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Water for life and livelihoods

River Basin Management Plan
Anglian River Basin District

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The Environment Agency website holds the river basin management plans for England and Wales, and a range of other information about the environment, river basin management planning and the Water Framework Directive. www.environment-agency.gov.uk/wfd

You can search maps for information related to this plan by using 'What's In Your Backyard'. http://www.environment-agency.gov.uk/maps.

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This plan at a glance

This plan is about the pressures facing the water environment in the Anglian River Basin District, and the actions that will address them. It has been prepared under the Water Framework Directive, and is the first of a series of six-year planning cycles.

By 2015, 16 per cent of surface waters (rivers, lakes, estuaries and coastal waters) in this river basin district are going to improve for at least one biological, chemical or physical element, measured as part of an assessment of good status according to the Water Framework Directive. This includes an improvement of **1,700 km** of the river network in relation to fish, phosphate, specific pollutants and other elements.

By 2015 19 per cent of surface waters will be at good ecological status/potential and 45 per cent of groundwater bodies will be at good status. In combination 20 per cent of all water bodies will be at good status by 2015. The Environment Agency wants to go further and achieve an additional two per cent improvement to surface waters across England and Wales by 2015.

The biological parts of how the water environment is assessed – the plant and animal communities – are key indicators. **At least 30 per cent of assessed surface waters will be at good or better biological status by 2015.**

The Anglian River Basin District is a unique environment; the landscape ranges from gentle chalk and limestone ridges to the extensive lowlands of the Fens and East Anglian coastal estuaries and marshes. Water is essential to the maintenance of the rivers, lakes, estuaries, coasts and groundwater that underpins these landscapes and their wildlife. And it is vital to the livelihoods of those who live and work here.

In the past there has been considerable progress in protecting the natural assets of the river basin district and in resolving many of the problems for the water environment.

However, a range of challenges remain, which will need to be addressed to secure the predicted improvements. They include:

- point source pollution from sewage treatment works;
- the physical modification of water bodies;
- diffuse pollution from agricultural activities;
- water abstraction;
- diffuse pollution from urban sources.

At present, because of these pressures and the higher environmental standards required by the Water Framework Directive only 18 per cent of surface waters are currently classified as good ecological status or potential. 33 per cent of assessed surface water bodies are at good or better biological status now, although we expect this to change to 27 per cent when we have assessed all water bodies.

In order to meet these targets, it is important for everyone to play their part now and in the future. River basin management is an opportunity for this generation – for people and organisations to work together to improve the quality of every aspect of the water environment – to create an environment we are all proud of and can enjoy.

1 About this plan

This plan focuses on the protection, improvement and sustainable use of the water environment. Many organisations and individuals help to protect and improve the water environment for the benefit of people and wildlife. River basin management is the approach the Environment Agency is using to ensure our combined efforts achieve the improvement needed in the Anglian River Basin District.

River basin management is a continuous process of planning and delivery. The Water Framework Directive introduces a formal series of 6 year cycles. The first cycle will end in 2015 when, following further planning and consultation, this plan will be updated and reissued.

The Anglian River Basin District Liaison Panel has been central to helping us manage this process. The panel includes representatives of businesses, planning authorities, environmental organisations, consumers, navigation, fishing and recreation bodies and central, regional and local government, all with key roles to play in implementing this plan. The Environment Agency has also worked extensively with local stakeholders to identify the actions needed to address the main pressures on the water environment.

This plan has been prepared under the Water Framework Directive, which requires all countries throughout the European Union to manage the water environment to consistent standards. Each country has to:

- prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters;
- aim to achieve at least good status for all water bodies by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027;
- meet the requirements of Water Framework Directive Protected Areas;
- promote sustainable use of water as a natural resource;
- conserve habitats and species that depend directly on water;
- progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
- progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants;
- contribute to mitigating the effects of floods and droughts.

The plan describes the river basin district, and the pressures that the water environment faces. It shows what this means for the current state of the water environment, and what actions will be taken to address the pressures. It sets out what improvements are possible by 2015 and how the actions will make a difference to the local environment – the catchments, the estuaries and coasts, and the groundwater.

Looking towards implementation, the plan highlights the programme of investigations to be undertaken. This will identify more actions, particularly those associated with diffuse pollution, for delivery during the first cycle. New national measures, made available by government, will also lead to additional improvements. At local level, the Environment Agency will be working closely with a wide variety of organisations and individuals, not only to deliver the commitments contained in the plan, but wherever possible to expand upon them for the benefit of the water environment.

Strategic Environmental Assessment

A Strategic Environmental Assessment of the draft plan was completed to review the effects of the proposals on the wider environment. The assessment enabled us to make sure that this plan represents the most sustainable way of managing the water environment.

The Post Adoption Statement and accompanying Statement of Environmental Particulars is available at www.environment-agency.gov.uk/wfd.

Habitats Regulations Assessment

A Habitats Regulations Assessment of this plan has been carried out to consider whether it is likely to have a significant effect on any Natura 2000 sites. The assessment was undertaken by the Environment Agency, in consultation with Natural England.

The assessment concluded that the River Basin Management Plan is unlikely to have any significant negative effects on any Natura 2000 sites. The Plan itself does not require further assessment under the Habitats Regulations. This conclusion is reliant on the fact that before any measures in the plan are implemented they must be subject to the requirements of the Habitats Regulations. Any plans, project or permissions required to implement the measures must undergo an appropriate assessment if they are likely to a have a significant effect.

A copy of the Habitats Regulations Assessment of this plan is available at www.environment-agency.gov.uk/wfd.

Impact Assessment

An impact assessment of this plan has been completed. It looks at the costs of a reference case, which includes existing actions and new actions required by existing obligations, and the incremental costs and benefits of implementing the additional new actions required by this plan. The impact assessment also provides a forward look to the costs and benefits of potential action in future cycles (2015 to 2021 and 2021 to 2027).

A copy of the impact assessment is available at www.environment-agency.gov.uk/wfd.

2 About the Anglian River Basin District

The river basin district covers 27,890 km^2 from Lincolnshire in the north to Essex in the south, and Northamptonshire in the west to the East Anglian coast. The landscape ranges from gentle chalk and limestone ridges to the extensive lowlands of the Fens and East Anglian coastal estuaries and marshes. In total over 5.2 million people live and work in small or medium sized towns and cities within the district which has no extensive metropolitan areas.

Figure 1 **Map of the Anglian River Basin District**

The river basin district is predominantly rural, with more than half of its land surface (approximately 1.5 million hectares) used for agriculture and horticulture. From the fertile

Fens – which cover 388,500 hectares of Lincolnshire, Cambridgeshire and Norfolk – to the extensively grazed grasslands in the Waveney Valley, Anglian River Basin District has one of the most productive agricultural landscapes in the world. Best known for its cereal crops, more than a quarter of England's wheat and barley are produced here. But the river basin district is also a major horticultural region cultivating everything from peas and beans to potatoes and carrots, apples, strawberries, salad crops, flowers and shrubs. Farmers also harvest over half of the nation's sugar beet – mainly in Cambridgeshire, Lincolnshire, Norfolk and Suffolk. Also Britain's pig and poultry farms are mostly located here. The second largest pig herd in England is located here. Sheep flocks, beef and dairy herds may be small compared with other regions, but they are important to the farming 'balance' of the region and grazing livestock makes a major contribution to our prized landscape.

One of the most striking parts of the river basin district are the Lincolnshire and Cambridgeshire Fens. This artificial, man-made landscape has been forged from coastal and estuarine wetlands over many centuries. These marshes, which are at or below sea level have been artificially drained and continue to be protected from floods by drainage banks and pumps. With the support of this drainage system, the Fens have become the most important arable agricultural area in Britain for grains and vegetables. These drainage systems also provide flood protection to a large number of settlements and properties and to the infrastructure (gas, water, electricity, telephones, etc.) which serves those communities.

The river basin district is the richest region in the UK for wetland wildlife. The Broads, in particular, is Britain's largest nationally protected wetland and provides a habitat for a myriad of rare plants and animals. Freshwater habitats within the river basin district are very important for wintering wildfowl, and reservoirs and watercourses support some important fisheries. Many invertebrate populations and populations of rare birds depend upon these freshwater wetlands. Approximately 80 per cent of England's resource of lowland fen occurs here, including the largest expanse of lime-rich fens. Other internationally important fens occur in the heads of valleys, fed by groundwater springs. A rich mix of other habitats are found in the region, including swamp, reedbeds and carr woodland.

Much of the extensive and varied coast of the region is internationally designated. This includes 33 per cent of the UK's extensive areas of saltmarsh, which reflects the presence of large estuaries and wide intertidal areas along the coast.

Pressures on the water environment

A great deal is already being done to protect and improve the water environment. However, it will take more time, effort and resources to deal with the pressures that have significantly altered and damaged the environment over the last few hundred years. There are a number of major challenges.

Transport networks, cities, towns and villages put pressure on the water environment. **Discharges from the sewage system can impact on quality** or the enjoyment of it and water companies will implement a major programme of work to address this issue.

Many of the towns are within one of the two Growth Areas or are one of the five Growth Points identified by the Government's Sustainable Communities Plan. Before 2026 spatial plans propose an additional 600,000 homes along with the jobs and services for the people in them. Managed well, this **growth and regeneration will be an opportunity** to make improvements to the water environment in a way that enhances people's quality of life.

The way land is managed has given rise to complex pollution issues. This **diffuse pollution is a major pressure** on the water environment and can come from both urban and rural areas. Further improvements are needed to land management practices to protect water quality and allow wildlife to thrive.

Physical modification is a key issue. Modified water bodies account for nearly 70 per cent of rivers and 77 per cent of both lakes and estuaries. The negative impacts of these centuries-old changes need to be mitigated, so as to provide the best habitat for wildlife possible, whilst recognising the ongoing need for those modifications to continue to exist. One of the biggest challenges facing the river basin district is **water management**. Parts are extremely dry, receiving only two-thirds of the UK's average rainfall. Many of our most important wildlife sites are dependent on a good supply of water and it is obviously of vital importance to public water supplies, agriculture and industry. At the other extreme, flooding is also a key feature of the river basin district. About one-fifth of the region is susceptible and therefore, coastal and inland flooding is a major concern for many communities. Natural forces such as sea level rise, coupled with climate change, can pose an increasing threat to people, property and coastal habitats.

All these challenges relate to a range of specific pressures that need to be dealt with in this river basin district. These are:

- **abstraction and other artificial flow regulation** – problems related to taking water from rivers, lakes and groundwater.
- **non-native species** - invasive non-native species are plants and animals that have deliberately or accidentally been introduced outside their natural range, and by spreading quickly threaten native wildlife and can cause economic damage.
- **nitrate** – a nutrient found in fertilisers used in agriculture, and in sewage effluent.
- **organic pollution** – an excess of organic matter such as manure or sewage which depletes the oxygen available for wildlife.
- **pesticides** – chemical and biological products used to kill or control pests.
- **phosphate** – a nutrient in sewage and fertiliser that can cause too much algae in rivers when in excess quantities.
- **physical modification** – changes to the structure of water bodies, such as for flood defence.
- **sediment** – un-dissolved particles floating on top of or suspended within water, for example those caused by increased rates of soil erosion from land based activities. Sedimentation can smother river life and spread pollutants from the land into the water environment.
- **urban and transport pollution** – a range of pollutants related to urban areas and the transport network.

3 Water bodies and how they are classified

In the context of the Water Framework Directive, the water environment includes rivers, lakes, estuaries, groundwater and coastal waters out to one nautical mile. For the purposes of river basin management, these waters are divided into units called water bodies, as summarised in Table 1. In addition, this plan aims to protect wetlands that depend on groundwater.

The total length of the rivers covered by the Water Framework Directive in the Anglian River Basin District is 6,968km.

Table 1 **Water body numbers in the Anglian River Basin District**

	Water body types					
	River and canal*	Lakes and reservoirs **	Estuaries (transitional)	Coastal	Ground water	**Total**
Natural water bodies	232	11	4	4	31	**282**
Artificial water bodies	130	24	0	0	n/a	**154**
Heavily modified water bodies	396	14	14	7	n/a	**431**
Total	**758**	**49**	**18**	**11**	**31**	**867**

** The river and canal category also includes surface water transfers (SWTs)*

*** The lake and reservoir category includes ditches that are in Sites of Special Scientific Interest (SSSI)*

The Water Framework Directive sets an objective of aiming to achieve at least 'good status' in all water bodies by 2015 or, provided that certain conditions are satisfied, seek to achieve the objective by 2021 or 2027.

Surface waters

For surface waters, good status is a statement of 'overall status', and has an ecological and a chemical component. Good ecological status is measured on the scale high, good, moderate, poor and bad. Chemical status is measured as good or fail.

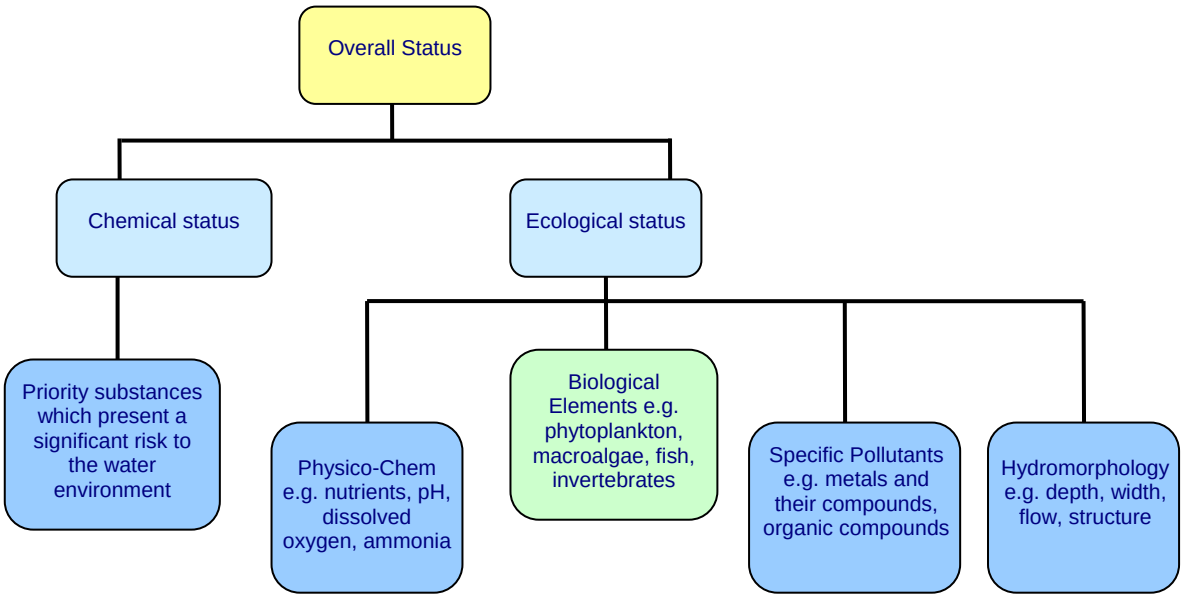
Good ecological status applies to natural water bodies, and is defined as a slight variation from undisturbed natural conditions. Figure 3 below shows how status is determined for surface waters. Each component has several different elements. These are measured against specific standards and targets developed by the Water Framework Directive UK Technical Advisory Group (UKTAG) and the European Union.

To understand the underlying reasons for water body status it is helpful to break down the results. Ecological status could be driven by the presence of a single chemical substance slightly exceeding the required standard. As well as ecological status this plan highlights the results of biological assessments (referred to as biological status) as these are the main indicators of the health of the environment for surface waters.

Monitoring and components of overall status

The monitoring programme for river basin management is based on a far wider range of assessments than were carried out in the past. A range of elements are measured in each water body, and a classification is produced based on a 'one out, all out' principle. This uses the poorest individual element result to set the overall classification.

Figure 2 **The components of overall status for surface water bodies**



The classification of water bodies will improve as new monitoring data are collected and better methods of assessment are developed. Future monitoring will help show where environmental objectives are already being met and where more needs to be done to improve the water environment. Monitoring will also give us some information on the spread of invasive non-native species.

The Water Framework Directive recognises the key role that water resources and habitats play in supporting healthy aquatic ecosystems. It requires that water bodies are managed to protect or improve hydromorphological conditions. Hydromorphology is a term that covers the flow of water in a water body and its physical form. The term encompasses both hydrological and geomorphological characteristics that help support a healthy ecology in rivers, lakes, estuaries and coastal waters.

Artificial and heavily modified waters

Nearly 70 per cent of surface water bodies in the river basin district are designated as 'artificial' or 'heavily modified'. This is because they may have been created or modified for a particular use such as water supply, flood protection, navigation or urban infrastructure.

By definition, artificial and heavily modified water bodies are not able to achieve natural conditions. Instead the classification and objectives for these water bodies, and the biology they represent, are measured against 'ecological potential' rather than status.

For an artificial or heavily modified water body to achieve good ecological potential, its chemistry must be good. In addition, any modifications to the structural or physical nature of the water body that harm biology must only be those essential for its valid use. All other such modifications must have been altered or managed to reduce or remove their adverse impact, so that there is the potential for biology to be as close as possible to that of a similar natural

water body. Often though, the biology will still be impacted and biological status of the water body may be less than good.

Groundwater

For groundwater, good status has a quantitative and a chemical component. Together these provide a single final classification: good or poor status.

A ground water body will be classified as having poor quantitative status in the following circumstances; where low ground water levels are responsible for an adverse impact on rivers and wetlands normally reliant on ground water; where abstraction of ground water has lead to saline intrusion; where it is possible that the amount of groundwater abstracted will not be replaced each year by rainfall.

Poor chemical status occurs if there is widespread diffuse pollution within the groundwater body, the quality of the groundwater is having an adverse impact on wetlands or surface waters, there is saline intrusion due to over abstraction, or the quality of water used for potable supply is deteriorating significantly. There are other objectives for groundwater quality in addition to meeting good status. These are the requirements to prevent or limit the input of pollutants to groundwater and to implement measures to reverse significant and sustained rising trends in pollutants in groundwater.

Protected areas

Some areas require special protection under European legislation.

The Water Framework Directive brings together the planning processes of a range of other European Directives. These Directives, listed in Table 2, establish protected areas to manage water, nutrients, chemicals, economically significant species, and wildlife – and have been brought in line with the planning timescales of the Water Framework Directive. Meeting their requirements will also help achieve Water Framework Directive objectives.

Table 2 **Other Directives and their Water Framework Directive protected areas**

Directive	Protected area
Bathing Waters	Recreational waters
Birds	Natura 2000 sites (water dependent special protection areas)
Drinking Water	Drinking water protected areas
Environmental Impact Assessment	-
Freshwater Fish Shellfish Waters	Waters for the protection of economically significant aquatic species
Groundwater	-
Habitats	Natura 2000 sites (water dependent special areas of conservation)
Integrated Pollution Prevention and Control	-
Major Accidents	-
Nitrates	Nitrate Vulnerable Zones
Plant Protection Products	-
Sewage Sludge	-
Urban Waste Water Treatment	Sensitive areas

Achieving the objectives of these protected areas is a priority for action in this plan. Annex D sets out their objectives and the actions required for Natura 2000 sites and the new Drinking Water Protected Areas required under the Directive. Annex C describes the actions required for all protected areas. In addition, there are two new daughter Directives (Groundwater and Environmental Quality Standards) that will be used to implement specific parts of the Water Framework Directive.

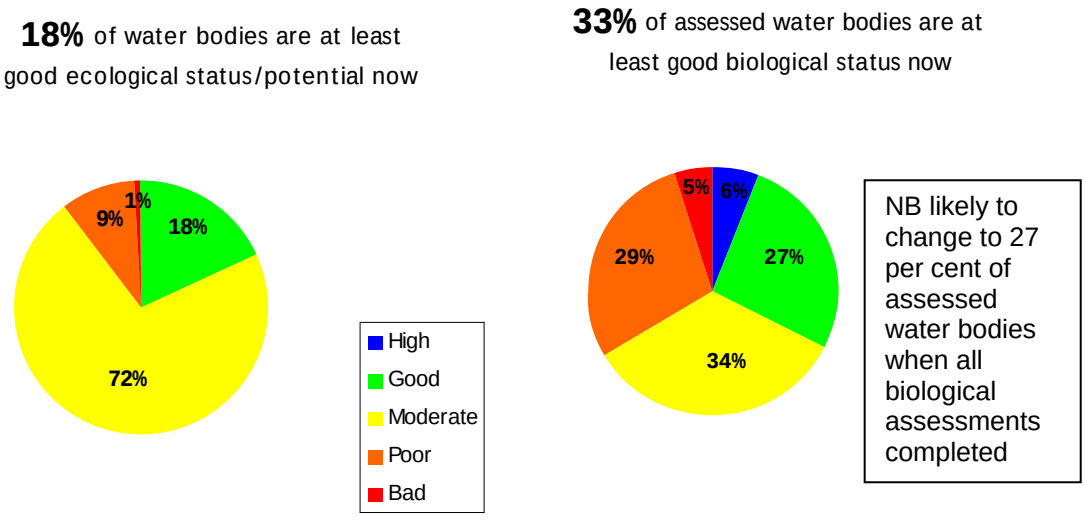
4 The state of the water environment now

The current status classification is the baseline from which improvements and the 'no deterioration in status' objective of the Water Framework Directive is measured. The current status classification has been updated since the draft plan. It is different to that presented in the draft plan because:

- the quality of assessments has been improved by refining classification methods;
- the accuracy of individual assessment tools has improved, especially for fish;
- a number of water bodies that were identified as potentially being heavily modified have not been designated as such in this plan because monitoring shows that they currently achieve good status;
- improvements from the water companies' Periodic Review 2004 have now been factored in;
- an additional 202 rivers have been classified that were previously unassessed.

Over 18 per cent of surface waters are at good or better ecological status/potential. However, 33 per cent of assessed surface waters are at good or better biological status now. This is shown in Figure 3.

Figure 3 **Ecological status/potential and biological status of surface water bodies now**



Statistics for both good ecological status or potential and biological status are influenced by the relative number of artificial and heavily modified waters and their classification. In the Anglian River Basin District, 16 per cent of 584 artificial and heavily modified water bodies are currently classified as at good or better ecological potential, compared to 23 per cent of the 251 natural surface water bodies having good or better ecological status. As discussed in the previous section the higher percentage of poor and bad water bodies assessed for biological status compared to ecological status/potential reflects the fact that even where all mitigation measures are in place to allow an artificial/heavily modified water body to be classified as good, the use of the water body may mean that biology is still impacted.

As biological monitoring continues it is likely that the percentage of surface water bodies at good or better biological status will change from 33 to 27 per cent. This is explained further in the section on "Biological status and monitoring".

For groundwater bodies, currently 65 per cent are at good quantitative status. A similar percentage are also at good chemical status.

Reasons for not achieving good status or potential

This section takes a closer look at rivers. The majority of management actions in the first river basin management cycle will be applied to rivers. Reasons for not achieving good status or potential in other surface waters are being developed. The first course of action for lakes, coasts and estuaries is to develop a better understanding of the issues.

To identify what needs to be done to improve the environment, the reasons for not achieving good status need to be understood. The main reasons most frequently identified by Environment Agency staff using monitoring data, their knowledge and their experience of individual water bodies are shown in Table 3. Each relates to one or more pressures, which in turn impact on elements of the classification.

The reasons for failure include point source discharges from water industry sewage works, diffuse source pollution from agriculture, abstraction and a range of reasons due to physical modifications. The actions in this plan will increase the number of waters achieving good status or potential, for example through significant investment in improving discharges from sewage works and changes to land management practices. Even if good status is not completely achieved, the actions will also lead to improvements to the key elements impacted.

Table 3 **Main reasons (where known) for not achieving good ecological status or potential**

Reason for failure	Key elements impacted
Diffuse source agricultural	ammonia, dissolved oxygen, diatoms, fish, invertebrates, macrophytes, phosphate
Point source water industry sewage works	ammonia, dissolved oxygen, diatoms, invertebrates, phosphate
Physical modification flood protection	fish, invertebrates, mitigation measures for morphology
Physical modification land drainage	fish, invertebrates, mitigation measures for morphology
Abstraction	dissolved oxygen, fish, hydrology
Diffuse source mixed urban run – off	ammonia, dissolved oxygen, fish, invertebrates, phosphate
Point source trade industry - non water industry	ammonia , invertebrates, phosphate
Physical modification barriers to fish migration	fish
Physical modification urbanisation	mitigation measures for morphology
Physical modification water storage and supply (including for power generation)	fish, invertebrates, mitigation measures for morphology

It is important to note that because classification involves a wider range of elements than previous monitoring schemes, and many of the key pressures are complex and occur in combination, we often do not know the reason for a failure. For many water bodies either the reasons for failure are unknown, or it is uncertain whether there is a failure or whether pressures really are causing an impact. In these cases we will need to investigate, as discussed in **"**Investigations – improving outcomes for 2015**"** in Section 6.

For groundwater quality, the main reasons for poor status are high or rising nitrate concentrations, with some failures for pesticides and other chemicals. The main reason for poor quantitative status is that abstraction levels – mainly for drinking water – exceed the

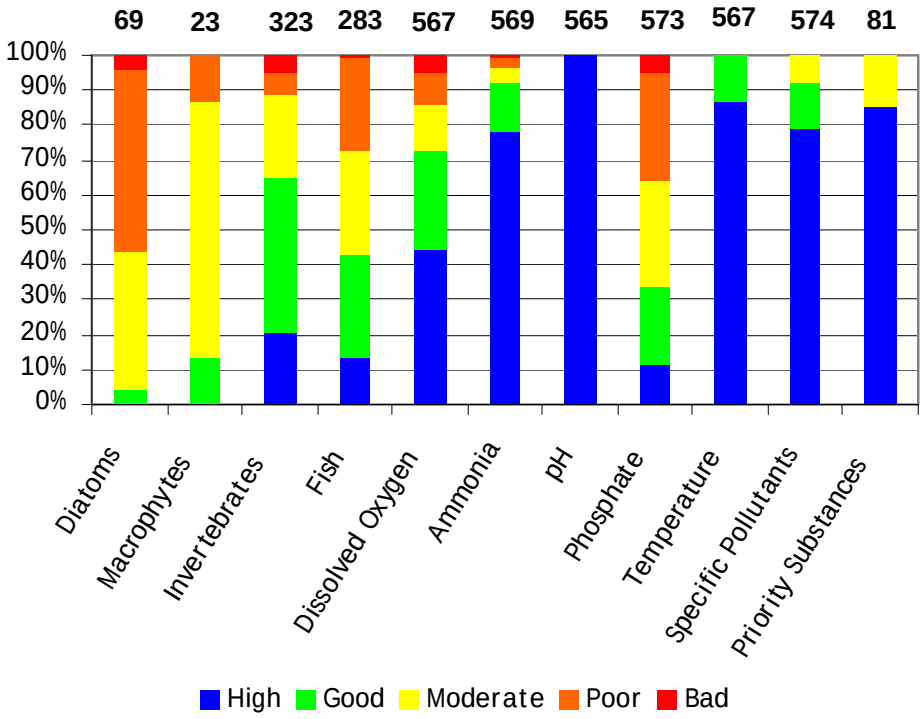
rate at which aquifers recharge. The plan identifies a range of actions to prevent deterioration and improve groundwater elements, as well as investigations to improve the confidence in groundwater classification.

Classification of individual elements

For rivers, which comprise the majority of water bodies in the river basin district, the main elements indicating that the standards for good ecological status are not being achieved are fish, phosphate and invertebrates. This is shown in Figure 4.

The results for macrophytes (aquatic plants) and diatoms (microscopic algae) are from relatively fewer water body assessments based on a new (2007) risk based monitoring programme. However, as would be expected, the results for these elements confirm the presence of pressures on biology in many of the assessed water bodies.

Figure 4 **Proportion of river water bodies in each status class, by element** (numbers above bars indicate total number of water bodies assessed for each element).



Excessive sediment is a possible cause for biology not being good in a number of water bodies. At present however, standards are not available to identify clearly where sedimentation is excessive. The Environment Agency will be developing techniques to access the impact of sedimentation as one of the actions in this plan.

Case Study 1: **Making room for fish**

Barriers to fish passage are one of the big issues affecting the ecology of rivers. This plan's fish pass programme will make more room by addressing ten priority structures, such as gauging stations, flood gates and privately owned structures like mills. In addition we are planning 50 eel passes across the region. Together they will contribute to the ecological health of several hundred kilometres of river in the Anglian River Basin District. In 2009/10 about £150k was received from Defra to progress the programme.

A recent success has been the creation of Bures Mill bypass channel which will enable coarse fish and eels to migrate freely up the river Stour for the first time in years improving the fish and eel stocks in 52km of river.

Biological status and monitoring

New monitoring programmes for the Water Framework Directive since 2007 focus on locations where the Environment Agency suspects there may be a problem caused by pressures on the water environment. The Environment Agency does not yet have biological assessments for all relevant water bodies. In this river basin district 54 percent of water bodies have an assessment for at least one biological element. The number of water bodies covered by biological monitoring is set to increase over the next three years. As new information becomes available it is likely that some water bodies currently labelled as good biological status will be shown to have a lower quality.

For instance, from the chemical monitoring the Environment Agency is now clear that there is a link between high levels of phosphate in surface waters and biological failures in the main river type (lowland alkaline rivers). The assessment of reasons for failure that we have started to undertake shows that across England and Wales 22 per cent of river water bodies are failing to achieve good status/potential because of excessive levels of phosphate. In this river basin district phosphate results show that it is likely that the percentage of water bodies at good or better biological status will reduce from 33 to 27 per cent when additional water bodies are assessed for diatoms and/or macrophytes. This same analysis points to discharges from sewage treatment works and releases from agriculture being responsible for the majority of this. Rather than wait for the results of more biological assessments, we need to ensure corrective action is started in the first plan cycle.

Through The Water Services Regulation Authority's (Ofwat's) determination of the water industry periodic review of investment, the water industry will continue their investment programme targeted at addressing their contribution to phosphate pollution. It is important that agriculture also makes a contribution in the first cycle improvements.

The Environment Agency is now working with the main farming groups to understand better the main ways in which phosphate from land enters and is transported in water bodies. Farming groups have agreed to use this information to encourage individual farmers to take action to reduce their contribution to water pollution. We will trial this new approach in the Anglian River Basin District and through the Campaign for Farmed Environment. We will also look at what the advice and incentives available through agri-environment schemes and the England Catchment Sensitive Farming Delivery Initiative can do to reduce phosphate pollution of water and wetlands.

In parallel with this approach, the Environment Agency will continue to develop work on regulatory measures, such as piloting Water Protection Zones (WPZs) so that if voluntary approaches are shown not to work in a particular area, or where higher environmental standards are needed in for example protected areas, we are ready and able to ensure progress is made before 2015. The work to identify the ways in which phosphate enters water bodies and the means of reducing this will inform the measures that might be applied in WPZs. WPZs will only be effective if the means of control have been clearly identified.

5 Actions to improve the water environment by 2015

The following gives an overview of the key contributions from sectors and organisations that the Environment Agency will work with to implement this plan.

These actions are summarised versions of the full programme of actions (programme of measures) that can be found in Annex C.

The lead organisation for each action is given in brackets. Note that many actions will involve more than one sector and need to be implemented in partnership. Actions in Annex C are therefore duplicated across the relevant sectors. Sectors are encouraged to put further actions forward during the implementation of this plan.

After the action tables there are sections on:

All sectors

All sectors must comply with the range of existing regulations, codes of practice and controls on use of certain substances.

Investigations will be carried out by the Environment Agency and partner organisations where appropriate, to establish the extent and source of pressures and to identify any further actions that are technically feasible and proportionate in cost. These actions will be carried out during this or future management cycles.

Investigations and actions as noted above will be carried out in drinking water protected areas (where necessary focused in safeguard zones) to reduce the risk of deterioration in raw water quality and therefore reduce the need for additional treatment to meet drinking water standards.

A small number of candidate Water Protection Zones (WPZ) will be promoted nationally early in the first plan cycle, where there is clear evidence that voluntary mechanisms such as the England Catchment Sensitive Farming Delivery Initiative and pollution prevention campaigns are not sufficient by themselves to achieve the required environmental objectives. The candidate WPZs will be used to establish the usefulness of the concept, but as we have said earlier in describing the results of the biological monitoring, this in turn relies on a clear understanding of the practices causing problems and the techniques to avoid them.

Agriculture and rural land management

Agriculture accounts for more than half of the land area in the Anglian River Basin District. The sector, therefore, has a big role in looking after and improving the quality of the rural environment.

A combination of incentive, advisory and regulatory measures have been in place for a number of years to help farmers and other land managers protect the environment. For instance the Code of Good Agricultural Practice and agri-environment schemes, such as Entry Level Stewardship and Higher Level Stewardship. Wise stewardship of resources such as soil, nutrients, water and energy helps to cut costs while maintaining or improving the productivity of land and livestock.

Nevertheless, the way in which land is managed is still having a negative impact on natural resources and further action is needed to address diffuse pollution and other key pressures in rural areas. Government will consider the introduction of further restrictions of activities and restrictions on chemicals where there is evidence that voluntary actions failed to deliver.

Example actions
Cross-Compliance – to help farmers comply with a range of Directives to reduce pollution from agriculture at farms receiving subsidies (all land managers) • Across the river basin district
Establish and enforce **Nitrate Vulnerable Zones** in catchments at high risk from nitrate pollution (Environment Agency) to reduce the amount of nitrate and other pollutants entering water from farmland • Across the river basin district
Pesticides statutory code of practice – advice for operators on control of plant protection products to prevent and limit pollution of waters (all operators) • Across the river basin district
Maintain a nationally funded advice-led partnership under the England **Catchment Sensitive Farming** Delivery Initiative (Natural England, Environment Agency) to reduce diffuse water pollution from agriculture in priority areas • Bure, Ant and Muckfleet; Deben, Alde and Ore catchments; Lincolnshire Coast Rivers; Little Ouse (Thetford area); North Northfolk Rivers; Gipping and Orwell; River Nar; River Wensum; Yare and Waveney; Rivers Stour and Colne; River Blyth and surrounding SSSIs.
Form **Strategic Partnerships** with the England Catchment Sensitive Farming Delivery Initiative and other advice led partnership work (Natural England, Environment Agency, River Nene Regional Park, Essex & Suffolk Water) to provide further funding to reduce diffuse water pollution from agriculture • River Nene, River Great Ouse and the Blackwater and Chelmer rivers
Work with Natural England to target **agri-environment** schemes (Natural England, Environment Agency) to ensure adoption of best practice farming and reduce diffuse pollution from agriculture.
Establish a demonstrations catchment project in the river basin district to test and look at the effect of agricultural diffuse pollution control measures in a representative range of catchment types
Comply with new EC Sustainable Use of Pesticides Directive to control use of Plant Protection Products
Specialist workshops to address pressures in areas identified via Environment Agency's Agricultural Evidence Base, WFD classification.
Encourage farmers to build storage reservoirs to support summer irrigation and promote water efficiency on farms
Voluntary initiative in pesticides, including MOTs on sprayers, crop protection management plans, training for sprayer operators

Angling & conservation

The angling and conservation sector has a large role to play in delivering local 'on the ground' improvements to the water environment as well as lobbying for new mechanisms. It engages communities and individuals, building on their skills and experience and actively involves them in making these improvements. Angling is a popular past time that brings people closer to nature and provides local intelligence on environmental quality – over 218,000 rod licences were sold in 2007/08.

Many environmental organisations can influence environmental quality through the land they own or manage. Riparian owners have specific responsibility for the management of their watercourses so their support, involvement and investment in implementing the actions are crucial.

Example actions
Anglian River Sea Trout Project. Identification and prioritisation of barriers to breeding brown trout populations in several Anglian Rivers including North Norfolk chalk rivers: the Glaven, Stiffkey, Burn and Nar.
Creation of backwaters, bankside scrapes, reed beds and marginal vegetation, to improve habitat provision, in river.
Floating Pennywort control throughout the river basin district.
Sediment Management Strategy - catchment approach to sediment management to reduce inputs and balance with dredging to achieve waterways specification for users. Production of Management Plans and actions
Norfolk Non Native Forum. Appointment of a dedicated coordinator to raise awareness and a network of surveillance and eradication officers. Work with aquatic centres to raise awareness and encourage not to sell invasive plants. Planning guidance and conditions to eradicate through the consent process. Training for partner organisations / issue guidance notes. Encouraging non - returns of angling catch invasive species. Angling guidance regarding live baiting, crayfish plague. Dredging standard operating procedure/guidance to clean down equipment etc. Stocking policies to remove risk.
Great Ouse Wetland Vision - river restoration on a catchment scale. Some projects are small scale (rod licence funded) £10 - 30K, but others are landscape scale: Bedford River Valley Park, Milton Keynes Floodplain Forest.
Sediment Management Strategy - catchment approach to sediment management to reduce inputs and balance with dredging to achieve waterways specification for users. Production of Management Plans and actions

Central government

Government will continue to influence the development of EU legislation to help bring forward initiatives that protect and improve the water environment, and that are proportionate in cost and technically feasible. The Department for Environment, Food and Rural Affairs (Defra) will be considering further policy options within the first cycle of River Basin Management Planning that could help further improve the number of water bodies achieving good status by 2015. These include controls on phosphate in detergents, tackling misconnections, general binding rules, a code of practice on septic tanks and options to increase the use of sustainable drainage systems to reduce risks of flooding and pollution of surface waters during periods of high rainfall.

The Environment Agency, Forestry Commission, Natural England and the Marine and Fisheries Agency (to become the Marine Management Organisation) are the key government agencies for this plan. The agencies will work together on relevant actions.

Example actions
Enhanced capital allowance scheme is a government incentive giving tax relief for the purchase of water efficient plant and machinery to business that pay income or corporation tax. See www.eca-water.gov.uk (Defra/government) • National
Implement the water related actions of the **Invasive Non-native Species Framework** Action Plan for Great Britain (Defra, Environment Agency) . • Nationally
Disseminate and develop **species identification guides** and train key groups, to improve early detection of invasive non-native species (Natural England) • Nationally

Environment Agency

The Environment Agency is the Government's lead agency for implementing the Water Framework Directive. We will continue to monitor, provide advice on and manage improvements to the water environment. We regulate discharges to and abstraction from the water environment by issuing and enforcing environmental permits and licences. Where necessary we will take enforcement action against those who act illegally and damage or put at risk the water environment. We also have responsibility to make sure there is enough water to meet the needs of industry, agriculture and wider society in the future.

We will work closely with all sectors to learn from them, build on existing knowledge and to develop a shared commitment to implementing environmental improvements.

Example actions
Continue and develop a **monitoring programme**, to maintain our understanding of the state of the water environment (Environment Agency). • Across the river basin district
Run local pollution prevention campaigns (Environment Agency) to raise awareness of the need for responsible handling and disposal of chemicals, oil and other pollutants. • Specified water bodies identified at risk, such as safeguard zones
Action to **reduce the physical impacts of flood risk management** activities in artificial or heavily modified water bodies (Environment Agency). • Waters specified in Annex C
Action through the **Restoring Sustainable Abstraction programme** to investigate sites at risk due to abstraction pressures.
Work with planners to ensure that new and existing homes and buildings are more water efficient.
Anglian River Sea Trout Project. Identification and prioritisation of barriers to breeding brown trout populations in several Anglian
Eel Management Plan for the Anglian River Basin District. Produced to improve migration. Identification of barriers.
Installation of riffles and flow deflectors to provide habitat improvement in river channel, project will be delivered in a number of priority catchments (see Annex C).
Priority Barriers Project to identify barriers in need of removal or fish passes to benefit coarse fish and eels
Distribution of Chinese Mitten Crab identification leaflet. Gives species characteristics and current distribution in the Great Ouse catchment
Leaflets sent to each package treatment plants owner on the Broads raising awareness of problem of phosphates being discharged from small private and promoting reduced detergent use
River Nar restoration - production of management and sediment strategies.

Industry, manufacturing & other business

Business services, retailing and health services are three of the most significant employment sectors for the Anglian River Basin District. Sectors that provide significantly above average levels of employment in the river basin include: wholesale and distribution; transport; food and drink; and agriculture. The activities of these businesses can directly or indirectly affect the water environment.

Most relevant actions in this plan are already underway or are part of the existing regulatory system. However, some actions are new, and will help the river basin district reduce nutrients such as phosphate and will help meet tighter standards on ammonia and 40 other priority substances and pollutants. Where appropriate, industry will participate in pollution prevention campaigns and in investigations to establish the extent and source of pressures to define any further actions required for this and future cycles.

Example actions
Comply with regulations such as Environmental Permitting, Environmental Damage and Groundwater, to limit environmental damage and help prevent land contamination, pollution and deterioration of waters (industry). • Nationally
Industry support to **investigate emissions from sites and pollution** from contaminated land (Industry), to reduce uncertainty and provide additional information • Sites contributing to potential environmental quality standard failure
Pollution Prevention advice and campaigns to provide targeted advice and enforcement (Environment Agency) to reduce contaminants being released to groundwater from industrial estates, petrol stations and other sources • High risk areas such as safeguard zones
Sitewise - pilot (Environment Agency) project in Anglian river basin district to promote resource efficiency in the construction industry and to limit its impact on the environment
Implementation of the Remediation Strategy for the Helpston project (Environment Agency).

Local and regional government

Local and regional government have a major role in implementing this plan. The sector has a far reaching influence on businesses, local communities and leisure and tourism sectors. The river basin district's county councils, districts, cities and unitary authorities also have duties and powers in relation to planning, waste and minerals, regeneration, highways, transportation, emergency planning, countryside management and other activities. Town and parish councils exist at the local level across the whole of the river basin district.

Many of the actions identified in the plan form part of this sector's normal work. The Environment Agency and others will work with local authorities to ensure that all relevant actions are identified, prioritised, resourced and implemented.

Example actions
Produce **guidance for planning authorities** in partnership with Royal Town Planning Institute (Environment Agency), to support this plan. • Across the river basin district
Action to **reduce the physical impacts of urban development** in artificial or heavily modified waters, to help waters reach good ecological potential. • Artificial and heavily modified water bodies are specified in Annex C.

Example actions
Implement **surface water management plans**, increasing resilience to surface water flooding and ensuring water quality is considered on a catchment basis (Environment Agency, local authorities). • Across the river basin district
Promote the use of **sustainable drainage systems** in new urban and rural development where appropriate, and retrofit in priority areas including highways where possible (Environment Agency, local authorities). • Across the river basin district
Lincolnshire Coastal Country Park. Develop a network of high quality wildlife and visitor facilities, providing a focus for significant economic revival using the natural and historic heritage as a vehicle for change
Fire service Memorandum of Understanding (MoU) on implementing pollution control measures in emergencies
Contribute to achieving favourable condition on Swanholme Lakes SSSI by undertaking specific management works
Ensuring the Local Development Framework policies require water efficiency standards in new development that exceed extant Buildings Regulations. Standards should be linked to the Code for Sustainable Homes level 3 and above, and Building Research Establishment Environmental Assessment Method standards
River Nene Regional Park - part of the growth area agenda. Key aim is to deliver green infrastructure as an integral element of the proposed development of housing in the growth areas. Action through: Government funding - 10% top slice of all development monies of growth areas, developer contributions.
Waterwise East - has the remit to influence planners and developers to encourage water efficiency. Initially, a " no deterioration" measure - could lead to need for less abstraction in the longer term, less need to import water in the short term.

Mining and quarrying

There are no deep mines within the river basin district. Extractive industries however do include brick clay in Peterborough and Bedfordshire and extensive sand and gravel extraction across the river basin district. Water quality can be undermined by the silting of watercourses by discharges from these operations and by working below the water table.

Example actions
Investigate emissions from working sites and **appraise options of best practice controls** at mines and quarries to ensure environmental quality standards are met (Operators) • Sites contributing to potential environmental quality standard failure
A 50 Year Vision for Wetlands Action through: Awareness and education campaign and the delivery of Wetland Habitat Action Plan.
Assessment of extractive sites potential benefit to the water environment whilst operating and through restoration provisions i.e. flood storage, nature reserves (Wetland), recreation and the realisation of these benefits through partnership working with relevant bodies

Navigation

Ports, harbours and marinas are essential for economic prosperity. Many navigation and port authorities have already done a great deal to help improve ecology and water quality and some harbours are home to internationally important wildlife. Careful planning will be needed to ensure that waters remain navigable whilst at the same time water quality is protected and improved.

Proposals to build new ports or expand existing ones need to take sustainable water management goals into account. Physical changes are permitted to waters for navigation but only if certain conditions are met.

The Anglian coast is also popular with tourists and recreational boaters. We want to encourage recreation in the river basin district, whilst taking action to minimise any environmental impacts.

Example actions
Ban on Tributyltin (TBT) use on ship hulls unless there is a coating to prevent leaching of underlying TBT anti-foulants, to prevent or limit pollution in marine waters (Marine and Fisheries Agency, others) • Nationally
Develop a dredging and disposal framework (Ports sector), which will provide guidance to all those undertaking or permitting navigation dredging and dredged material disposal activities to assist in achieving the statutory objectives of the Water Framework Directive and related Environmental Quality Standards Directive (2008/105/EEC). • Nationally (England)
Education campaigns to increase awareness of boat wash, and its impacts. Publication of leaflet by Broads Authority and The Environment Agency/British Waterways Boaters Handbook.
Standard Operating Procedures to provide guidance and standards to be achieved when undertaking maintenance works on navigable channels.
Ouse Washes Technical Advisory Group looking into sedimentation from Earith to Ouse outfall into The Wash. Regime of control and maintenance measures to improve control of sedimentation.

Urban & transport

Development and regeneration is a major opportunity to improve the water environment. However, when poorly planned or designed, urban and transport infrastructure can adversely impact on water quality or water resources. The Environment Agency and others want to work with the urban and transport sector to achieve an urban water environment rich in wildlife that local communities can benefit from and enjoy.

A good quality water environment has the potential to help economic regeneration and to enhance the economic and social amenity value of developments, and improve the quality of life in cities, towns and villages.

Spatial planning and design for urban development and infrastructure should aim to reduce surface water run off; protect and restore habitats; improve the quality of rivers, coastal waters, and groundwater; and thus protect drinking water supplies and bathing areas. The release of toxic pollutants that harm the water environment also need to be reduced.

Example actions
Follow **pesticides statutory code of practice** advice for operators on control of plant protection products, to prevent or limit pollution of waters (all operators) • Across the river basin district
Support to **investigate emissions from sites and pollution** from contaminated land to reduce uncertainty and provide additional information (Industry) • Sites contributing to potential environmental quality standard failure

Example actions
Action to **reduce the physical impacts of urban development** in artificial or heavily modified water bodies, to help waters reach good ecological potential • Waters specified in Annex C.
Water Cycle Study/Strategy to address the impact of development on infrastructure capacity, water resources and receiving waters (Local Authorities).
Water Quality partnership for the Broads, providing partnership co-ordination for projects to address diffuse non-agricultural impacts (Broads Authority).

Water industry

Water companies are major partners in the management and protection of the water environment. The Environment Agency works with companies, consumers and Government to ensure that the sector's environmental work is planned and implemented in a way that is affordable for the public.

Improvement of continuous and intermittent sewage effluent discharges, and of water resources management will be carried out as part of the ongoing water industry asset management programme.

The companies' programme of work under the periodic review of water industry investment in 2009 will make a large contribution to meeting the objectives in this plan. This includes carrying out investigations, and specific improvement schemes to address water quality or water resources.

In addition, specific actions will be carried out in drinking water protected areas to help safeguard drinking water supplies.

Example actions
Reduce leakage through **active leakage control** and **customer supply pipe repair policies** to help ensure sufficient water for people and wildlife (water companies). • Across the river basin district
Complete the current round of **water company asset investment** to deliver water quality improvements and reduce the impact of abstraction (water companies). • Rivers, coasts and estuaries across the river basin district
Improvements to water company assets under the next round of company investment (PR09), to deliver water quality improvements and continue to reduce the impact of abstraction under a range of environmental Directives (water companies). • Rivers, coasts and estuaries across the river basin district
Examine the role of effluent re-use, through the Anglian Region Water Efficiency Group and Waterwise East.

Individuals and communities

Everyone can help protect and improve the water environment. Actions people can take include the following.

To save water

in houses or offices

- Turn off the tap when brushing your teeth, and take short showers rather than baths.
- Wash fruit and vegetables in a bowl rather than under the running tap - and use the remainder on your plants.
- Install a 'hippo' or 'save-a-flush' in your toilet cistern.

- Run your dishwasher or washing machine with a full load on economy setting, and boil the minimum amount of water needed in kettles or saucepans.
- Ask your water company to fit a meter. On average, this could reduce your household water bill.
- Install a low-flush toilet, put flow regulators on your taps and showers, and install waterless urinals at work.
- Consider installing a grey-water recycling system in your home, block or workplace. This can save one third of domestic mains water usage.

in gardens

- Choose plants that tolerate dry conditions for your house, balcony or garden. To help lawns through dry periods, don't cut them too short.
- To save water in your garden, collect rain in a water-butt, water at the beginning or end of the day, mulch plants, and avoid sprinklers or hosepipes without trigger nozzles.
- Fix dripping taps, and lag pipes to avoid them bursting in freezing weather.

To prevent pollution

- Use kitchen, bathroom and car cleaning products that don't harm the environment, such as phosphate-free laundry detergents, and use as little as possible. This helps prevent pollution.
- Take waste oil and chemicals such as white spirit to your municipal recycling facility: don't pour them down the sink or outside drains.
- Check that your household appliances connect to the foul sewer, not the surface water drain.
- Ensure your septic tank or private sewage treatment plant is well maintained and working effectively.
- Ensure your household oil storage is in good condition, with an up-to-date inspection record.
- When you see pollution or fly-tipping, phone us on 0800 807060.

To protect water dependent wildlife

- Put cotton buds and other litter in the bin, not down the toilet. It may end up in the sea where it can harm wildlife
- Eat fish from sustainable sources, caught using fishing methods that don't cause damage to marine wildlife and habitats
- Eliminate invasive non-native species from your garden.
- Adopt-a-beach to help keep beaches clean of litter than can harm wildlife and cause pollution..
- Join a river group to spot pollution, invasive non-native species, and take part in practical tasks.

Actions to protect drinking water

Drinking water supplied to households by water companies is of high quality and complies with strict standards enforced by the Drinking Water Inspectorate. Where water is abstracted from a water body for human consumption, the water body is designated as a Drinking Water Protected Area (DrWPA) – additional objectives apply and where necessary, additional action is put in place to protect the quality of the raw water abstracted.

Where we are reasonably confident that the DrWPA objective is at high risk of not being complied with, a Safeguard Zone has been identified. In the Safeguard Zone additional actions will take place. These may include voluntary agreements, pollution prevention

campaigns and targeted enforcement action of existing legislation. Additional monitoring is taking place to assess whether those DrWPAs currently not assessed at high risk, need a Safeguard Zone and additional action taken.

In parallel with this approach, the Environment Agency will continue to develop work on regulatory measures, such as piloting Water Protection Zones in England. If voluntary approaches are shown not to work in a Safeguard Zone, we are ready and able to ensure progress is made before 2015.

The costs of action in this plan

Overall the Environment Agency estimate that the cost for implementing the actions in the Anglian River Basin Management Plan will be £114 million annually. A significant proportion of this cost relates to existing measures. The existing measures are mainly required to fulfil the requirements of earlier EC Directives and are defined as the Reference Case in the Impact Assessment

There are new measures in the plan which we estimate to cost £64 million with a benefit of £10 million. In addition, investigations will be carried out that will help to identify the additional measures necessary in future planning cycles. The new measures are defined as the Policy Option in the Impact Assessment.

Further information on the approach used to assess the costs and benefits is contained in the Impact Assessment.

Taking action in a changing climate

The UK's Climate Projections (UKCP09) show that this region is likely to experience hotter drier summers, warmer wetter winters and rising sea levels. This is likely to have a significant effect on environmental conditions and will increase the impact of human activity on the water environment. Table 4 shows the likely effects of climate change on known pressures in the water environment.

It is essential that the actions in this plan take account of the likely effects of climate change. What is done now must not make it harder to deal with problems in the future.

Most actions in this plan will remain valid as the climate changes. Others can be adapted to accommodate climate change.

Table 4 **Qualitative assessment of likelihood that climate change may increase the risk from known pressures by 2050 and beyond**

Relative severity of impact of climate change on:	Level of Severity
Abstraction and other artificial flow regulation	Very high
Nutrients (nitrate and phosphate)	High
Physical modification	Medium
Sediment	High
Biological (invasive non-native species)	Medium
Microbiology (including faecal indicator organisms)	Medium
Organic pollution (sanitary determinands)	Medium
Biological (fisheries management)	Low/Medium
Acidification	Freshwater: Low Marine: Medium/High
Priority hazardous substances, priority substance and specific pollutants such as pesticides	Low
Salinity	Medium
Temperature of point source discharges	Low

It is important to assess the carbon implications of the plans to avoid, adding unnecessary carbon dioxide burdens that could increase the problem of climate change.

The carbon costs associated with actions in the water industry Periodic Review 2009 (PR09) have been quantified. This is where the most significant carbon impacts will occur as the actions include requirements for additional water treatment, construction of new works or upgrades to existing sites.

The approximate operational carbon implications of PR09 measures in England and Wales is approximately 4,722,000 tonnes per year at the start of the PR09 cycle (2009-10) and 4,564,200 tonnes per year at the end of the PR09 cycle (2014-2015). This does not include the carbon implications of constructing the schemes. These figures are from the water company plans and result from schemes to satisfy a number of existing drivers such as Urban Waste Water Directive, Bathing Waters Directive as well as the Water Framework Directive.

In this river basin district, the operational carbon component driven by the additional requirement to meet good status under the Water Framework Directive is estimated, at this time, to be 621 tonnes per year. In the majority of cases this will be balanced by reductions elsewhere as part of the CRC Energy Efficiency Scheme (formally known as the Carbon Reduction Commitment).

The CRC Energy Efficiency Scheme is a legally binding scheme, which covers large business and public sector organisations, and is intended to promote energy efficiency and help reduce carbon emissions. See www.decc.gov.uk for further information.

The majority of other actions are likely to have low impact as they are investigations, partnerships or encouraging best practice management. The potential impact of these can be assessed as the work is progressed.

No organisation has sole responsibility for ensuring that society adapts successfully to the effects of climate change on the water environment. Most will be achieved by working together and in partnership. This river basin management process provides an excellent framework to help focus and co-ordinate activities. In particular it will allow action to be taken on existing pressures at sites that are at risk and where appropriate restore the natural characteristics of catchments to protect water quality, maintain water resources and reduce the risks of floods and droughts thus building resilience to the further impacts of climate change.

Working with other plans and programmes

A wide range of planning processes help ensure more sustainable management of the water environment. They are briefly described here.

Development planning

Development planning plays a key role in sustainable development and we, the Environment Agency, will continue to work closely with planning authorities. We aim to ensure that planners understand the objectives of the Water Framework Directive and are able to translate them into planning policy.

There are many planning processes and provisions involved. They include:

- national guidance;
- Regional Spatial Strategies
- Local Development Documents;
- local guidance (e.g. Supplementary Planning Documents).

In the Anglian River Basin District, there are already spatial plans which set out proposed levels of growth and development up to 2026. The Region will see a substantial amount of new development in the next 15-20 years particularly in areas identified for growth or regeneration. The three largest Growth Areas include substantial areas within the region:

- Thames Gateway, a regeneration area of national importance which includes parts of South Essex (Essex Thames Gateway)
- London-Stansted-Cambridge-Peterborough
- Milton Keynes – South Midlands, which includes Luton, Bedfordshire and North Northamptonshire Housing Market Area

Good development planning requires a very clear understanding of:

- where to locate new development such as houses;
- the options for sewage treatment;
- the best ways to reduce nutrients from diffuse pollution.

The adopted regional plans that cover the Anglian River Basin District encourage local authorities to ensure that their plans, policies, programmes and proposals take account of the environmental consequences of river basin management plans.

In the Anglian Region, the Environment Agency is already working with Anglian Water to identify any potential constraints to growth associated with the environmental capacity of receiving watercourses at Waste Water Treatment Works throughout the region. The study looks at the environmental capacity from two perspectives; from a water quality point of view, and in terms of flood risk. It is hoped by this early warning and forward planning, possible future serious problems can be avoided.

It is acknowledged that any increase in discharge will inevitably result in an increase in flood risk and also deterioration in water quality if works are not upgraded. The aim of this study is to provide some clarity to the likely scale of that increased risk. The results of this work will inform the review of Regional Spatial Strategies, the new Single Regional Strategies and other planning policies for councils.

Flood risk and coastal erosion planning

There is a separate planning process for flood and coastal erosion risk management introduced by the new European Floods Directive (Directive 2007/60/EC on the assessment and management of flood risks). This requires that the environmental objectives of the Water Framework Directive are taken into account in flood and coastal erosion plans. Implementation of the Floods Directive in England and Wales will be co-ordinated with the Water Framework Directive. The delivery plans and timescales for the two directives will be closely aligned.

Catchment Flood Management Plans (prepared by the Environment Agency) and Shoreline Management Plans (prepared by local coastal authorities and the Environment Agency) set out long term policies for flood risk management. The delivery of the policies from these long term plans will help to achieve the objectives of this and subsequent river basin management plans.

The Environment Agency plans its flood and coastal risk management capital investment through the ‘Medium Term Plan’, which is a rolling five-year investment plan. Using this, we have identified flood and coastal risk management activities that will deliver one or more restoration or mitigation measures included in this plan. Although these activities will be carried out for flood risk management purposes, they will be carried out in such a way to ensure any impacts are minimised and that the ecology is protected. Activities will not lower water body status unless fully justified under Article 4.7 of the Water Framework Directive.

Marine planning

The Marine Strategy Framework Directive is closely linked with the Water Framework

Directive and their application overlap in estuaries and coasts. The Environment Agency is working with Defra, Welsh Assembly Government and others to ensure that the implementation of both Directives is fully integrated.

Managing new physical modifications

In specific circumstances the Water Framework Directive provides a defence for when, as a result of a new physical modification, good ecological status or potential cannot be achieved or where deterioration in status occurs. This is covered under Article 4.7 of the Directive.

Although protecting the water environment is a priority, some new modifications may provide important benefits to human health, human safety and/or sustainable development.

Such benefits can include:

- public water supply;
- flood defence/alleviation;
- hydropower generation;
- navigation.

It is often impossible to undertake such activities without causing deterioration of status to the water body. The benefits that such developments can bring need to be balanced against the social and economic benefits gained by maintaining the status of the water environment in England and Wales.

The Environment Agency has developed a process for applying the tests and justifications required for such new modifications (Article 4.7) and will work with stakeholders to ensure these provisions are met during the first cycle of river basin management.

Other planning processes

The Environment Agency is also working to align planning processes in other areas. These include water resources and water quality, agriculture and rural development and natural heritage. Annex J provides further information about other planning processes.

6 The state of the water environment in 2015

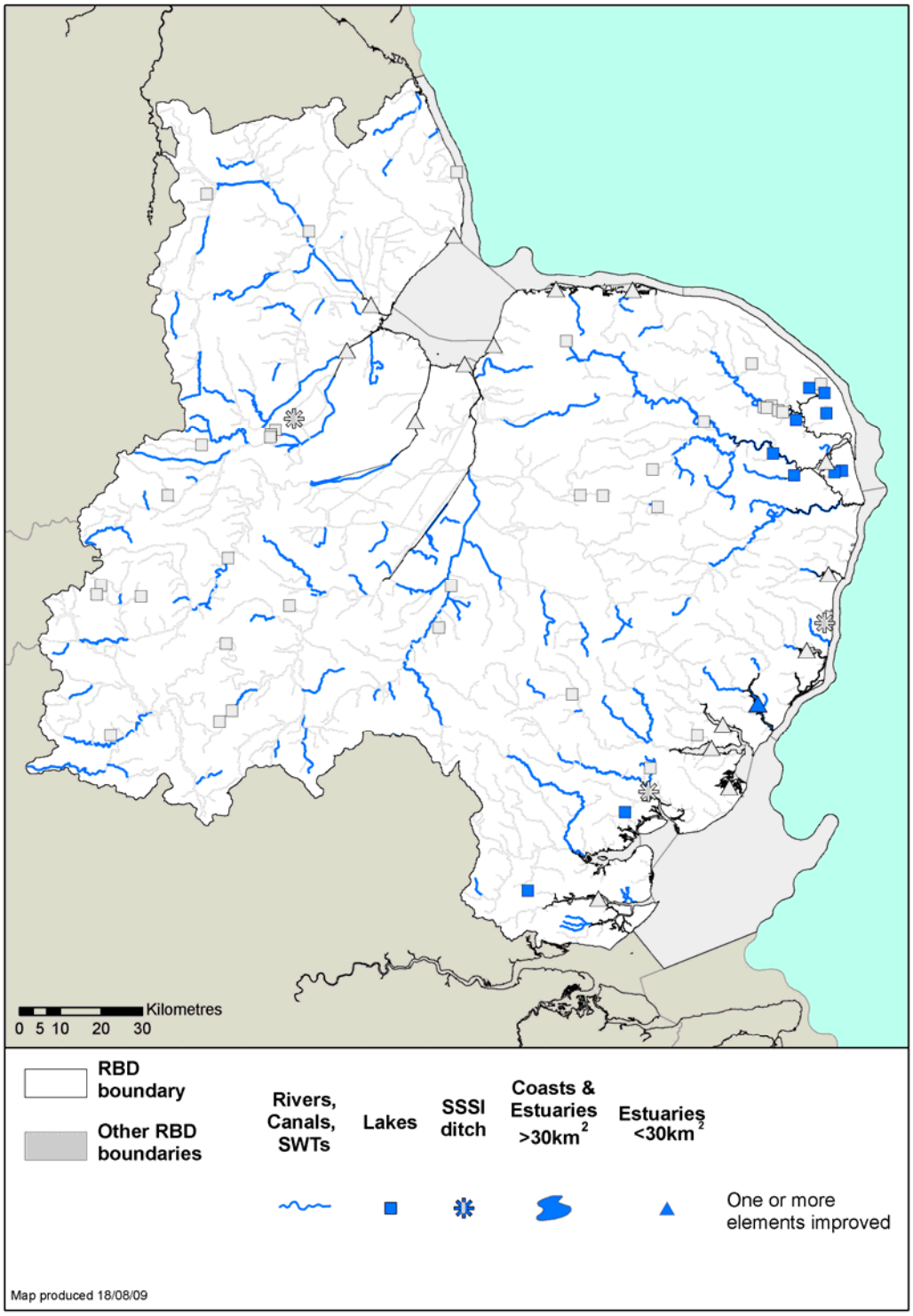
One of the objectives of the Water Framework Directive is to aim to achieve good status in all water bodies by 2015. For 80 per cent of water bodies these targets cannot be met by this date. Greater improvement in status is limited by the current understanding of pressures on the water environment, their sources, and the action required to tackle them.

By 2015, over 16 per cent of all surface waters in the Anglian River Basin District will show an improvement for one or more of the elements measured. For rivers and canals alone, this improvement is 16 per cent, which translates to over 1,700km of river improvement and is illustrated in Figure 5.

In the Anglian River Basin District these elemental improvements include the following:

- 772 km of rivers and 7 lakes will improve class for phosphate
- 96 km of rivers will improve class for ammonia
- 112 km of rivers will improve class for dissolved oxygen
- 602 km of rivers will improve class for fish
- 126 km of rivers will improve class for invertebrates
- 185 km of rivers will improve for diatoms
- 43 km of rivers and 2 lakes will improve for macrophytes
- 2 lakes will improve class for phytoplankton

Figure 5 **Surface water bodies showing an improvement for one or more elements**



Figures 6 and 7 show what ecological and biological status will be in 2015 compared to now. By 2015, 19 per cent will be in at least good ecological status/potential and 36 per cent of surface waters will be in at least good biological status. Figures 10 and 11 show the predicted quantitative status and chemical status for groundwater in 2015.

Figure 6 **Ecological status/potential of surface water bodies now and in 2015**

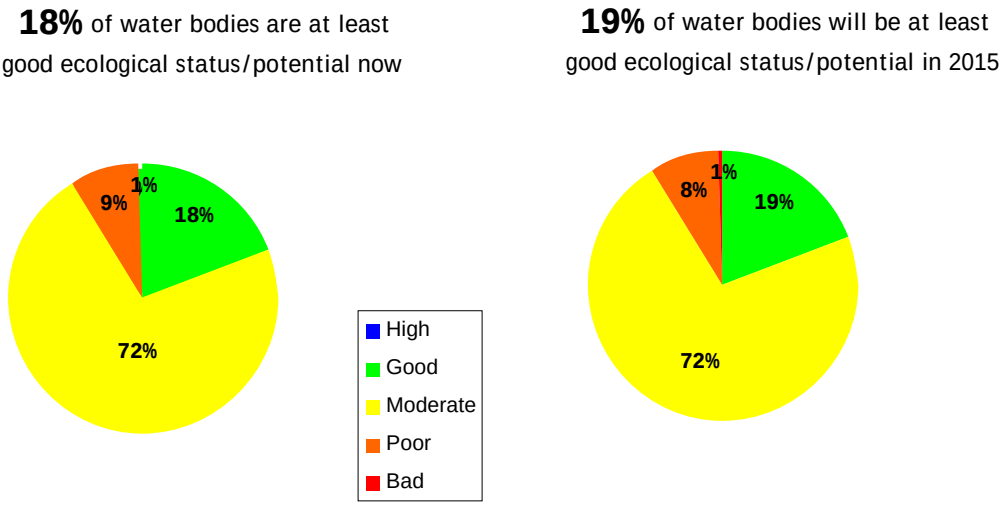
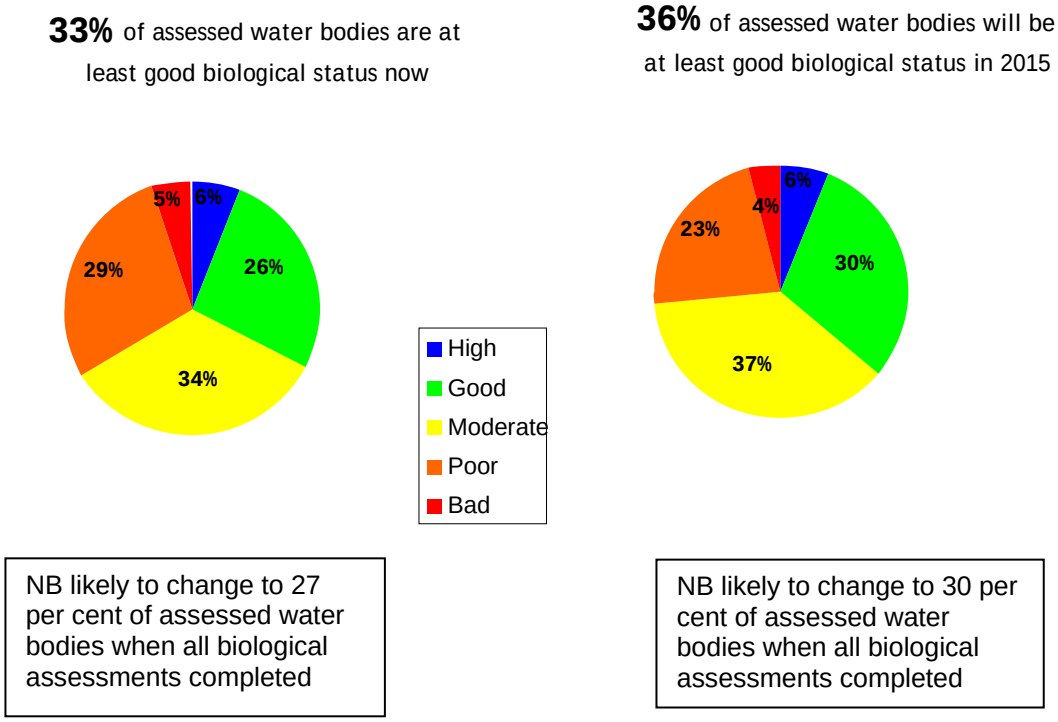


Figure 7 **Biological status of surface water bodies now and in 2015**



NB likely to change to 27 per cent of assessed water bodies when all biological assessments completed

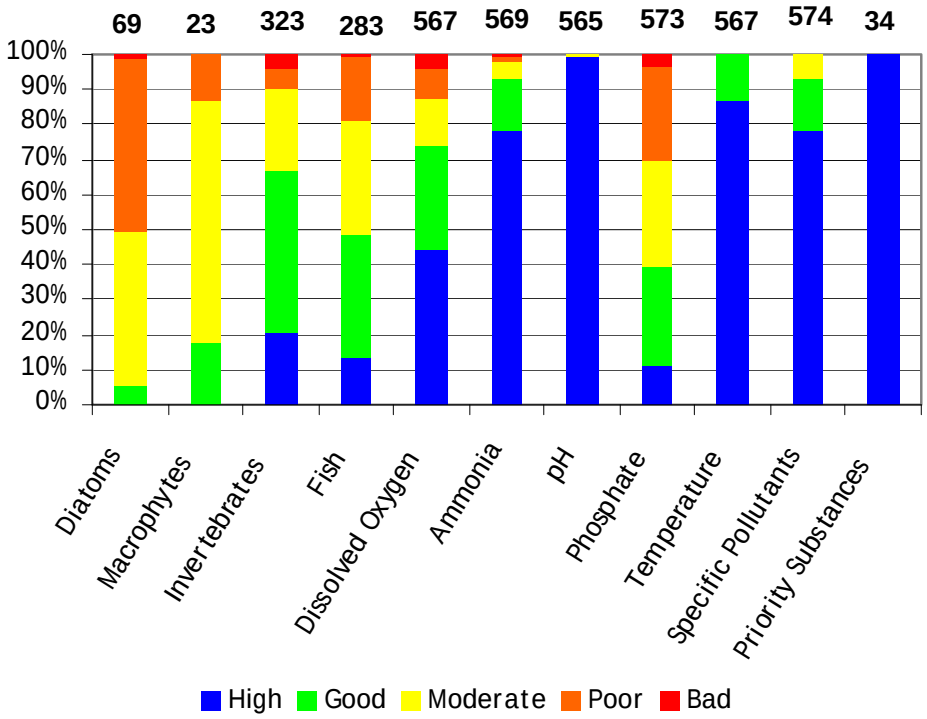
NB likely to change to 30 per cent of assessed water bodies when all biological assessments completed

For groundwater bodies, 65 per cent will be at good quantitative status by 2015 and 65 per cent will be at good chemical status.

For the 584 artificial and heavily modified water bodies, 17 per cent will be in at least good ecological potential in 2015, compared to 26 per cent of the 251 natural surface water bodies being at good or better ecological status.

Figure 8 **Predicted proportion of river water bodies in each status class, by element, for 2015**

(numbers above bars indicate total number of water bodies assessed)



For many estuaries, coasts and lakes it is unlikely that an improvement in the number of water bodies at 'good' status/potential can be achieved by 2015. The biological tools and monitoring data needed to classify these types of water bodies have only recently been developed. There is limited knowledge about the pressures that affect many of these water bodies and how their biology responds to changes in these pressures. It has therefore not been possible to identify many additional cost effective and proportionate measures. In many cases though there will be improvements to some key elements as the result of actions in this plan and there will be investigations to help find technically feasible actions that are not disproportionately costly. The Environment Agency wants these waters to achieve good overall status or potential by 2021 or 2027.

There will be no deterioration in groundwater status by 2015, but improvement will take place over longer timescales. Figures 10 and 11 show the predicted quantitative and chemical status of groundwater in 2015.

Looking at overall status, the combination of ecological status/potential and chemical status, 19 per cent of surface water bodies are expected to meet good overall status by 2015.

Investigations – improving outcomes for 2015

In many cases we, the Environment Agency, are not able to identify appropriate status actions for water bodies that are currently not achieving good ecological status. Sometimes this is because the cause of the problem and its sources are not yet known. Sometimes this

will involve gaining corroborative evidence of biological problems to justify expenditure where there is low confidence of failure of chemical standards. In other cases the most appropriate solution to the problem needs to be researched. Investigations into these types of issues will be an important measure during the first cycle.

Where possible, investigations will take place before 2013 so that the results are known in time for the formal review of this plan by 2015. The Environment Agency has identified a significant number of surface water bodies that require investigations in this plan. A proportion of these will lead to actions that should be straightforward to put in place before 2015. The outcome of our detailed planning work is that we have confidence that 19 per cent of surface waters will be in good or better ecological status/potential by 2015. This is our formal target for this plan.

Across England and Wales we have a formal target of achieving 31 per cent of surface waters in good ecological status or potential by 2015. Improvement to the water environment has to be managed as a continuum, not in isolated six year cycles. We are already confident in this river basin district that 16 per cent of surface waters will be improved by for at least one element by 2015. We are also confident that a proportion of investigations will lead to action that we can put in place before 2015. To ensure we capture these additional opportunities, we will be ensuring that the Anglian River Basin District makes its contribution to a goal of achieving up to 33 per cent of surface waters across England and Wales at good status or potential by 2015.

Figure 9 **Predicted status or potential of surface water bodies in 2015**

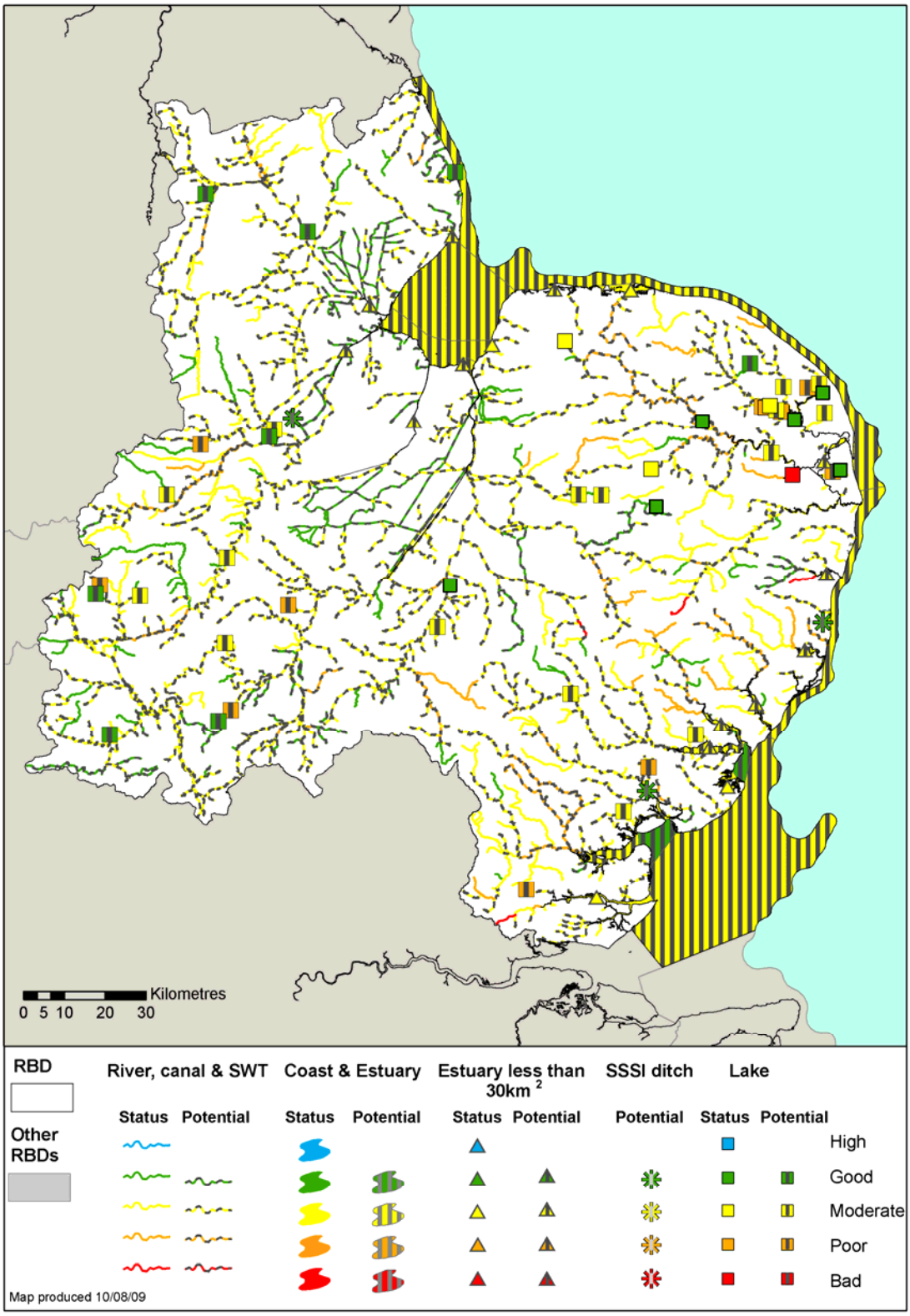


Figure 10 **Predicted quantitative status for groundwater in 2015**

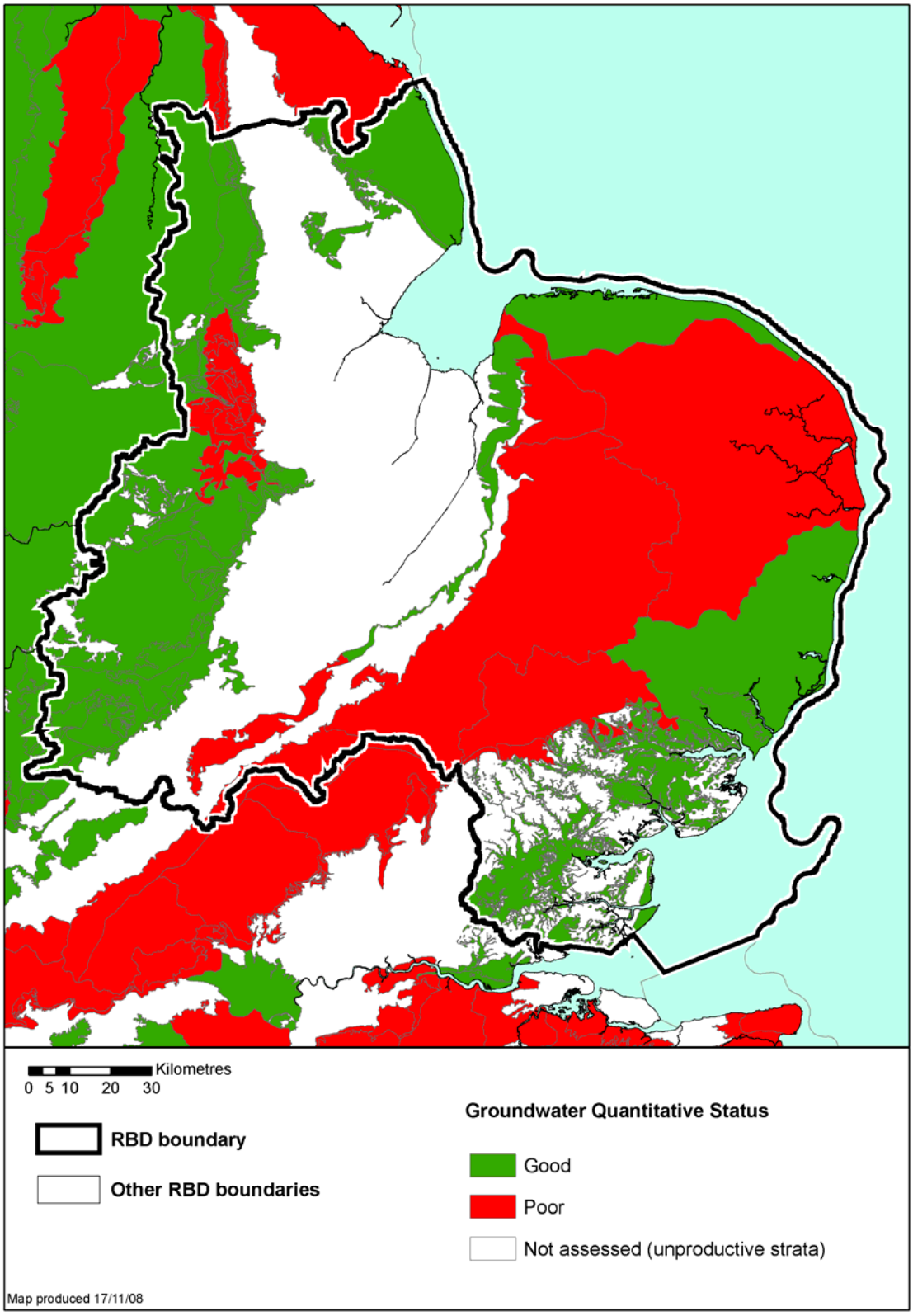
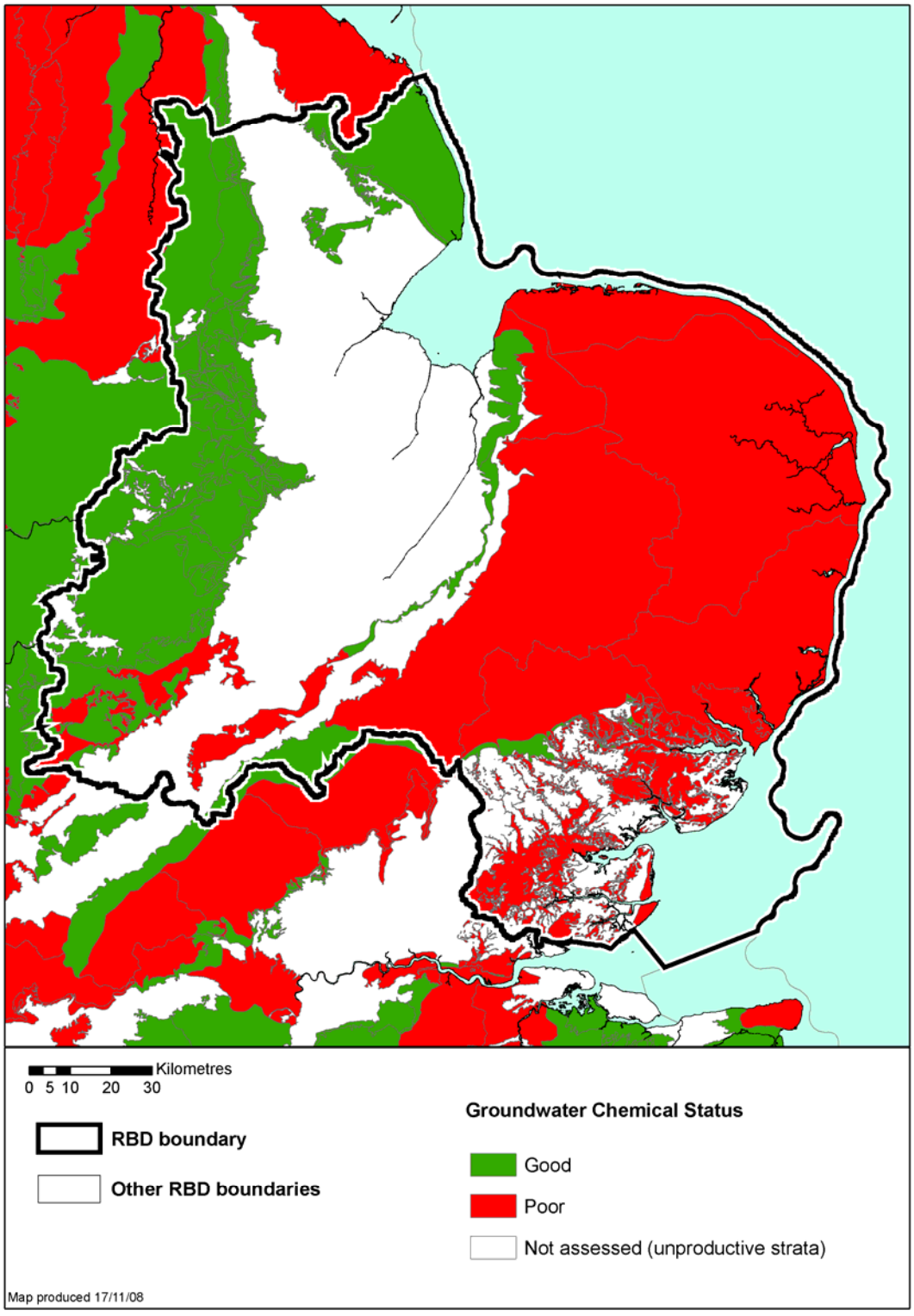


Figure 11 **Predicted chemical status for groundwater in 2015**



7 Targets for subsequent cycles

There are three river basin management cycles: 2009-2015, 2015-2021 and 2021-2027. Achieving good status in all water bodies by 2027 is a significant challenge.

The information gained from investigations during the first cycle will help to accelerate improvement to known issues using both traditional and novel techniques in both second and third cycles. New issues will arise though.

This plan sets out where good status cannot be achieved by 2015. This relates to 81 per cent of rivers, 65 per cent of lakes, 100 per cent of estuaries, 73 per cent of coastal waters and 55 per cent of groundwater.

In these cases an alternative objective of good status or potential by 2021 or 2027 is set (see Annex E).

Over the period to 2027, the pressures on the water environment will change, particularly because of climate change. It is not known in detail how the water environment will respond to this.

The population in the river basin district will continue to increase, with further urbanisation. Agriculture will respond to the changing climate both here and abroad, market conditions, financial incentives and regulatory pressures. Technology and other solutions to address the pressures will improve, but the rate at which some new solutions can be introduced will depend on the economic climate.

The Environment Agency believes that achieving good status in all water bodies by 2027 will not be possible using only current technologies. Even achieving 75 per cent good status will require marked changes in land use and water infrastructure, such as a major programme to separate foul and surface water sewers across most of the river basin district. By current standards, such changes are extremely unlikely to be economically or socially acceptable. For some waters therefore, achieving good status by 2027 may not be technically feasible or may be disproportionately costly.

The Environment Agency wants to work with others to find and implement additional actions to improve the environment, with the aspiration of achieving good status in at least 60 per cent of waters by 2021 and in as many waters as possible by 2027.

The water environment now and objectives for 2015 are described further in the section 'Anglian River Basin District catchments in 2015'. A summary of the key statistics for the river basin district is provided in Section 10.

8 Anglian River Basin District catchments

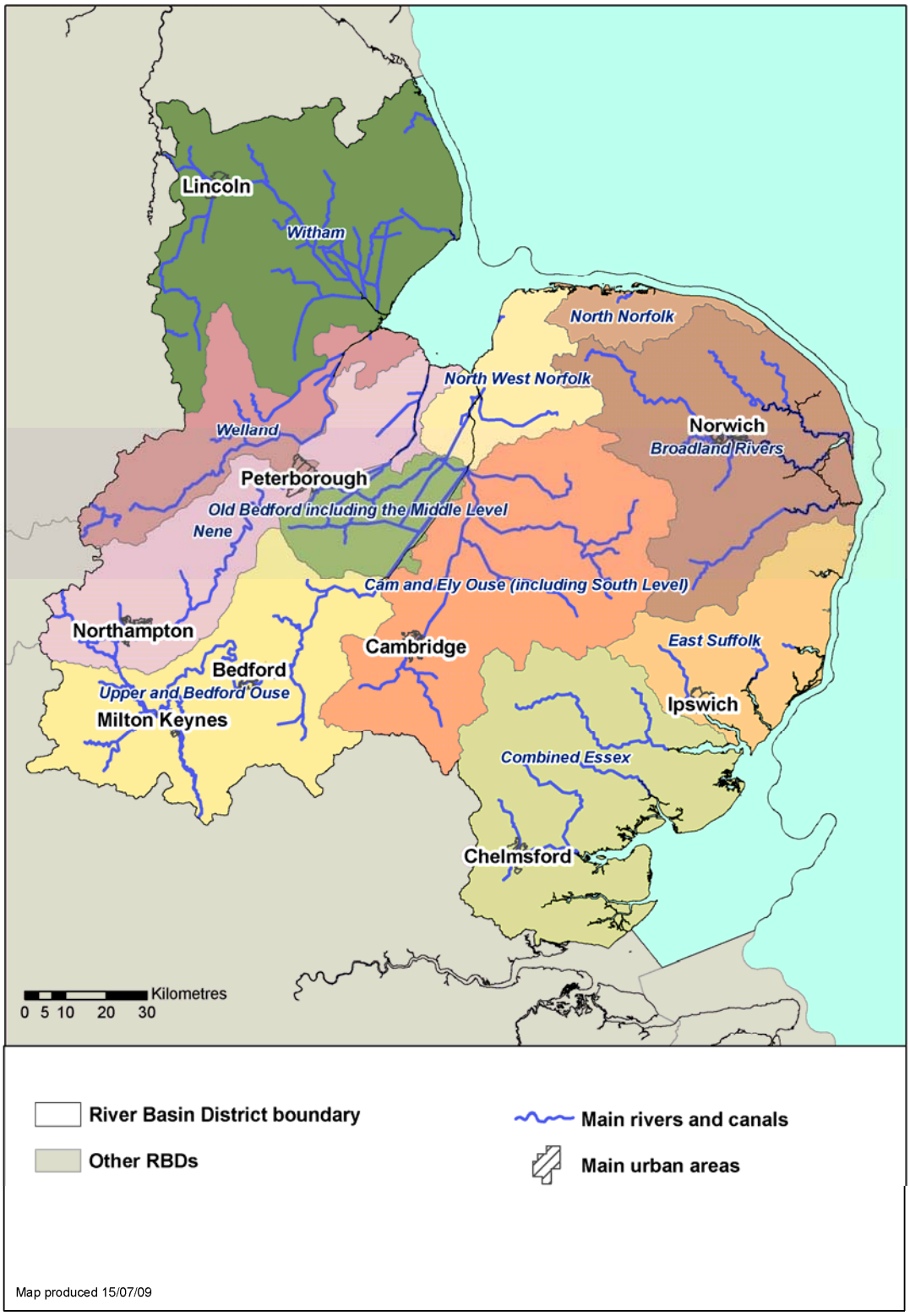
This section summarises information about the status of waters in the different parts of the Anglian River Basin District, their objectives and some of the actions for them.

Rivers and lakes are grouped by catchment. There are 11 catchments, presented here.

- **Broadland Rivers**
- **Cam and Ely Ouse (including South Level)**
- **Combined Essex**
- **East Suffolk**
- **Nene**
- **North Norfolk**
- **Northwest Norfolk**
- **Old Bedford including the Middle Level**
- **Upper Ouse and Bedford Ouse**
- **Welland**
- **Witham**

There are separate sections for **estuaries and coastal waters**, and **groundwater**.

Figure 12 **Map of the catchments in the Anglian River Basin District**



Broadland Rivers

This catchment covers a relatively flat area of approximately 3,188 km^2. The area is mostly rural, with a few larger urban areas including the City of Norwich, Great Yarmouth and Lowestoft. The main land use in the catchment is arable agriculture, although there are pockets of water-dependent industries around Norwich. Tourism and water-based recreational pursuits such as boating and angling, are vitally important to the Broadland Rivers economy. The tidal rivers in the Broadland Rivers area form the third largest inland navigation in Britain.

The Broadland Rivers area also encompasses the Broads Executive Area (status equivalent to a National Park Area) and has a high density of local and nationally important protected sites, including the Broads and River Wensum Special Areas of Conservation (SACs) and the Broadland Special Protection Area (SPA), both of which are protected under European law.

Several key centres of growth are planned in this catchment. By 2021, additional homes are planned around the growth point of Norwich (10,500), and also at Great Yarmouth (5,000) and Lowestoft (4,000) where significant development is planned on waterfront sites. In addition, a potential Ecotown has also been proposed at Rackheath in the Broadland Rivers catchment. Actions will be taken to ensure that these developments do not adversely impact on the water environment (refer to Annex C).

Table 5 **Key statistics at a glance for the Broadland rivers catchment**

	Rivers		Lakes	
	Now	2015	Now	2015
% at good ecological status or potential	8	9	17	28
% assessed at good or high biological status (59 water bodies assessed)	27	27	15	38
% assessed at good chemical status (7 water bodies assessed)	29	100	75	100
% at good status overall (chemical and ecological)	8	9	11	28
% improving for one or more element in rivers		25		56

There are 93 river water bodies in the catchment and 18 lakes. More than 27 per cent of rivers (132km of river length) and 15 per cent of lakes currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 33 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that 358 km, 25 per cent of rivers by length, in the Broadland Rivers catchment will improve for at least one element by 2015. For example in this catchment, 194 km of rivers will show class improvements for phosphate, 97 km for diatoms and 68 km for fish.

Some key actions for this catchment:

- Installation of a permanent eel pass and trap at Taverham on the River Wensum.
- The Bure Valley Living Landscape. The purpose of this initiative is to increase connectivity between the 6 Sites of Special Scientific Interest in the lower Bure valley. This will be achieved by re-naturalising the river and enhancing arable land to reduce diffuse pollution. An important element will be to develop new opportunities for people to enjoy wildlife.
- Pennywort control on River Waveney and Rockland Board.
- Partnership working in the Broads to deliver Wetland Opportunities, with wetland sites being enhanced that include South Fen in the Ant, Hickling in the Thurne and Upton in the Bure.

Cam and Ely Ouse (including South Level)

The Cam and Ely Ouse catchment comprises an area of approximately 3,600 km^2, encompassing Cambridge, Royston, Saffron Walden, Newmarket, Bury St Edmunds, Ely and Swaffham. This area contains a stretch of the Ely Ouse, from Earith to Denver, as well as the Wissey, the Little Ouse, the Lark and the Cam. It, also includes an area of Fenland, the South Level, which derives its water from the Ely Ouse.

The catchment supports a number of nationally and internationally important water-related sites that are of exceptional value.

Many of the rivers monitored within the area are naturally slow flowing, with the result that dissolved oxygen levels are significantly lower than those found in upland regions. High nutrient levels are a problem in many watercourses and can lead to prolific algae growth and associated dissolved oxygen problems. Duckweed cover can also be extensive.

Key centres of growth are planned in this catchment. By 2021, additional homes are planned at Cambridge (16,500), Thetford (6,000) and Bury St Edmunds (8,000). There will be considerable pressures from these developments to provide a water supply from an area where water resources are scarce and already allocated for abstraction or the environment. In addition, a potential Ecotown has been proposed at Hanley Grange. Development actions (refer to Annex C) will therefore be required to achieve good ecological status and prevent the deterioration of water bodies.

Table 6 **Key statistics at a glance for the Cam and Ely Ouse catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	17	18
% assessed at good or high biological status (61 water bodies assessed)	27	29
% assessed at good chemical status (17 water bodies assessed)	94	94
% at good status overall (chemical and ecological)	17	18
% improving for one or more element in rivers		22

There are 83 river water bodies and 5 lakes in the catchment. Over 27 per cent of rivers and lakes (in excess of 173km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 20 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that 236 km, 24 per cent of rivers by length, in the Cam and Ely Ouse catchment will improve for at least one element by 2015. For example, in this catchment 182 km of rivers will show class improvements for phosphate and 29 km for invertebrates.

Some key actions for this catchment:

- Loss of marshland at the coast, to be compensated for by 65ha of created wetland at Hilgay.
- Trialling of soft bank protection methods along the River Cam between Milton and Waterbeach to prevent bank erosion and protect towpath.
- Water Cycle Study/Strategy for Forest Heath and St Edmundsbury to address the impact of development on infrastructure capacity, water resources and receiving waters.
- Investigation into the effects of moored boats on sediment deposition on the River Cam.

Combined Essex

The Essex Rivers area lies within the counties of Essex and Suffolk as well as a small part of Cambridgeshire. It encompasses the rivers and tributaries of the Stour, Colne, Pant/Blackwater, Chelmer, Crouch and Roach, along with the smaller catchments of Sixpenny, Tenpenny, Holland and Asheldham Brook.

The Ely Ouse to Essex Transfer Scheme augments flows in the River Stour and River Pant/Blackwater to enable the public water supply abstractions to take place when natural flows in the rivers are not sufficient.

The water environment is used for a variety of activities including recreation, public water supply, fisheries and conservation. The area is rich in landscape and wildlife heritage and most of the coast is of international importance for conservation.

Key centres of growth are planned through the catchment. By 2021, additional homes are planned at Colchester (12,500), Chelmsford (12,500), Basildon (9,500) and Southend (4,000). These will place cumulative pressures on water resources and on estuaries into which they discharge treated effluent, and development actions (refer to Annex C) will be required to achieve good ecological status and prevent deterioration of water bodies. Flood alleviation schemes along the coast offer opportunities to create new coastal habitat, for example, salt marshes through the managed realignment of coastal flood defences.

Table 7 **Key statistics at a glance for the Combined Essex catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	7	7
% assessed at good or high biological status (68 water bodies assessed)	33	33
% assessed at good chemical status (7 water bodies assessed)	67	78
% at good status overall (chemical and ecological)	7	7
% improving for one or more element in rivers		8

There are 125 river water bodies and 5 lakes in the catchment. Over 33 per cent of rivers and lakes (in excess of 280km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 12 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that over 198 km, 19 per cent of rivers by length, in the Combined Essex catchment will improve for at least one element by 2015. For example, in this catchment 158 km of rivers will show class improvements for phosphate and 26 km for dissolved oxygen.

Some key actions for this catchment:

- Installation of elver passes to provide habitat improvement in river channel and eel migration. Schemes located at :Kings Mill, Stonham Back Cut, Cuton Back Cut, Barnes Mill, Broomfield Mill, Langleys Weir, Howe ST. Mill, Wickham Place, Blue Mills, Greys Mill, Easterford Mill, Blackwater Mill, Bradwell, Stisted Mill, Convent Lane Wiers, Cooks Mill, Ford ST. Mill, Chappel Mill, Chalkney Mill, Earls Colne Mill, Townsford Mill, Hulls Mill, Alderford Mill.
- In response to increasing pesticide concentrations in the Rivers Stour, Chelmer and Blackwater Essex & Suffolk Water has appointed two catchment Officers to work with farmers, growers, landowners and agronomists and other pesticide users in the catchments with the aim of reducing pesticides entering watercourses.
- Floating pennywort removal projects.

Case Study 2: **Bures Mill Fish Pass, River Stour**

A recent success story within the Stour catchment has been the creation of Bures Mill bypass channel as a natural fish pass. Bures Mill sluice is situated on the River Stour, a lowland river forming the Essex Suffolk border. The sluice provides essential water control allowing effective flood management of the river but this sluice also acts as an almost total obstruction for upstream passage of coarse fish and eels.

A bypass channel was created as a natural fish pass with riffles and pools along the dried bed of the original course of the river in 2009, making an additional 51.7km km of river and tributaries freely accessible to eels. It also allows other fish species present to undertake their natural migration patterns. The fish pass will enhance spawning habitat for a number of fish species and be beneficial to the water vole population, which is now only found at this location on the Stour. This project has been carried out in partnership with the Essex Wildlife Trust.

East Suffolk

The East Suffolk Rivers area encompasses the valleys, tributaries and estuaries of the Rivers Gipping, Deben, Alde, Thorpeness Hundred, Yox, Blyth and Lothingland Hundred. The area is mostly rural with a few towns: Ipswich, Felixstowe, Stowmarket, Woodbridge, Leiston, Halesworth and Needham Market.

Agriculture is the predominant land use within the area, though there are pockets of industry which include food processing, milling, malting and the manufacture of farm machinery and fertilizers.

The area has a rich landscape and includes the Suffolk Coasts and Heaths Area of Outstanding Natural Beauty (AONB) and the Suffolk Rivers Valleys Environmentally Sensitive Area. Areas of the coast are of international importance for conservation.

Many of the East Suffolk rivers are impacted by drought and periods of low flows, which is reflected in the dissolved oxygen levels measured in some of the these rivers dropping to low levels. Despite this, some are still able to support a reasonable cyprinid population dominated by roach, bream, dace and chub.

The key centre of growth planned in this catchment is Ipswich, where 20,000 additional homes are planned for 2021. Development actions (refer to Annex C) will be required to achieve good ecological status and prevent deterioration of water bodies.

Major infrastructure expansion is expected at the port at Felixstowe. In addition, there is the nuclear power generation site on the coast at Sizewell, which may undergo expansion. Again, actions will be necessary to mitigate any negative impacts and ensure good ecological status is achieved.

Table 8 **Key statistics at a glance for the East Suffolk catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	17	17
% assessed at good or high biological status (34 water bodies assessed)	15	15
% assessed at good chemical status (2 water bodies assessed)	100	100
% at good status overall (chemical and ecological)	17	17
% improving for one or more element in rivers		11

There are 65 river water bodies in the catchment and no lakes. Over 15 per cent of rivers (28km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 9 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that over 48 km, 10 per cent of rivers by length, in the East Suffolk catchment will improve for at least one element by 2015. For example in this catchment, 43 km of rivers will show class improvements for phosphate and 11 km for dissolved oxygen.

Some key actions for this catchment:

- The Blyth-Alde landscape partnership vision will encourage a re-emergence of the natural landscape between the two estuaries creating a large sustainable area of unique beauty whose evolution whilst founded on the past will be of benefit to both people and wildlife in the future.
- The Valley Fens Living Landscape Project seeks to preserve the integrity of some of the most diverse and richest wetland habitats in Suffolk through buffering and linking the best remaining sites.
- The National Trust has carried out a Coastal Risk Assessment on its properties to evaluate land and buildings in relation to future flood and erosion risks on the coast. A Coastal Adaption Strategy has been completed for Orford Ness.
- Establishment of the agricultural water abstractor group ESWAG (East Suffolk Water Abstractor Group)

Nene

The River Nene rises in Northamptonshire and flows through Northampton, Peterborough, Wisbech and Sutton Bridge before discharging into The Wash. To the east of Peterborough the catchment is typical low lying fen. Internal Drainage Boards maintain a network of drains and control water levels in this area. West of Peterborough much of the landscape is undulating, dissected by the valley of the River Nene and its tributaries.

The River Nene is an important source of raw water to fill both Pitsford and Rutland Water reservoirs for public water supply. It is also important for navigation and recreational uses. The navigation connects with the Grand Union Canal in Northampton and with the Middle Level River System at Stanground. There is no significant groundwater abstraction in the catchment, due to the absence of major aquifers. The Nene Washes, which lie downstream of Peterborough, have been classified as a Special Protection Area (SPA) and Ramsar site. The area floods seasonally providing an important flooded grassland habitat for a wide range of bird species.

A number of large discharges are made to the Nene. These include treated effluent from sewage treatment works (STWs) and industrial sources and are one of the major influences on the quality of the surface water within the catchment.

The catchment contains a diverse and in many cases, prolific fish community. The main pressures affecting fisheries are low flows and associated problems such as poor dilution of treated effluent, barriers to fish movement and habitat degradation through flood defence and navigation works.

Key centres of growth are planned for 2026 at Peterborough (24,000), Daventry (13,500), Wellingborough (16,225), Kettering (16,250) and Corby (22,100). There are, therefore, pressures from the cumulative impacts of planned development in the Nene catchment; and development actions (refer to Annex C) will be required so that there is good ecological status and no deterioration of its water bodies.

Table 9 **Key statistics at a glance for the Nene catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	21	22
% assessed at good or high biological status (31 water bodies assessed)	47	56
% assessed at good chemical status (11 water bodies assessed)	82	91
% at good status overall (chemical and ecological)	21	22
% improving for one or more element in rivers		9

There are 69 river water bodies in the catchment and 4 lakes. Over 47 per cent of rivers and lakes (183km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 6 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that over 98 km, 16 per cent of rivers by length, in the Nene catchment will improve for at least one element by 2015. For example in this catchment, 44 km of rivers will show class improvements for invertebrates and 55 km for fish.

Some key actions for this catchment:

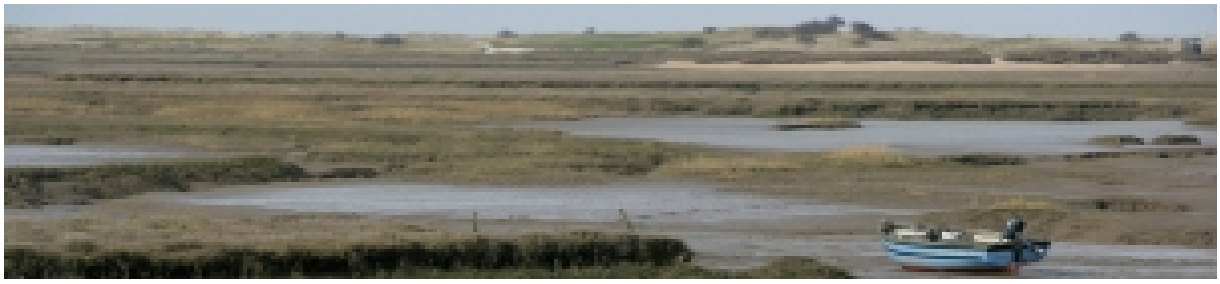
- The Revital-ISE project. This will endeavour to implement improvements along the length of the Ise valley with the aims of enhancing the biodiversity, providing increased access, increasing leisure and recreational activities, improving the landscape value and restoring the natural floodplain where possible.
- Stanwick Lake Higher Level Stewardship to restore wet grassland and reed bed areas in Stanwick Country Park.
- Nene Park Fisheries Project. Working with Nene Park Trust to improve angling, fisheries and biodiversity.
- Floating Pennywort Control on the River Nene. Rolling programme targeting floating pennywort on the Upper Nene.

Case Study 3: **River Nene England Catchment Sensitive Farming Delivery Initiative Strategic partnership.**

Diffuse pollutions is one of the most significant pressure in the Anglian River Basin District. We are working in Partnership with Natural England and River Nene Regional Park to deliver England Catchment Sensitive Farming Delivery Initiative advice in the River Nene catchment. This will help deliver benefits for water quality and will benefit the quality of water for drinking, reducing the burden of treatment. This partnership project will run until

April 2011 and will deliver over £100,000 worth of advice to Farmers, Land manager and others with an interest in diffuse pollution.

North Norfolk



The North Norfolk area is geographically small and comprises of a relatively narrow strip of land along the North Norfolk coast. The catchment is predominantly rural, with the largest towns being Mundesley, Cromer, Sheringham, Holt and Wells-next-the-Sea.

The main watercourses are the Rivers Hun, Burn, Glaven, Stiffkey, Mun, all of these are relatively small in terms of both flow and length but are important in terms of the biodiversity they support.

The area supports a variety of land uses, although most is agricultural land used for the production of cereals and root crops, there is also some animal husbandry and horticulture. The landscape value of North Norfolk is recognised in its designation as part of the Norfolk Coast Area of Outstanding Natural Beauty (AONB).

Fisheries in the Rivers Burn, Glaven and Stiffkey are diverse, though populations are limited in some parts of the watercourses by degraded habitats and barriers to migration. There are, however, thriving brown trout populations and the rivers may have potential for sea trout if access and spawning habitat is improved.

There is no key centre for growth in the North Norfolk catchment which is planned as part of the East of England region, though small scale development is expected throughout the area and development actions (refer to Annex C) will be required to ensure achievement of good ecological status and prevent the deterioration of water bodies.

Table 10 **Key statistics at a glance for the North Norfolk catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	0	0
% assessed at good or high biological status (6 water bodies assessed)	17	17
% assessed at good chemical status (0 water bodies assessed)	0	0
% at good status overall (chemical and ecological)	0	0
% improving for one or more element in rivers		50

There are 6 river water bodies in the catchment and no lakes. Over 17 per cent of rivers (10km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 3 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that nearly 30 km, 36 per cent of rivers, by length, in the North Norfolk catchment will improve for at least one element by 2015. For example in this catchment, 10 km of rivers will show class improvements for dissolved oxygen and 19 km for fish.

Some key actions for this catchment:

- Anglian River Sea Trout Project. Identification and prioritisation of barriers to breeding brown trout populations in several Anglian Rivers including North Norfolk chalk rivers: the Glaven, Stiffkey, Burn and Nar.
- Installation of riffles and flow deflectors to provide habitat improvement in river channel of the River Stiffkey.
- Norfolk Non Native Forum. Appointment of a dedicated coordinator to raise awareness and a network of surveillance and eradication programme. Work with aquatic centres to raise awareness and encourage not to sell invasive plants.
- The River Glaven Conservation Group are restoring sections of the river with riffles, reconnecting the flood plain etc.

North West Norfolk

The North West Norfolk catchment comprises an area of approximately 1,000 km^2 which stretches from Denver to Hunstanton, with major urban areas including Kings Lynn, Downham Market and Hunstanton. This area contains the River Great Ouse (north of the Denver Sluice); the Rivers Heacham, Ingol, Babingley and Nar which originate as springs from the chalk uplands in the east of the area and flow into The Wash; and the lowlands to the west of the Ouse as far as the River Nene. The Fenland region to the west is crossed by numerous man-made. The catchment drains to the tidal River Great Ouse, which outfalls to The Wash.

The North West Norfolk catchment is predominantly rural with a population of 109,000. Most of the population depends, in different ways and degrees, upon the catchment for a living. The countryside is predominantly agricultural in character, gently undulating in form and containing many areas of diverse landscapes. The quality of the agricultural land is indicated by the fact that about a quarter of its land is classified as ‘high quality’ land and is an important national and local resource.

The catchment supports a balanced ecosystem and contains sites of exceptional environmental value which include the River Nar, Roydon Common and Dersingham Bog. Rivers in the low-lying fenland areas are slow flowing, with the result that dissolved oxygen levels are low. Nutrient enrichment is a significant problem in parts of the catchment. Almost all of the catchment to the east of the Great Ouse has been designated a Nitrate Vulnerable Zone (NVZ) under the EC Nitrates Directive.

The key centre of growth planned for this catchment is Kings Lynn where an additional 9,460 homes are planned to be built by 2021. Development actions (refer to Annex C) will be required to achieve good ecological status and prevent deterioration.

Table 11 **Key statistics at a glance for the Northwest Norfolk catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	15	15
% assessed at good or high biological status (11 water bodies assessed)	27	36
% assessed at good chemical status (0 water bodies assessed)	0	0
% at good status overall (chemical and ecological)	15	15
% improving for one or more element in rivers		16

There are 19 river water bodies in the catchment and a single lake. Over 27 per cent of rivers and lakes (49km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 3 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that over 59 km, 27 per cent of rivers by length, in the Northwest Norfolk catchment will improve for at least one element by 2015. For example in this catchment, 3 km of rivers will show class improvements for phosphate and 56 km for fish.

Some key actions for this catchment:

- River Nar restoration - production of management and sediment strategies.
- Gaywood Flood Alleviation Scheme - Reconnection of the Gaywood River to its former flood plain. Within the project there is the opportunity to create new wildlife habitats in the Gaywood Valley that will enhance the amenity of the area.
- Econet - Norfolk Wildlife Trust and the Norfolk Biodiversity Partnership have prepared an ecological network map for Norfolk identifying core areas for biodiversity where protection, enhancement and expansion of the existing resource will be a priority.
- Giant Hogweed control measures on the River Nar SSSI. The aim is to prevent expansion from lower reaches to the Upper Nar.

Case Study 4: **The River Nar Restoration Strategy**

The River Nar SSSI in Norfolk is one of England's premier chalk rivers with transitions to fenland river. A partnership involving the Environment Agency, the Water Management Alliance, Natural England, Norfolk County Council and Anglian Water are working towards Defra's bringing the River Nar SSSI into favorable condition by 2010.

The key issues in achieving favourable condition are river form and function, water quantity and quality.

- The form and function of the river is sub-optimal. Studies on the impacts of structures, barriers and obstructions have contributed to the development of the River Nar Restoration Strategy.
- Work is also ongoing to improve river water quantity by the Environment Agency, through the Restoring Sustainable Abstraction programme.
- Work is also ongoing to improve water quality by the Environment Agency, Norfolk county council and Anglian Water. Phosphate stripping at Litcham has resulted in profound benefits in terms of water quality, and further investigations are proposed to ensure long term improvements.

Old Bedford including the Middle Level

The Old Bedford, including Middle Level catchment comprises an area of approximately 921 km^2, with major urban areas including Whittlesey, March, Ramsey and Chatteris. The local area comprises the Ouse Washes and the Middle Level River Systems.

The Ouse Washes (32 km from Earith to Denver) were created in the 17th century to provide storage of floodwater from the Bedford Ouse catchment. As one of the few remaining areas of Washland, the seasonally flooded Washes support important numbers of wintering and breeding wetland birds. The site is also important for aquatic plants and invertebrates. Another important protected area is Woodwalton Fen.

The Middle Level, 80 per cent of which is fenland and below sea level, is administered by the Middle Level Commissioners. The economy of this rural area is dependent on agriculture due to the creation of some of the most productive soils for arable farming in the UK by historic draining of the Fens.

The very nature of the watercourses in this fenland area, being predominantly man-made pumped drains and low-lying, result in very low dissolved oxygen levels. Nutrient enrichment arising from agricultural run-off and sewage treatment works can encourage excessive weed and algal growth that can also affect water quality. Both the Middle Level River System and the freshwater section of the Hundred Foot River have been designated as Sensitive Areas (Eutrophic) under the Urban Waste Water Treatment Directive. Large parts of the catchment have also been designated a Nitrate Vulnerable Zone (NVZ) under the EC Nitrates Directive. There is no key centre for growth in the Old Bedford catchment. However, existing towns such as March and Chatteris will have significant development (8,000 homes). Development actions (refer to Annex C) will be required to achieve good ecological status and prevent deterioration.

Table 12 **Key statistics at a glance for the Old Bedford catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	25	25
% assessed at good or high biological status (11 water bodies assessed)	64	64
% assessed at good chemical status (1 water bodies assessed)	100	100
% at good status overall (chemical and ecological)	25	25
% improving for one or more element in rivers		25

There are 12 river water bodies in the catchment and no lakes. Over 64 per cent of rivers (96km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 3 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that nearly 23 km, 17 per cent of rivers by length, in the Old Bedford, including Middle level catchment will improve for at least one

element by 2015. For example in this catchment, 14 km of rivers will show class improvements for phosphate and 8 km for dissolved oxygen.

Some key actions for this catchment:

- The Ouse Valley Living Landscape project aims to create a network of species-rich flood meadows, floodplain grazing marsh and wet woodland along the Ouse Valley from St Neots to the Ouse Washes.
- Great Fen Project - to restore over 3,700ha of wildlife habitat in Cambridgeshire, connecting Woodwalton Fen and Holme Fen NNRs.
- Maintenance manuals have been developed by the Middle level Commissions. These are linked to local Biodiversity Action Plans.
- Development of tidal river strategy to address evacuation of water from the Ouse Washes in spring.

Upper Ouse and Bedford Ouse

The Upper Ouse and Bedford Ouse catchment covers an area of approximately 3,000 km^2. The River Great Ouse dominates the area, from its source north of Brackley, all the way to Earith. The Grand Union Canal also bisects the upper catchment.

The catchment supports a wide range of recreational activities, an important navigation and abstraction for a number of uses, including agriculture, public water supply and industry. The major aquifers are the Chalk, Lower Greensand and the Bedford Oolite. The Environment Agency also operates, in partnership with Three Valleys Water, the River Hiz Support Scheme, whereby groundwater can be pumped into the rivers Hiz and Oughton to support it in times of low flow.

Nutrient enrichment is the main water quality problem in the catchment. Both the River Great Ouse and River Ouzel have been designated as Sensitive Areas (Eutrophic) under the Urban Waste Water Treatment Directive (UWWTD) and the majority of the catchment is designated a Nitrate Vulnerable Zone (NVZ).

The character of the land varies from gently rolling in the upper catchment, moving to more extensive river valley flood plains and flood meadows downstream. These areas support a number of wetland sites, including the Special Area of Conservation (SAC) Portholme Meadow. Land use is predominantly agricultural with the major urban areas including Milton Keynes, Leighton Buzzard, Bedford, Hitchin and Huntingdon.

Key centres of growth are planned by 2021 at Milton Keynes (41,000), Bedford & Marston Vale (17,000), Luton and Dunstable (22,000) and Huntingdon (8,000). Pressures from the cumulative impacts of planned development, especially those on water resources and water quality mean that actions (refer to Annex C) will be required to achieve good ecological status and ensure that there is no deterioration.

Table 13 **Key statistics at a glance for the Upper Ouse catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	26	29
% assessed at good or high biological status (46 water bodies assessed)	39	39
% assessed at good chemical status (21 water bodies assessed)	100	100
% at good status overall (chemical and ecological)	26	29
% improving for one or more element in rivers		17

There are 94 river water bodies in the catchment and 5 lakes. Over 39 per cent of rivers (347km of river length) currently achieve at least good biological status.

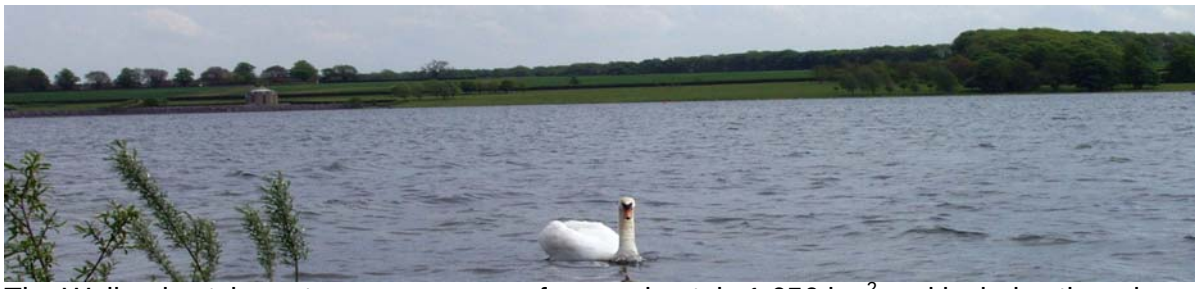
The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 16 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that over 201 km, 20 per cent of rivers by length, in the Upper Ouse catchment will improve for at least one element by 2015. For example in this catchment, 179 km of rivers will show class improvements for phosphate and 28 km for fish.

Some key actions for this catchment:

- Implement eel passage solutions at Hemingford Sluice, Houghton Mill on the River Ivel and at Brownshill all in the Great Ouse system.
- River Ouse Strategic Partnership. This will provide the opportunity to: deliver farm advice through on-farm visits and workshops; channel experiences from the CSF to more farmers; create a farm-scale appraisal of catchment risk and to target solutions; put farmers on a higher priority basis for their application for ELS/HLS; build 'accession partners'.
- Giant Hogweed control measures on the Upper Ouse at Brackley.

Welland



The Welland catchment covers an area of approximately 1,656 km^2 and includes the urban areas of Market Harborough, Uppingham, Oakham, Stamford, northern fringe of Peterborough, Market Deeping and Spalding.

From the headwaters of the River Welland to Stamford a series of small tributaries flow to the north bank of the river. These have steep valley slopes, whilst the Welland itself meanders across a wide floodplain. To the east, the Fenland area predominates and is characterised by low-lying terrain. Here, local Internal Drainage Boards maintain a network of drains, which control water levels.

The major aquifer in the catchment is the Southern Lincolnshire Limestone which is an important source of raw water for public water supply. The River Welland is an important source of raw water for both public water supply to Rutland Water and industrial supply to Eyebrook Reservoir. The river is also important for navigation and recreation; in particular

Rutland Water and the river corridor through Stamford are heavily used, particularly during summer months.

There are a number of areas within the catchment which are of important nature conservation value. Along the higher ground of the Welland Valley there are surviving remnants of ancient woodland. These form important habitats for invertebrates, plants, birds and mammals. Another important site is Rutland Water, created by impoundment of the Gwash valley. This reservoir has been designated as a Site of Special Scientific Interest (SSSI), Special Protection Area (SPA) and Ramsar site as it is a major wetland area.
Key centres of growth are planned for the catchment by the East Midlands Region. By 2026, additional homes are planned focussing on Market Harborough and Spalding**.** Development actions (refer to Annex C) will be required to achieve good ecological status and prevent deterioration of water bodies.

Table 14 **Key statistics at a glance for the Welland catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	24	24
% assessed at good or high biological status (26 water bodies assessed)	24	41
% assessed at good chemical status (5 water bodies assessed)	100	100
% at good status overall (chemical and ecological)	24	24
% improving for one or more element in rivers		37

There are 46 river water bodies in the catchment and 5 lakes. Over 24 per cent of rivers (123km of river length) currently achieve at least good biological status.

The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 17 surface water bodies by 2015. Those waters in the worst state will be prioritised.

Good status has several components. It is estimated that over 224 km, 40 per cent of rivers by length, in the Welland catchment will improve for at least one element by 2015. For example in this catchment, 43 km of rivers will show class improvements for macrophytes and 164 km for fish.

Some key actions for this catchment:

- Installation of riffles and flow deflectors to provide habitat improvement in river channel of the River Welland.
- Welland Sea Trout Project. To re-establish a viable sea trout population in the Welland by enabling natural re-colonisation.
- Welland Rivers Trust Scheme. River enhancements through HLS and working with the Mayfly Fishers, Grantham Fly Fishers, and Gwash Fly Fishers.
- South Lincolnshire Fenland Restoration Project centred on Baston and Thurlby fens (SSSI and nature reserve). Expansion of last remnants of fenland in Lincolnshire to landscape scale through land management, including restoration of gravel workings and measures to secure long-term security of water supply.

Witham

The Witham catchment lies within the county of Lincolnshire. The River Witham rises south of Grantham, passes through Lincoln and drains to The Wash at Boston. Other significant rivers include the Rivers Brant, Till, Bain, Slea and the extensive network of drainage systems in the East and West Fens north of Boston.

There are several urban areas supporting engineering and service-based industries within the catchment. The remainder of the area is extensively rural with good agricultural land. Drainage has historically had a significant effect on the catchment; much of the Fen areas are below sea level. Here, local Internal Drainage Boards maintain a network of drains, which control water levels.

The catchment benefits from the Trent Witham Ancholme River Transfer Scheme. This is a key infrastructure link for managing water resources, maintaining summer water levels and meeting agricultural, public water supply and industrial needs.

The catchment includes over 150 Sites of Special Scientific Interest (SSSIs) in addition to the southern tip of the Lincolnshire Wolds; an Area of Outstanding Natural Beauty (AONB) which has important conservation value. The catchment contains a diverse and prolific fish community. However, a number of barriers to fish movement also exist throughout the catchment which can add to problems of flow stress and reduced oxygenation during the summer months.

Key centres of growth are planned, particularly at Lincoln with 40,600 new homes. Development actions (refer to Annex C) will be required to achieve good ecological status and prevent deterioration of water bodies.

Proposed flood alleviation schemes offer opportunities to create new habitat, such as salt marshes, through managed realignment of coastal flood defences.

Table 15 **Key statistics at a glance for the Witham catchment**

River and lake water bodies	Now	2015
% at good ecological status or potential	23	24
% assessed at good or high biological status (53 water bodies assessed)	38	43
% assessed at good chemical status (9 water bodies assessed)	89	89
% at good status overall (chemical and ecological)	23	24
% improving for one or more element in rivers		12

There are 125 river water bodies in the catchment and 3 lakes. Over 38 per cent of rivers (248km of river length) currently achieve at least good biological status.

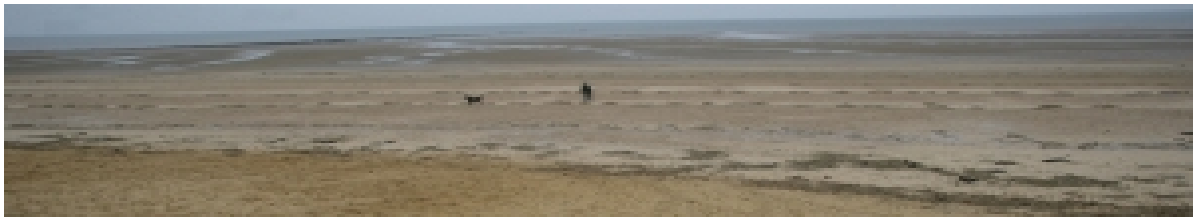
The implementation of actions will improve the status of water bodies throughout the catchment and we predict that they will be enough to improve the status of 15 surface water bodies by 2015. Those waters in the worst state will be prioritised.
Good status has several components. It is estimated that over 226 km, 22 per cent of rivers by length, in the Witham catchment will improve for at least one element by 2015. For

example in this catchment, 39 km of rivers will show class improvements for invertebrates, 35 km for diatoms and 179 km for fish.

Some key actions for this catchment:

- Lincolnshire Marsh Water Vole Project. Establishing a network of land managers that can monitor and trap mink.
- Lincolnshire Coastal Grazing Marsh to retain and increase traditional cattle grazing. Aims to provide incentives for farmers to continue or return to livestock farming with networks of ditches used again as wet fences. Restoration of traditional livestock management in areas that are now predominantly arable.
- A 94ha site at Frampton has been changed from intensive arable production to freshwater wetland grazing marsh. The land replaces habitat being affected by coastal change elsewhere in the river basin district.
- Habitat enhancement work at Great Ponton and Syston. Installation of faggots to reinforce banks and help deflect the flow of water and scour silt from the river bed to benefit white-clawed crayfish as well as brown trout and water vole.

Estuaries and coastal water bodies



The Anglian coasts and estuaries stretch for over 1,800 km from Mablethorpe, on the Lincolnshire coastline, to Canvey Island in the Outer Thames. Several large estuaries including the Wash Embayment, Orwell, Colne and Blackwater discharge to this coastal zone, which also extends inland to include the tidal waters of the Broadland Rivers – Waveney, Bure and Yare.

Much of the coastline is afforded national and international protection for the important habitats and species present, or the landscape and heritage value. The estuaries support internationally important numbers of birds visiting the wetland habitats such as saltmarsh and intertidal mudflats. The designation of a new marine Special Area of Conservation (SAC) off the North Norfolk coastline is currently under consideration.

Large numbers of people visit the coast for the natural attractions navigable waterways, and the 38 recognised bathing beaches. The ‘Blue Flag’ status of several of these beaches highlights the good water quality alongside beach amenities. The estuaries in particular are also very popular areas for recreational sailing and other watersports.

Ports at Felixstowe and Harwich provide nationally significant facilities for container and general cargo handling other ports include Great Yarmouth and Lowestoft which also provide support for the North Sea offshore oil and gas industries. There are also major port developments at Harwich, Ipswich and the redevelopment of Shellhaven (in the adjacent Thames River Basin District) that could have ecological implications, for example, on estuary fisheries.

There are commercial shellfisheries in several estuaries for mussels, cockles and oysters. In the Wash there are also significant fisheries for brown and pink shrimp, whelks and flatfish, and eels are still caught on a commercial basis in the tributary estuaries, although eel populations have declined significantly.

The estuaries have diverse fish communities and are important nursery areas for many estuarine and marine species, including bass.

Continuation of nuclear energy generation is currently under consideration at Sizewell Power Station. In addition, the east coast has become important for offshore wind power, most notably at windfarms off Lowestoft and Great Yarmouth, with others under construction off Skegness and Clacton. These may influence the fixed bed fauna and fish and bird migration routes.

Large areas of hinterland lie below sea level, currently being defended by a combination of natural defences, old sea walls and newer sea defences. There are several areas becoming susceptible to flooding, and long-term strategies to manage the flood defences are currently being developed in conjunction with Shoreline Management Plans. Flood alleviation schemes offer opportunities to create new coastal habitat, as exemplified by the creation of salt marsh in the Blackwater Estuary through managed realignment of coastal flood defences.

Urban and agricultural diffuse inputs are increasingly being highlighted as possible sources of contamination, particularly nutrients and faecal indicator organisms. Actions (refer to Annex C) are being proposed to address these issues and ensure that good ecological status is achieved.

Table 16 **Key statistics at a glance for estuaries and coasts**

	Estuaries		Coastal	
	Now	2015	Now	2015
% at good ecological status or potential	0	0	27	27
% assessed at good or high biological status (16 water bodies assessed)	33	33	86	86
% assessed at good chemical status (13 water bodies assessed)	82	82	100	100
% at good status overall (chemical and ecological)	0	0	27	27
% improving for one or more element		6		0

There are 18 estuarine water bodies in the river basin district. 33 per cent of estuaries currently achieve at least good biological status.

The river basin district also includes 11 coastal water bodies. 86 per cent of coastal waters currently achieve at least good biological status.

No further water bodies are predicted to achieve good status by 2015.

Some key actions:

- Improvements to a number of sewage treatment works will reduce the impact of nutrient and faecal indicator organisms.
- England catchment sensitive farming delivery initiative projects provide advice on reducing rural diffuse pollution entering marine waters.
- Development of habitat creation to offset losses of important coastal habitats through coastal squeeze for example, creation of salt marsh in the Blackwater Estuary through managed realignment of coastal flood defences.
- Ports and Harbours will apply national guidance frameworks on dredging and disposal of dredgings where appropriate locally, and sign up to Defra's maintenance dredging protocol;
- Sea fisheries committees will produce code of conduct for commercial fisheries and sea anglers and help to establish marine protected areas.
- Managed realignment of coast near Boston. Three gaps made in sea wall and restoration of salt marsh and lagoons.

Groundwater

The Anglian River Basin District contains 31 groundwater bodies. In some instances the groundwater bodies are an amalgamation of aquifers because they are connected and groundwater is exchanged between them.

The main aquifers in the Anglian Basin are the Chalk and Lincolnshire Limestones. The Chalk runs from the north Norfolk coast towards London and the limestone runs down the spine of Lincolnshire. Significant groundwater is also obtained locally from some sandy aquifers such as the Crag in Norfolk and Suffolk, the Woburn Sands in Bedfordshire and Sandringham Sands in north west Norfolk.

Groundwater is used for public water supply, industry and agriculture across the river basin and is under significant pressure from diffuse pollution. This is manifest principally as nitrate, phosphates, herbicides and pesticides.

The potential impact of diffuse pollution on groundwater is dependent on whether the aquifers are protected by overlying rocks such as boulder clay, and whether the water table is close to the surface. The manner in which groundwater flows is also a factor and where cracks and fissures contribute to flow, the impacts of diffuse pollution can be spread widely.

Areas where the groundwater may rapidly be affected by diffuse pollution are the Lincolnshire limestone or the Cambridgeshire Bedfordshire Ouse Chalk. Here, the aquifers are exposed at the surface and rising nitrate trends in the groundwater are generally evident. This has significant implications for public water supply as it increases the need for blending and, over time, the cost of water treatment for supply is likely to increase.

Key centres of urban growth are planned throughout the river basin district by 2021. These will place cumulative pressures on groundwater abstraction in areas where resources are fully committed and result in greater discharge and treatment of effluents.

Table 17 **Key statistics at a glance for groundwater**

Groundwater	Now	2015
% at good quantitative status	65	65
% assessed at good chemical status (31 water bodies assessed)	65	65
% at good status overall	45	45

There are a total of 31 groundwater bodies in the river basin district. 65 per cent are currently at good quantitative status and 65 per cent at good for chemical status. These are not expected to change by 2015.

Some key actions:

- Implementation of the Remediation Strategy for the Helpston Project. In the 1980s two landfill sites at Helpston, near Peterborough, were used for the disposal of the agricultural pesticide mecoprop. This has since leaked into the local groundwater aquifer, polluting public and private water supplies. The project optimises the existing pump and treat system in order to prevent the eastwards migration of mecoprop

contamination. It also assesses the feasibility of accelerating the remediation of mecoprop at source within the landfill waste and leachate.

9 Next steps – implementing this plan

Diffuse pollution investigation and action

In developing the River Basin Management Plans approximately 8,500 investigations have been identified for England and Wales, including further monitoring. The vast majority of these will be undertaken by the Environment Agency and all of these will be completed by the end of 2012. The investigations will focus on resolving what is causing the problem and what the best method to tackle it is. As a result of the evidence they will provide, we will be able to take further action in the first cycle where practicable.

The remainder of the investigations – including over 100 water company catchment management investigations – will be carried out by co-deliverers across England and Wales during the course of the first delivery cycle. Working with the river basin district liaison panels, the Environment Agency will welcome the input of local data and knowledge from other parties to help drive action at catchment level.

We are confident the investigation programme will lead to actions enabling a further reduction in diffuse pollution and more environmental improvement before 2015. As we have said earlier, the Environment Agency is already committed to delivering, through its own work or through working with others, an additional two per cent improvement towards good status or potential by 2015 across England and Wales

Additional national measures

In addition to commitments already provided, the UK Government and Welsh Assembly Government will continue to demonstrate their commitment and bring forward significant work starting with;

- banning phosphates in household laundry detergents;
- a new requirement contained within the Flood and Water Management Bill making the right to connect to surface water sewers contingent on Sustainable Drainage Systems (SuDS) being included in new developments. Local authorities will be responsible for adopting and maintaining SuDS that serve multiple properties and the highways authorities will maintain them in all adopted roads;
- general binding rules to tackle diffuse water pollution by targeting abuse of drainage systems, potentially including industrial estates, car washes and construction by 2012;
- transferring the responsibility for misconnections to water companies by 2012;
- the Water Protection Zones Statutory Instrument which will enter into force on 22 December 2009 and will be used to tackle diffuse pollution where voluntary measures are not sufficient;
- more funding for the Catchment Sensitive Farming Delivery Initiative in England from 2010 – a 50% increase in capital grant spend, and evaluation of the initiative to ensure it is achieving maximum effectiveness;
- better targeting of agri-environment schemes for water protection. In Wales, this includes aligning the forthcoming “Glastir” agri-environment scheme to contribute towards meeting Water Framework Directive requirements;
- supporting the farming industry in the Campaign for the Farmed Environment, which has reducing impacts on water quality as one of its priorities;
- encouraging farmers to use buffer strips to reduce diffuse pollution through guidance and advice provided under cross compliance;
- better understanding of the impact of sediment and measures to tackle it as a result of the additional funding announced in June 2009;
- further consideration of the impact of cross compliance and good agricultural and environmental conditions (GAEC) on water quality;

- implementation of the Sustainable Use of Pesticides Directive;
- Environmental Permitting Regulations guidance setting essential standards of location, operation and maintenance for septic tanks.

These and the other actions in the plans will lead towards a greater achievement of good status and improvement within class, with more than a quarter of the length of all rivers improving.

Implementing the plans at catchment level

The Environment Agency has found river basin liaison panels extremely valuable, and will continue to work with them throughout the plan delivery period. The panels will help to encourage river basin district-wide action through their sectors, monitor overall progress and prepare for the second cycle of River Basin Management Planning.

Given that implementation requires activity 'on the ground', it is essential that there is the maximum involvement and action from locally based organisations and people. Innovative ways of working together need to be identified that will deliver more for the environment than has been captured in this plan.

The Environment Agency will adopt a catchment-based approach to implementation that is efficient and cost-effective. This will support the liaison panels, complement existing networks and relationships, and enable better dialogue and more joined up approaches to action.

In some places there will be added value from adopting more detailed catchment plans to help deliver the River Basin Management Plan objectives during the planning cycles. The River Kennet is a case in point where we have set up a pilot group with a range of stakeholders. We will share the knowledge gained with the liaison panels, to help identify other catchments that could benefit from a similar approach.

Working with co-deliverers

This plan sets out in detail the actions required to improve the water environment. All organisations involved must play their part, record their progress and make the information available.

Where the work of a public body affects a river basin district, that body has a general duty to have regard to the River Basin Management Plan. Ministerial guidance states that the Environment Agency should:

- work with other public bodies to develop good links between river basin management planning and other relevant plans and strategies, especially those plans that have a statutory basis such as the Local Development Plans and Wales Spatial Plan;
- encourage public bodies to include Water Framework Directive considerations in their plans, policies, guidance, appraisal systems and casework decisions.

For some, the actions in this plan may be voluntary and for others they will be required under existing legislation. We want to work with you to make these actions happen, and identify new action to create a better place.

Reporting on progress

The Environment Agency will use its environmental monitoring programme and, where appropriate, information from other monitoring programmes, to review whether work on the ground is achieving the environmental objectives. We will update the classification status of water bodies accordingly and review progress annually. At the end of 2012 a formal interim report will be published. This will:

- describe progress in implementing the actions set out in this plan;
- set out any additional actions established since the publication of this plan;

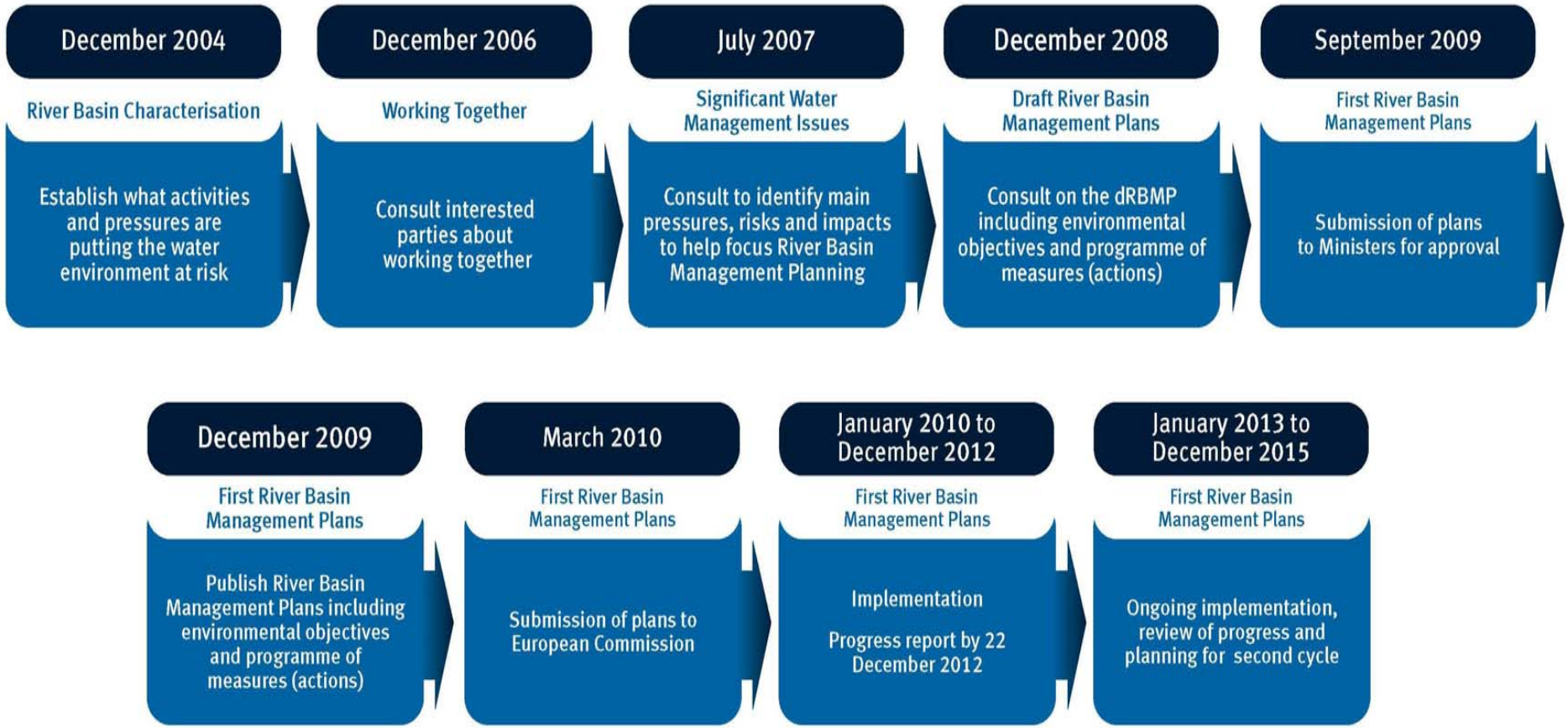
- assess the progress made towards the achievement of the environmental objectives.

Preparations have already begun for the next cycle period 2015 to 2021 and for the subsequent cycle to 2027. If you have proposals for actions that can be included in these future cycles please contact us.

River basin management milestones

The plan builds on a number of other documents and milestones required by the Water Framework Directive. The work to date has ensured a strong evidence base, and a framework for dialogue with interested organisations and individuals. In terms of taking this plan forwards, it helps to understand the major milestones remaining. These future milestones are summarised in the figure below.

Figure 13 **River basin management planning milestones to date and to 2015**



10 Summary statistics for the Anglian River Basin District

Table 18 **Summary statistics for the Anglian River Basin District**

	Rivers, Canals and SWT's	Lakes and SSSI ditches	Estuaries	Coastal	Surface Waters Combined	Groundwater
% of water bodies with improvement in any status of any element by 2015	16	24	6	0	16	0
% of water bodies at good ecological status/potential or better now For groundwater: % of water bodies at good or better quantitative status now	18	31	0	27	18	65
% of natural water bodies at good ecological status or better now	23	36	0	0	23	65
% of artificial and heavily modified water bodies at good ecological potential or better now	15	29	0	43	16	N/A
% of water bodies at good ecological status/potential or better by 2015. For groundwater: % of water bodies at good or better quantitative status 2015	19	35	0	27	19	65
% of natural water bodies at good ecological status or better by 2015	25	55	0	0	26	65
% of artificial and heavily modified water bodies at good ecological potential or better by 2015	16	29	0	43	17	N/A
% of water bodies at good chemical status now	85	83	82	100	85	65
% of water bodies at good chemical status 2015	94	100	82	100	93	65
% of water bodies at good biological status or better now	33	11	33	86	33	N/A
% of water bodies at good biological status or better by 2015	36	22	33	86	36	N/A
% of water bodies with alternative objectives (good status 2021 or 2027)	81	65	100	73	81	55
% of waterbodies deteriorated under Article 4.7	0	0	0	0	0	0

% of all water bodies (surface waters and groundwaters) at good status now	19
% of all water bodies (surface waters and groundwaters) at good status by 2015	20

11 Further information – the annexes

Annex A **Current state of waters in the Anglian River Basin District**
What the waters are like now. Information on our network of monitoring stations, the classification status of water bodies and the reference conditions for each of the water body types in the river basin district.

Annex B **Water body status objectives for the Anglian River Basin District**
Information on water body status and objectives

Annex C **Actions to deliver objectives**
Details of the actions planned (programmes of measures) for each sector to manage the pressures on the water environment and achieve the objectives of this plan.

Annex D **Protected area objectives**
Details of the location of protected areas, the monitoring network, environmental objectives and the actions required to meet Natura 2000 sites and Drinking Water Protected Area objectives.

Annex E **Actions appraisal and justifying objectives**
Information about how he water body objectives have been set and the actions selected. It also includes justifications for alternative objectives.

Annex F **Mechanisms for action**
More detail about the mechanisms (i.e. policy, legal, financial tools) that are use to drive actions.

Annex G **Pressures and risks**
Information about the significant pressures and risks resulting from human activities on the status of surface water and groundwater.

Annex H **Adapting to climate change**
Information on how climate change may affect the pressures on the water environment and the ability to meet the objectives.

Annex I **Designating artificial and heavily modified water bodies**
Information about the criteria used to designate waters as artificial or heavily modified water bodies.

Annex J **Aligning other key processes to River Basin Management**
Aligning planning processes to deliver multiple benefits and sustainable outcomes

Annex K **Economic analysis of water use**
Information about the costs of water services within the river basin district

Annex L **Record of consultation and engagement**
Details of how we have worked with interested parties to develop this plan

Annex M **Competent authorities**
List of the competent authorities responsible for river basin management planning.

Annex N **Glossary**
Explanation of technical terms and abbreviations.

The 'Guide to the River Basin Management Plan' explains where in the annexes you can find the information that is required by the Water Framework Directive.

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Environment Agency

Water for life and livelihoods

Guide to the River Basin Management Plan annexes

Contents

1. Introduction

The River Basin Management Plans are supported by a number of annexes which contain more detail than we have put into the main plan. The annexes provide additional information on requirements, approaches and results from analyses. We have done this to keep the main plans short and readable while providing the more detailed information which many stakeholders have asked for.

This notes summarises what is in each annex and also notes where you can find the information that the Water Framework Directive requires.

You can also look at 'What's in your backyard' on our website. This sets out environmental data and maps for England and Wales at a local level, including information for river basin management plans:

- http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e

2. Annex A: Current state of waters in the River Basin District

This annex includes maps that show the surface water body types that are present in the river basin district with an overview of the types and their reference conditions. It includes maps of the network of monitoring stations and, separately, the results of the monitoring programme showing the status classification of water bodies.

3. Annex B: Objectives for waters in the River Basin District

This annex sets out in detail the objectives for each water body and, where required, the reason for setting an alternative objective. The current status of the water body and the individual elements are listed along with the environmental outcomes that the actions in the river basin management plan will deliver for each status element. If appropriate, the reason for designation of the water body as artificial or heavily modified is provided. It notes if all or part of the water body lies within a designated protected area.

For groundwater it identifies trends and threshold values for substances (as a reference for consideration of the significance of the concentration of a pollutant) and at which point action should be taken to reverse an upward trend. The annex notes any new (sustainable) physical modifications that are proposed, where these may cause deterioration, and the measures proposed to limit any impact.

4. Annex C: Actions to deliver objectives

This gives the actions (programmes of measures) that are relevant to each sector, which will reduce the pressure on the water environment and deliver the objectives of the river basin management plan. It notes the pressure that is being addressed, what will happen, where and when the action will take place, and the lead and partner organisations involved.

The sector is the one that may be causing the pressure or is being affected by an action. The sector may be taking action or its activities may be affected by an action implemented by others. Some actions are noted against more than one sector.

5. Annex D: Protected areas objectives

This describes drinking water protected areas and protected areas established under other directives. It summarises their location, monitoring network and objectives, as well as the current state of compliance with their objectives. It sets out Natura 2000 protected area actions and actions for surface water drinking water protected areas.

6. Annex E: Actions appraisal

This annex describes the process used to identify and appraise the actions (measures) and to develop water body objectives for the first cycle of river basin management. It also provides details on the justifications for setting any alternative objectives. It includes some consideration of climate change in terms of carbon and how Strategic Environmental Assessment (SEA) requirements have been taken into account.

7. Annex F: Mechanisms for action

This annex describes the mechanisms (i.e. policy, legal, financial tools) that are currently available or which are proposed, for delivering measures needed to achieve Water Framework Directive objectives. It notes:

- mechanisms that available for implementing basic measures under the Water Framework Directive, including the key directives that are referred to in the Water Framework Directive;
- the ongoing activities that are controlled through these mechanisms that, although they were not put in place specifically to help achieve Water Framework Directive objectives, will help to maintain the status of water bodies;
- how these existing mechanisms, and new mechanisms, can be used to put in place supplementary measures that need to be taken to achieve Water Framework Directive objectives.

8. Annex G: Pressures and risks

This annex summarises significant water management issues, the pressures these give rise to and the impact that human activity may have on the status of surface water and groundwater within the river basin district. This takes into account point and diffuse source pressures, abstraction and flow regulation pressures, physical modifications and other human activities. The annex considers the scale of the pressures in the river basin district and their causes.

9. Annex H: Adapting to climate change

This annex sets out some key information from the UK Climate Impact Programme on projected climate changes and qualitatively describes how these may change the risks from current pressures on the water environment and the achievement of Water Framework Directive objectives. It qualitatively describes any risks to the benefits that the measures identified in the river basin management plan will deliver as a consequence of changes to the risks from current pressures. It identifies, in a general sense, if and where adaptation of measures needs to happen, and reviews any particular issues there may be for the river basin district. It does not discuss how introduction of measures may increase climate change risk, which is contained in the Strategic Environmental Assessment (SEA) report.

10. Annex I: Designating artificial and heavily modified water bodies

This annex presents a generic summary of the criteria and process we have used for recommending the designation of water bodies as artificial or heavily modified.

11. Annex J: Aligning other key processes to river basin management

This annex identifies:

- the need and requirement to align water related planning and management processes to deliver more sustainable outcomes for the water environment;
- where and how relevant policies, planning processes, management processes, programmes and initiatives, for key processes, are being better aligned;
- where further work is required by external public and other key organisations to better align these activities.

12. Annex K: Summary of economic analysis of water use

This annex sets out the work that has been done on economic analysis of water use by the Environment Agency, Defra, Welsh Assembly Government and stakeholders, and summarises the findings.

13. Annex L: Consultation and engagement

This annex describes the steps taken nationally and within the river basin districts to ensure that the first river basin management plans have been produced through consultation and engagement with interested parties. It covers:

- An overview of the steps taken to ensure that information is accessible to the public and stakeholders;
- A list of the consultations that have taken place and how we have used the responses to inform the development of the first river basin management plans;
- An overview of the different sectors involvement in the planning process.

14. Annex M: Competent authorities

This sets out the names and addresses of competent authorities for river basin management within the river basin district, and a note of their legal status and responsibilities. The annex also gives, for external enquirers, our contact points and procedures for obtaining background documentation and information.

15. Annex N: Glossary

This gives a list of terms and abbreviations used in the river basin management plan.

16. Where to find the requirements of the Water Framework Directive in river basin management plans

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
WFD Annex VII: River Basin Management Plans		
A.1.1-1.2	A general description of the characteristics of the river basin district required under Article 5 and Annex II. This shall include: 1.1. for surface waters: - mapping of the location and boundaries of water bodies, - mapping of the ecoregions and surface water body types within the river basin, - identification of reference conditions for the surface water body types; 1.2. for groundwaters: - mapping of the location and boundaries of groundwater bodies; • Article 5 is concerned with the characteristics of the river basin district and the environmental impact of human activity (as well as economic analysis of water use) • Annex II	Main text Annex B Annex A Annex A Annex B
A.2	A summary of significant pressures and impact of human activity on the status of surface water and groundwater, including: - estimation of point source pollution, - estimation of diffuse source pollution, including a summary of land use, - estimation of pressures on the quantitative status of water including abstractions, - analysis of other impacts of human activity on the status of water;	Annex G

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
WFD Annex VII: River Basin Management Plans		
A.3	Identification and mapping of protected areas as required by Article 6 and Annex IV. • Article 6 requires the establishment of a register of protected areas. • Annex IV describes the content or the register of protected areas and the summary that is required in river basin management plans.	Annex D
A.4.1-4.3	A map of the monitoring networks established for the purposes of Article 8 and Annex V, and a presentation in map form of the results of the monitoring programmes carried out under those provisions for the status of: 4.1. surface water (ecological and chemical); 4.2. groundwater (chemical and quantitative); 4.3. protected areas; • Article 8 requires the establishment and operation of programmes for monitoring water status. • Annex V sets out further details on monitoring and classification of status, and for presentation of maps in the river basin management plans.	Annex A Annex D
A.5	A list of the environmental objectives established under Article 4 for surface waters, groundwaters and protected areas, including in particular identification of instances where use has been made of Article 4(4), (5), (6) and (7), and the associated information required under that Article: - proposed extended deadlines - proposed less stringent objectives	Annex B Annex D

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
WFD Annex VII: River Basin Management Plans		
	- temporary deterioration - failure due to alterations / new modifications beneficial to human health / safety / sustainable development. • Article 4 sets out the environmental objectives for surface waters, groundwater and protected areas. Articles 4(4), 4(5), (4(6) and 4(7) deal respectively with the circumstances where there may be extensions to deadlines, less stringent objectives, temporary deterioration, or failure to achieve good status or potential or to prevent deterioration	
A.6	A summary of the economic analysis of water use as required by Article 5 & Annex III • Article 5 is concerned with economic analysis of water use (as well as characteristics of the river basin district and the environmental impact of human activity) • Annex III sets out the requirements for economic analysis, which should: o Take account of the principle of recover of costs of water services; and o Make judgements about the most cost effective combination of measures	Annex K Annex E
A.7.1-7.11	A summary of the programme or programmes of measures adopted under Article 11, including the ways in which the objectives established under Article 4 are thereby to be achieved • Article 11 sets out the requirements for establishing a programme of measures to achieve the objectives set out in Article 4. Measures should include basic measures as specified in part A of annex VI (see below), measures set out in Article 11(3) (see below) and supplementary measures • Article 4 sets out the environmental objectives for surface waters, groundwater and protected areas	Annex B – Objectives Annex C – Programme of measures Annex D – surface water drinking water protected areas and Natura 2000 protected areas Annex F – Basic measures

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
WFD Annex VII: River Basin Management Plans		
A.7.1	A summary of the measures required to implement Community legislation for the protection of water	Annex F
A.7.2	A report on the practical steps and measures taken to apply the principle of recovery of the costs of water use in accordance with Article 9 • Article 9 requires an economic analysis in accordance with annex III, taking of the principle of the recovery of costs of water use and the polluter pays principle. Regard may also be given to the social, environmental and economic effects of the recovery of costs, as well as geographic and climatic conditions	Annex K See also Annex E
A.7.3	A summary of the measures taken to meet the requirements of Article 7; • Article 7 requires the identification and protection of water bodies currently, or that may be, used for the abstraction of drinking water (more than 10 m3/d or more than 50 persons)	Annex C – Programme of measures Annex D – surface water drinking water protected areas and Natura 2000 protected areas Annex F – Basic measures
A.7.4	A summary of the controls on abstraction and impoundment of water, including reference to the registers and identifications of the cases where exemptions have been made under Article 11(3)(e) (see below);	Annex C –Programme of measures Annex F – Basic measures
A.7.5	A summary of the controls adopted for point source discharges and other activities with an impact on the status of water in accordance with the provisions of Article 11(3)(g) and 11(3)(i) (see below);	Annex C –Programme of measures Annex F – Basic measures
A.7.6	An identification of the cases where direct discharges to groundwater have been authorised in accordance with the provisions of Article 11(3)(j) (see below);	Annex F

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
WFD Annex VII: River Basin Management Plans		
A.7.7	A summary of the measures taken in accordance with Article 16 on priority substances; • Article 16 notes that the European Parliament and Council shall adopt specific measures against pollution of water by individual pollutants or groups of pollutants presenting a significant risk to or via the aquatic environment	Annex C – Programme of measures Annex F – Basic measures
A.7.8	A summary of the measures taken to prevent or reduce the impact of accidental pollution incidents;	Annex C –Programme of measures Annex F – Basic measures
A.7.9	A summary of the measures taken under Article 11(5) for bodies of water which are unlikely to achieve the objectives set out under Article 4; • Article 4 sets out the environmental objectives for surface waters, groundwater and protected areas • Article 11(5) requires further actions to be initiated where data indicate that the objectives described in Article 4 are unlikely to be achieved (except in the case of *force majeure*) including investigations, review of authorisations and monitoring programmes, and establishing of additional measures	Annex C –Programme of measures Annex F – Basic measures
A.7.10	Details of the supplementary measures identified as necessary in order to meet the environmental objectives established;	Annex C
A.7.11	Details of the measures taken to avoid increase in pollution of marine waters in accordance with Article 11(6); • Article 11(6) requires that Member States shall take appropriate steps not to increase pollution of marine waters. Measures may not lead to increased pollution of surface waters (except where this requirement would result in increased pollution of the environment as a whole)	Annex C –Programme of measures Annex F – Basic measures

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
WFD Annex VII: River Basin Management Plans		
A.8	A register of any more detailed programmes and management plans for the river basin district dealing with particular sub-basins, sectors, issues or water types, together with a summary of their contents	There are no more detailed programmes of this type. (Annex J covers other types of plans and programmes)
A.9	A summary of the public information and consultation measures taken, their results and the changes to the plan made as a consequence;	Annex L
A.10	A list of competent authorities in accordance with WFD Annex I • Annex I requires information for the competent authority on: - name and address; - geographical coverage of the river basin district; - legal status; - responsibilities; - membership (if coordinating other competent authorities, e.g. SEPA / Welsh Assembly Government / Defra);	Annex M

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
Article 11(3) on basic measures		
	Basic measures relate to: 11(3)(a) implementation of Community legislation (set out in Part A of Annex VI 11(3)(b) recovery of costs for water services 11(3)(c) efficient and sustain able water use 11(3)(d) protection of waters used for the abstraction of drinking water (Article 7) 11(3)(e) abstraction of fresh surface water and groundwater and impoundment of fresh surface water 11(3)(f) artificial recharge or augmentation of groundwater bodies 11(3)(g) point sources liable to cause pollution 11(3)(h) diffuse sources liable to cause pollution 11(3)(i) hydromorphological conditions 11(3)(j) direct discharges of pollutants into groundwater 11(3)(k) priority substances 11(3)(l) accidental pollution incidents	Annex F – Basic measures

Annex or Article	Water Framework Directive Requirement	Where in the RBMP
Annex VI: Lists of measures to be included within the programmes of measures		
Part A	Measures required under the following Directives: (i) The Bathing Water Directive (76/160/EEC); (ii) The Birds Directive (79/409/EEC); (iii) The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC); (iv) The Major Accidents (Seveso) Directive (96/82/EC); (v) The Environmental Impact Assessment Directive (85/337/EEC); (vi) The Sewage Sludge Directive (86/278/EEC); (vii) The Urban Waste-water Treatment Directive (91/271/EEC); (viii) The Plant Protection Products Directive (91/414/EEC); (ix) The Nitrates Directive (91/676/EEC); (x) The Habitats Directive (92/43/EEC); (xi) The Integrated Pollution Prevention Control Directive (96/61/EC).	Annex F – Basic measures
Part B	Sets out a non-exclusive list of supplementary measures which Member States within each river basin district may choose to adopt as part of the programme of measures required under Article 11(4). • Article 11(4) notes that supplementary, measures are those measures designed and implemented in addition to the basic measures, with the aim of achieving the objectives established pursuant to Article 4 (Environmental objectives).	Annex C –Programme of measures

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Water for life and livelihoods

River Basin Management Plan
Anglian River Basin District

Annex A: Current state of waters

Content

A.1 Introduction

This annex presents maps that show the status of water bodies and where we have environmentally significant deteriorating trends in groundwater quality. It includes maps showing the network of monitoring stations and maps showing the surface water body types that are present in the Anglian river basin district. There is an overview of the types and the reference conditions of all waters at the end of this annex.

Detailed information about classification on a water body by water body basis is included in annex B.

Annex D lists protected areas established under other Directives. It includes their location monitoring network and compliance with their objectives.

A.2 Maps of classification results

Status assessment is a useful way of reporting the health of the environment. For a particular point in time a classification will show us where the quality of the environment is good, and where it may need improvement.

In 2007 the Environment Agency made a change to the way we assess the status of water bodies. For twenty years, we have been using a General Quality Assessment (GQA) scheme to assess river water quality in terms of chemistry, biology and nutrients. GQA has helped drive environmental improvements by dealing with many of the major point sources of pollutants, such as discharges from sewage treatment works or other industry. The Environment Agency now needs a more comprehensive way of assessing the whole water environment that will help us direct action to where it is most needed.

For surface waters there are two separate classifications for water bodies, ecological and chemical. For a water body to be in overall ‘good’ status both ecological and chemical status must be at least ‘good’.

For groundwater there are two separate classifications for groundwater bodies; chemical status and quantitative status. Each must be reported in addition to the overall groundwater body status. For a groundwater body to be at good status overall both chemical status and quantitative status must be good. In addition to assessing status, there is also a requirement to identify and report where the quality of groundwater is deteriorating as a result of pollution and which may lead to a future deterioration in status.

» A separate document explaining the classification process in more detail can be found here

» Remember that classification is just one part of the evidence base that helps to focus efforts on those water bodies where a difference needs to be made. **If you have information regarding the state of your local water environment please contact our National Customer Contact Centre on 08708 506 506.**

Ecological status

Ecological classification is summarised in figure A.1 (below) and comprises:

- The condition of biological elements, for example fish
- Concentrations of supporting physico-chemical elements, for example the oxygen or ammonia levels
- Concentrations of specific pollutants, for example copper.
- And for high status, largely undisturbed hydromorphology

Ecological status is recorded on the scale of high, good, moderate, poor or bad. 'High' denotes largely undisturbed conditions and the other classes represent increasing deviation from this natural condition – from here on described as 'reference condition'. The ecological status classification for the water body, and the confidence in this, is determined the worst scoring quality element.

In annex B the ecological status for waterbodies is accompanied by a statement of how certain the Environment Agency are that a water body is worse than good status. See section A.6 for further information.

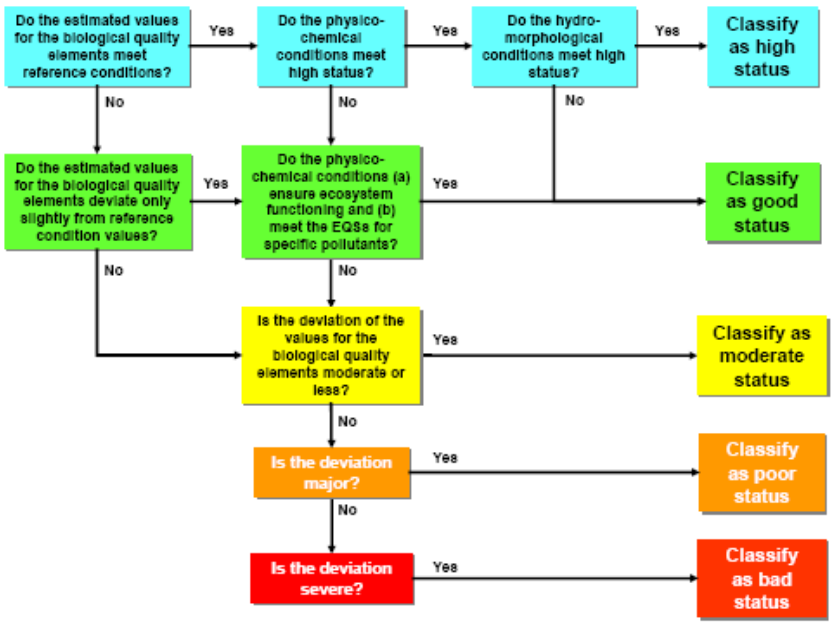


Figure A.1: Decision tree illustrating the criteria determining the different ecological status classes (from UKTAG Classification Guidance).

Only biological elements are recorded on the full scale, high to bad. Supporting physico-chemical elements are not reported below moderate status. However, the UK Technical Advisory Group (the UK-wide collaboration to develop best practice) has produced standards that distinguish between moderate, poor and bad for physico-chemical elements. The Environment Agency uses this information as part of our evidence base as well.

Surface Water Chemical status

Chemical status is assessed by compliance with environmental standards for chemicals that are listed in the Environmental Quality Standards Directive 2008/105/EC[1]. These chemicals include priority substances, priority hazardous substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives. Chemical status is recorded as good or fail. The chemical status classification for the water body, and our certainty in this, is determined by the worst scoring chemical.

An assessment of chemical status is required in water bodies where priority substances and other specific pollutants are known to be discharged in significant quantities. If a water body is labelled as "does not require assessment" it is because these pollutants are not discharged into this water body in significant quantities.

Groundwater status- chemical and quantitative

The achievement of good status in groundwater involves meeting a series of conditions which are defined in the Water Framework Directive (2000/60/EC) and Groundwater (Daughter) Directive (2006/118/EC). In order to assess whether these conditions are being met, a series of tests has been designed for each of the quality elements defining good (chemical and quantitative) groundwater status.

There are five chemical and four quantitative tests. Each test is applied independently and the results combined to give an overall assessment of groundwater body chemical and quantitative status. The worst case classification from the relevant chemical status tests is reported as the overall chemical status for the groundwater body and the worst case classification of the quantitative tests reported as the overall quantitative status for the groundwater body. The worst result of these two is reported as the overall groundwater body status. Groundwaters are classified as either at good or poor status.

The classification process is described further in UKTAG guidance: Paper 11b(i): Groundwater Chemical Classification for the purposes of the Water Framework Directive and the Groundwater Daughter Directive[2], and also in EU Water Framework Directive Common Implementation Strategy Guidance: Guidance Document No. 18: Guidance on Groundwater Status and Trend Assessment[3].

[1] Directive 2008/105/EC, 16 Dec. 2008 on environmental quality standards in the field of water policy, amending and subsequently repealing Directives 82/176/EEC, 83/513/EEC, 84/156/EEC, 84/491/EEC, 86/280/EEC and amending Directive 2000/60/EC

[2] http://www.wfduk.org/LibraryPublicDocs/gw_chemical_classification_paper_final_draft

[3] http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/guidance_n18pdf/_EN_1.0_&a=d

Groundwater Trend assessment

For groundwater bodies that have been identified as being at risk of failing to meet their environmental objectives for groundwater quality, there is a requirement to identify any significant and sustained upward trends in pollutant concentrations. A significant trend is one that could lead to a groundwater body failing to meet its environmental objectives before 2021 (the end of two river basin cycles) if measures are not put in place to reverse the trend.

The trend assessment process is described further in UKTAG guidance: Groundwater Trend Assessment[4].

Ecological Potential

Ecological Potential

For water bodies that have been designated as candidate heavily modified or artificial (HMAWBs see annex I), the Environment Agency must classify according to their ecological potential rather than status. UKTAG have adopted the 'mitigation measures approach' for classifying Heavily Modified and Artificial water bodies. This is a complicated procedure.

This approach first assesses whether actions to mitigate the impact of physical modification are in place to the extent that could reasonably be expected. If this mitigation is in place, then the water body may be classified as achieving good or better ecological potential. If this level of mitigation is not in place, then the water body will be classed as moderate or worse ecological potential.

Before an overall ecological potential classification is applied the second step is for the results of the mitigation measures assessment to be cross-checked with data from biological and physico-chemical assessments.

Where the Environment Agency have data for biological quality elements that show signs of damage from pressures other than hydromorphological alterations (for example, if the diatom or phytoplankton status is poor because of nutrient pressures) the ecological potential will be changed. To reflect this other pressure the water body will be labelled as 'Poor Ecological Potential'. This is also true where we have data for physico-chemical quality elements. As with diatoms, these are capable of picking up impacts beyond the hydromorphological pressure and must be also be reflected in the overall ecological potential result.

Where the flow conditions do not support good status (for example, due to over abstraction) it is necessary to over-ride the mitigation measures assessment so that the results of the biological surveys dictate the overall ecological potential. By doing this we will ensure we don't misrepresent the potential of a water body where, despite all mitigation measures being taken to address the physical pressures, the wildlife is suffering because of an abstraction upstream.

Finally, the Environment Agency may sometimes find that a water body has been designated as heavily modified yet the biological elements surveyed are at good ecological status. Where this is true we will remove the HMWB designation. We may be carrying out further biological monitoring between 2010 and 2012 to confirm that it is right to remove the designation.

[4] http://www.wfduk.org/tag_guidance/Article_05/Folder.2004-02-16.5332/gw_trend

Expert Judgement

The Environment Agency don't have data from all water bodies. Where we lack data we have used expert judgements to provide an initial assessment of the water body status. This expert judgement is based on the following strands of evidence:

- Risk assessments carried out as the first part of the river basin planning process (River Basin Characterisation)
- Data from other organisations, such as Natural England (SSSI condition assessments)
- Expert opinion from national experts and local Environment Agency officers

» Classification results based on expert judgement are clearly marked in Annex B.

A level playing field

Some of the scorings used in ecological classification have been agreed at a European level. The process of agreement is called 'intercalibration'. It ensures we are operating in a consistent way with the rest of Europe. Our definition of good status must be comparable with other countries. The classification techniques which have not yet been intercalibrated can still be used for classification in the UK and will go through a second phase of intercalibration. It should be noted that there is no intercalibration process for groundwater.

The results

In the Anglian river basin district 18 per cent of surface waters meet good status or better; 82 per cent do not meet good status (681 water bodies). 65 per cent of groundwater bodies are at status with the rest being poor status.

The majority of surface water bodies that fail to meet good status fail because of the Phosphate, Fish and Invertebrate elements of classification. These help to assess the impact of water quality, abstraction of water and morphological alteration to waterbodies.

The following maps show the classification results for this river basin district (Figure A.2 to A.7)

Figure A.2 **Ecological status or potential for rivers, canals and surface water transfers**

Figure A.3 **Ecological status or potential for lakes and ditches**

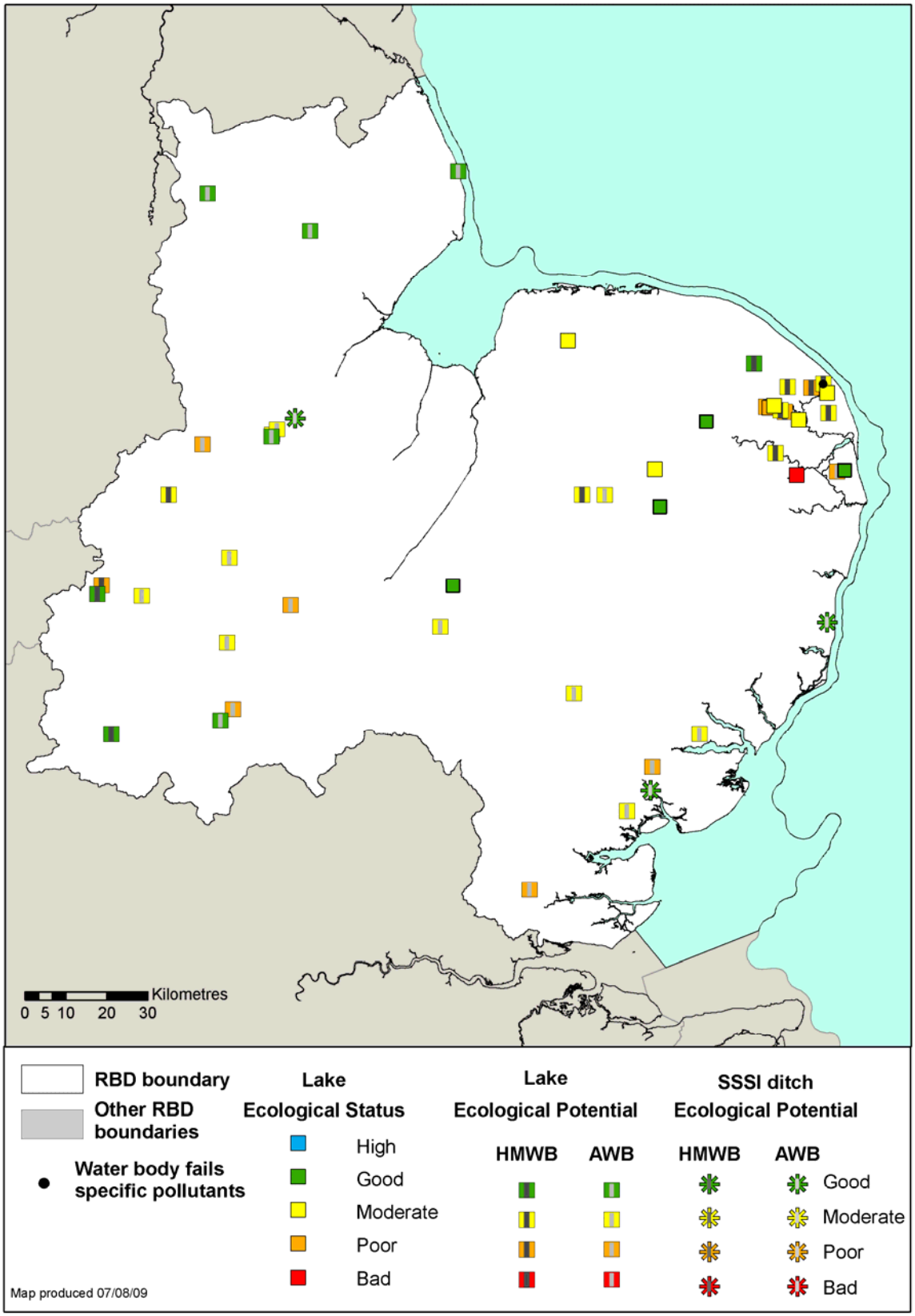


Figure A.4 **Ecological status or potential for estuarine and coastal waters**

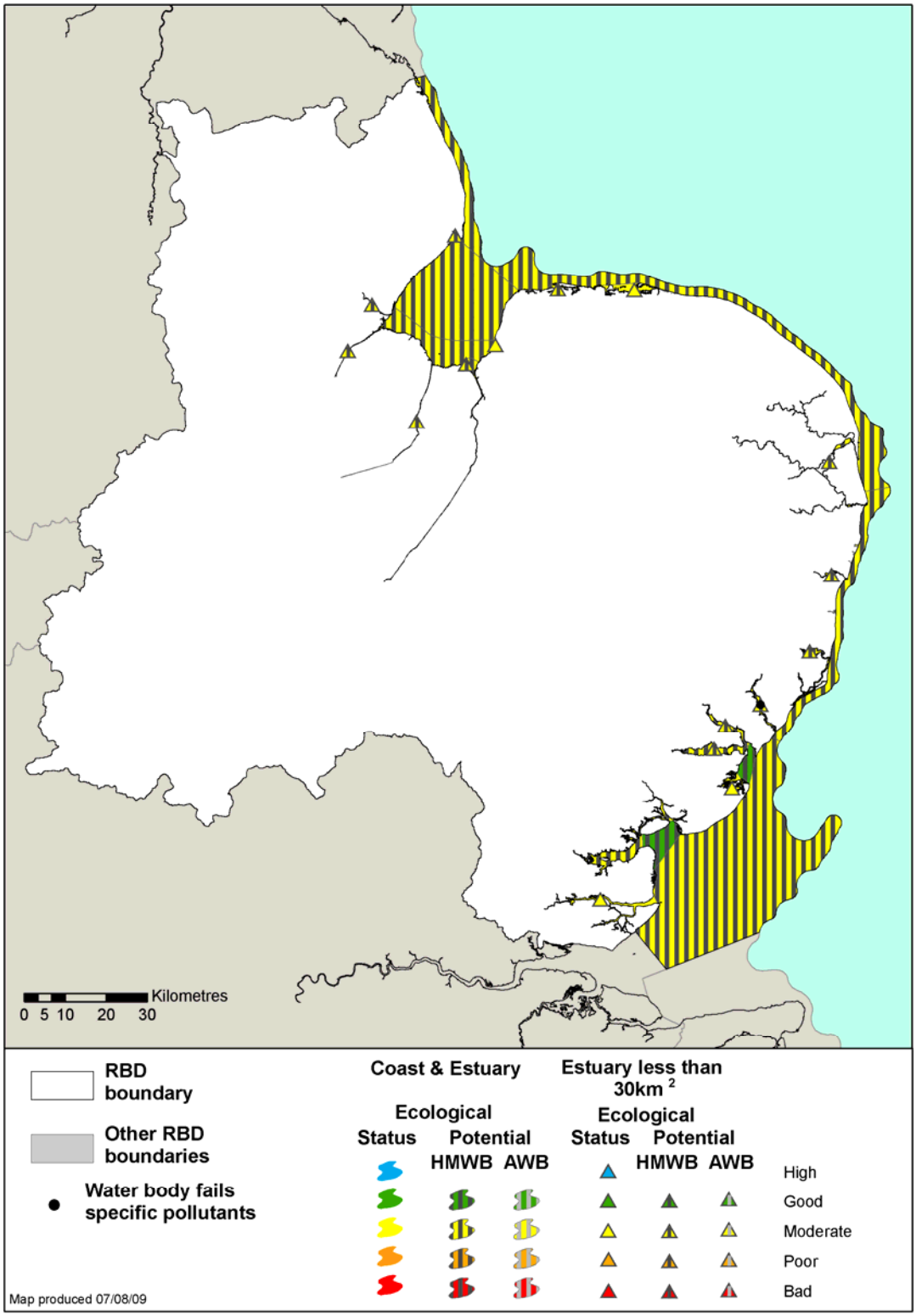


Figure A.5 **Chemical status for rivers, lakes, estuarine and coastal waters**

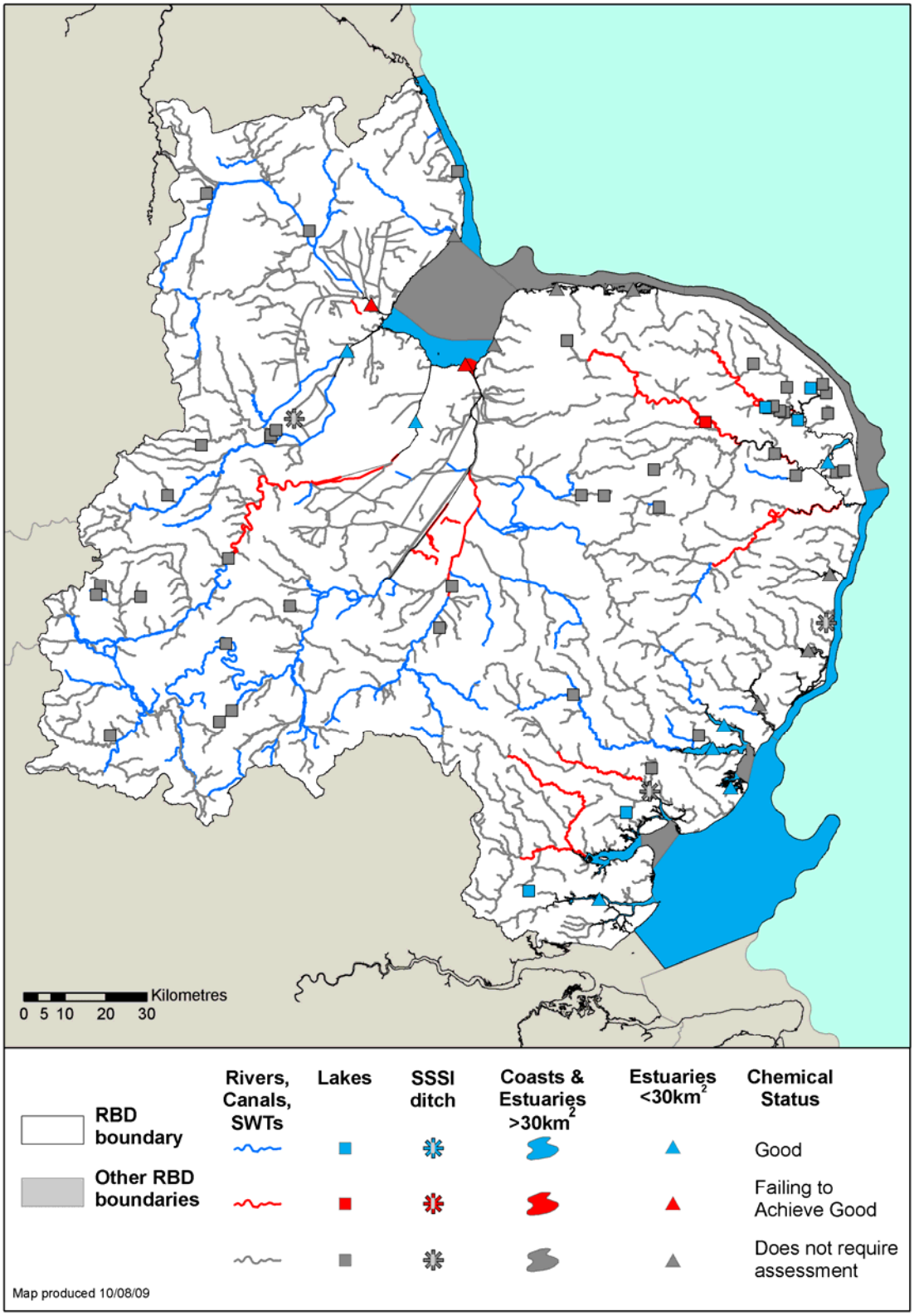


Figure A.6 **Chemical status and trends for groundwater**

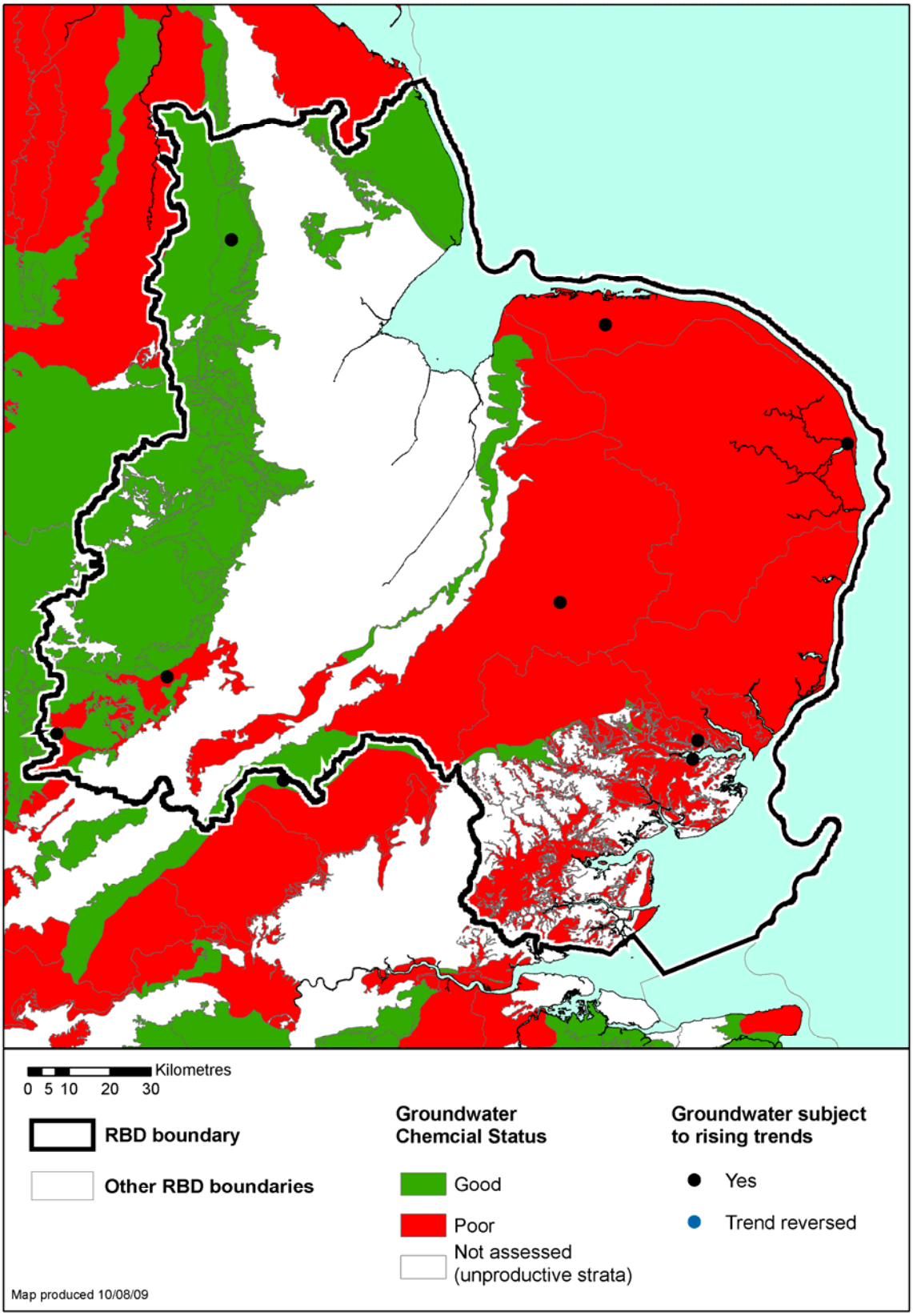
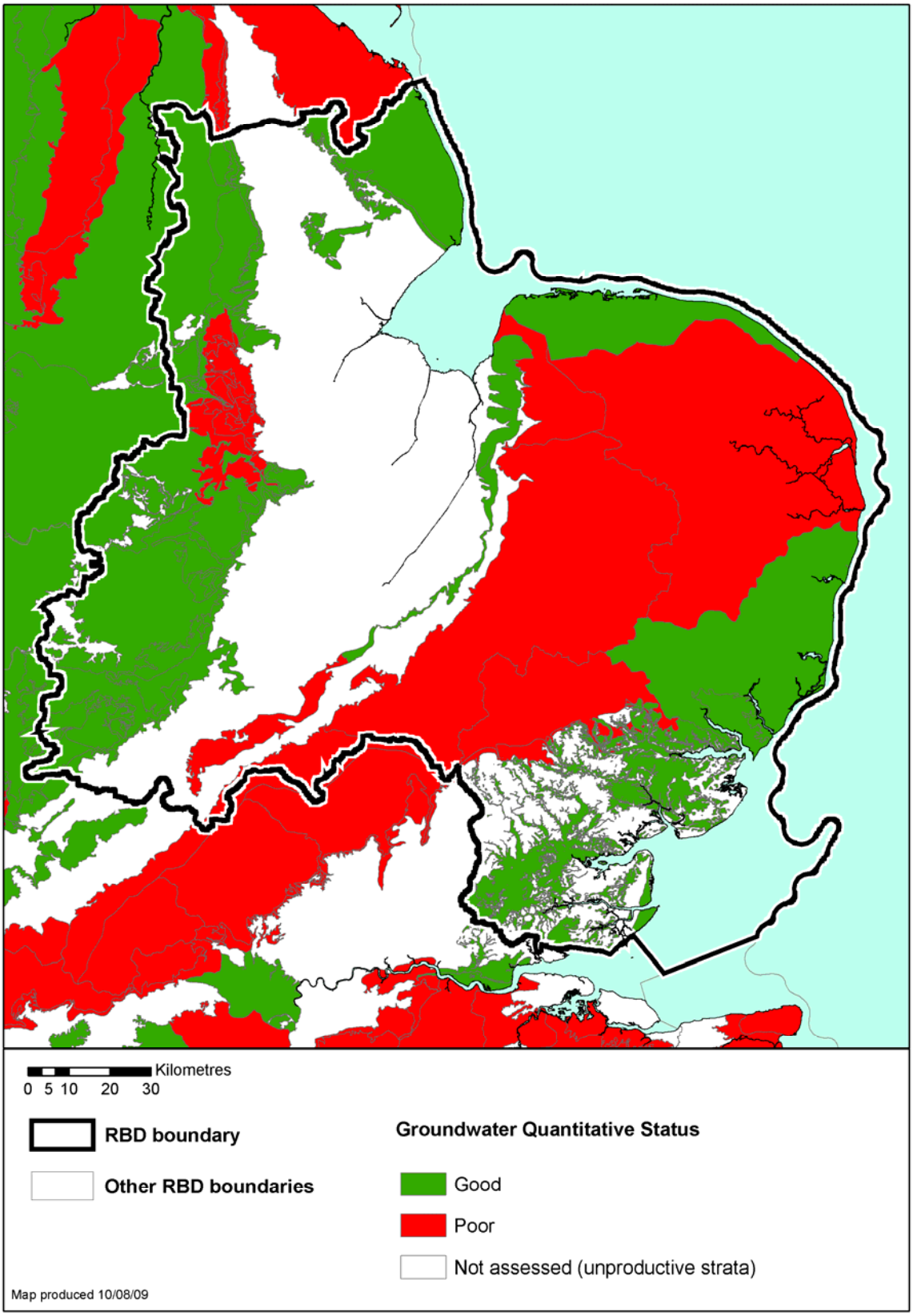


Figure A.7 **Quantitative status for groundwater**



A.3 Maps of monitoring network

In this section we show the network of monitoring stations used to establish the actual condition of all water body types within the Anglian river basin district in terms of their ecology, water chemistry, and flow and groundwater level.

For fresh surface waters we are using a targeted monitoring programme to classify water bodies at risk of failing to meet good status in 2015 (see annex G – Pressures and risks to the water environment). We have also established a smaller network of surveillance sites to provide information on long-term natural and anthropogenic trends. This network will also be used to validate our risk assessments.

For groundwater we have established two monitoring networks to classify groundwater bodies. We have a groundwater quality monitoring network that meets the surveillance and operational monitoring requirements for chemical status and trend assessment, and a groundwater level monitoring network to meet the requirements of quantitative status assessment.

We have also established surveillance monitoring in our coastal and estuarine water bodies.

Wherever possible we have supplemented data from the new ecological monitoring programmes with data from our monitoring programmes established for other purposes.

» More information on the monitoring and classification techniques can be found on the UKTAG website.

The following maps show our monitoring programme that we have used to classify water bodies (Figures A.8 to A.11)

Figure A.8 **Surveillance water bodies for rivers, lakes, estuarine and coastal water bodies**

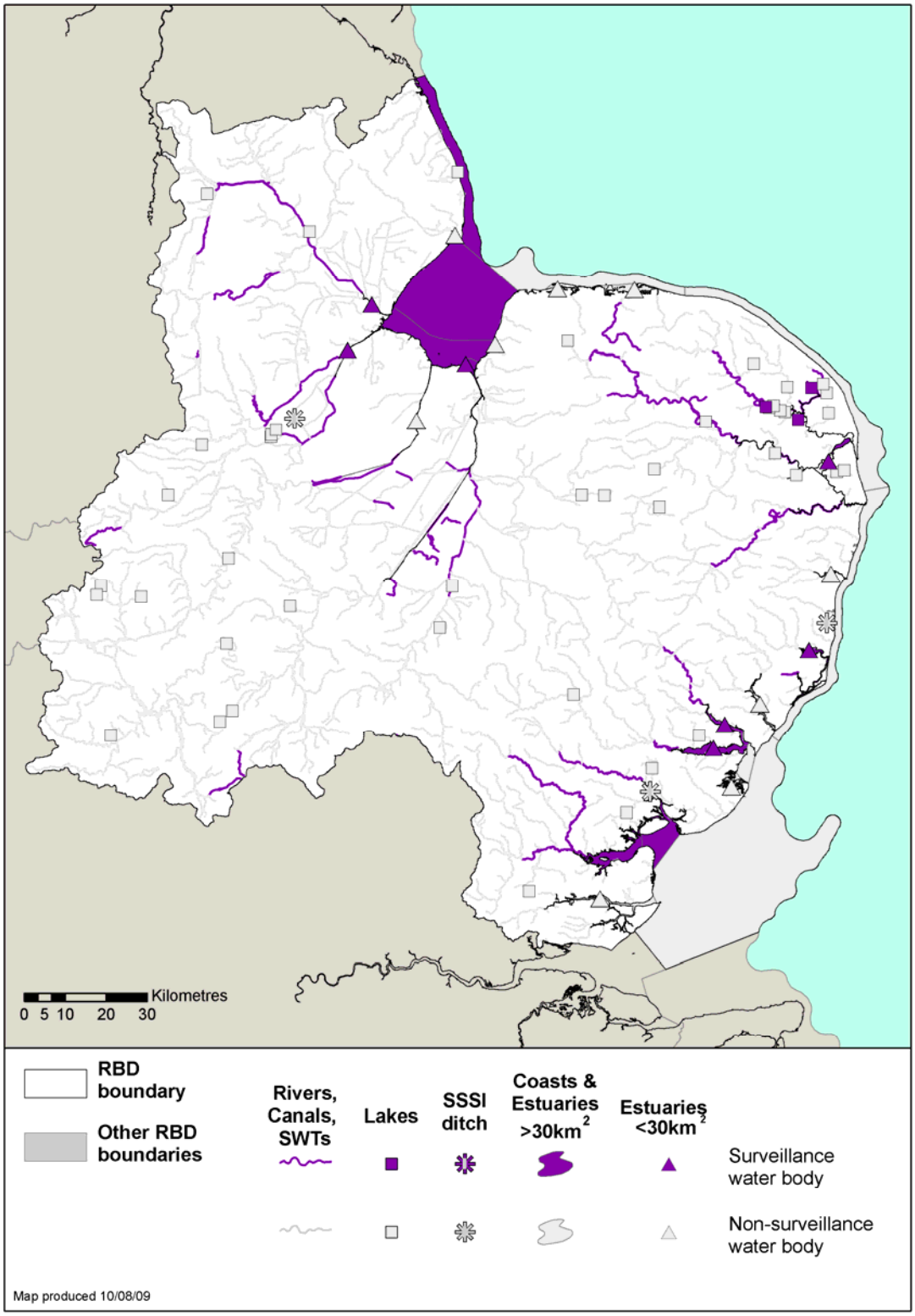


Figure A.9 **Ecological, chemical and flow monitoring network for rivers, canals, and lakes**

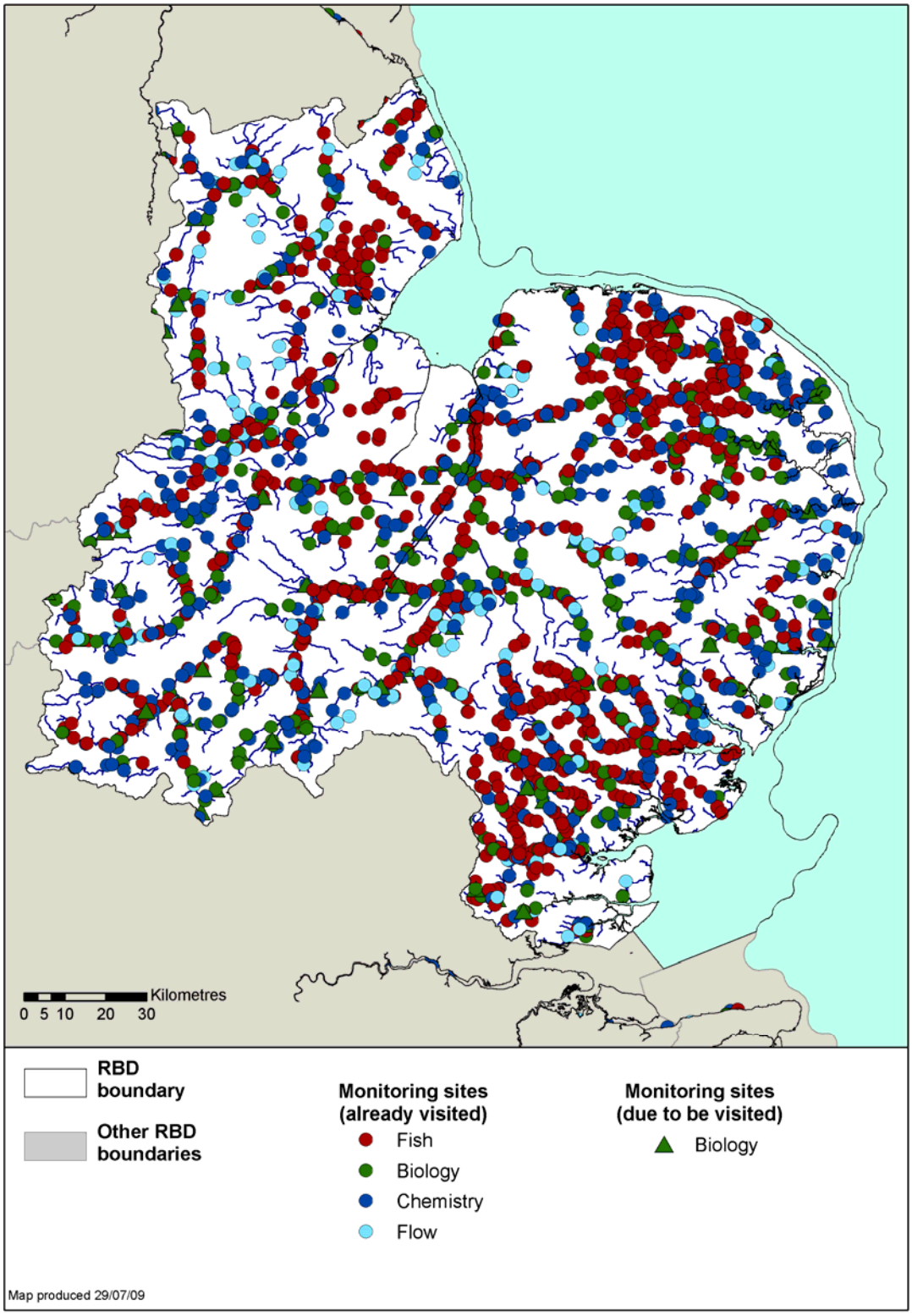
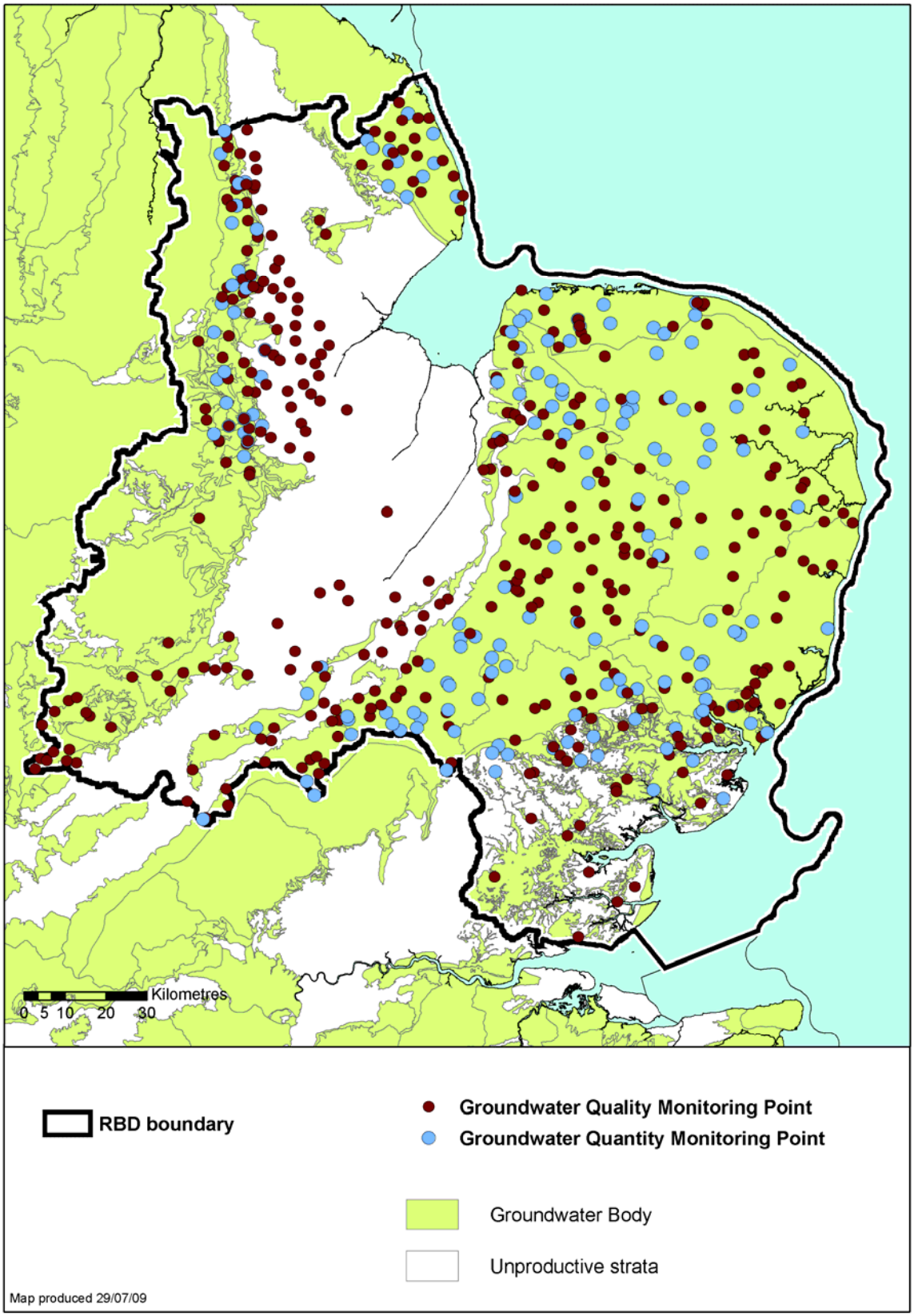


Figure A.10 **Ecological and chemical monitoring network for estuarine and coastal waters**

Figure A.11 **Chemical and level monitoring networks for groundwater**



A.4 Maps of surface water body types

Because the sorts of animals and plants found in upland, rocky, fast-flowing streams are very different to those found in lowland, slowflowing, meandering rivers, surface water bodies are grouped into different types according to their physical and chemical characteristics. The types described below dictate, in very general terms, the sorts of plants and animals likely to be present in water bodies of that type.

Further information on water types in the Anglian river basin district and the associated reference conditions are included in section A.5 of this annex.

The surface water body types that are found in the Anglian river basin district are illustrated in the maps shown below in Figures A.12 to A.15.

Figure A.12 **River water body types in Anglian river basin district**

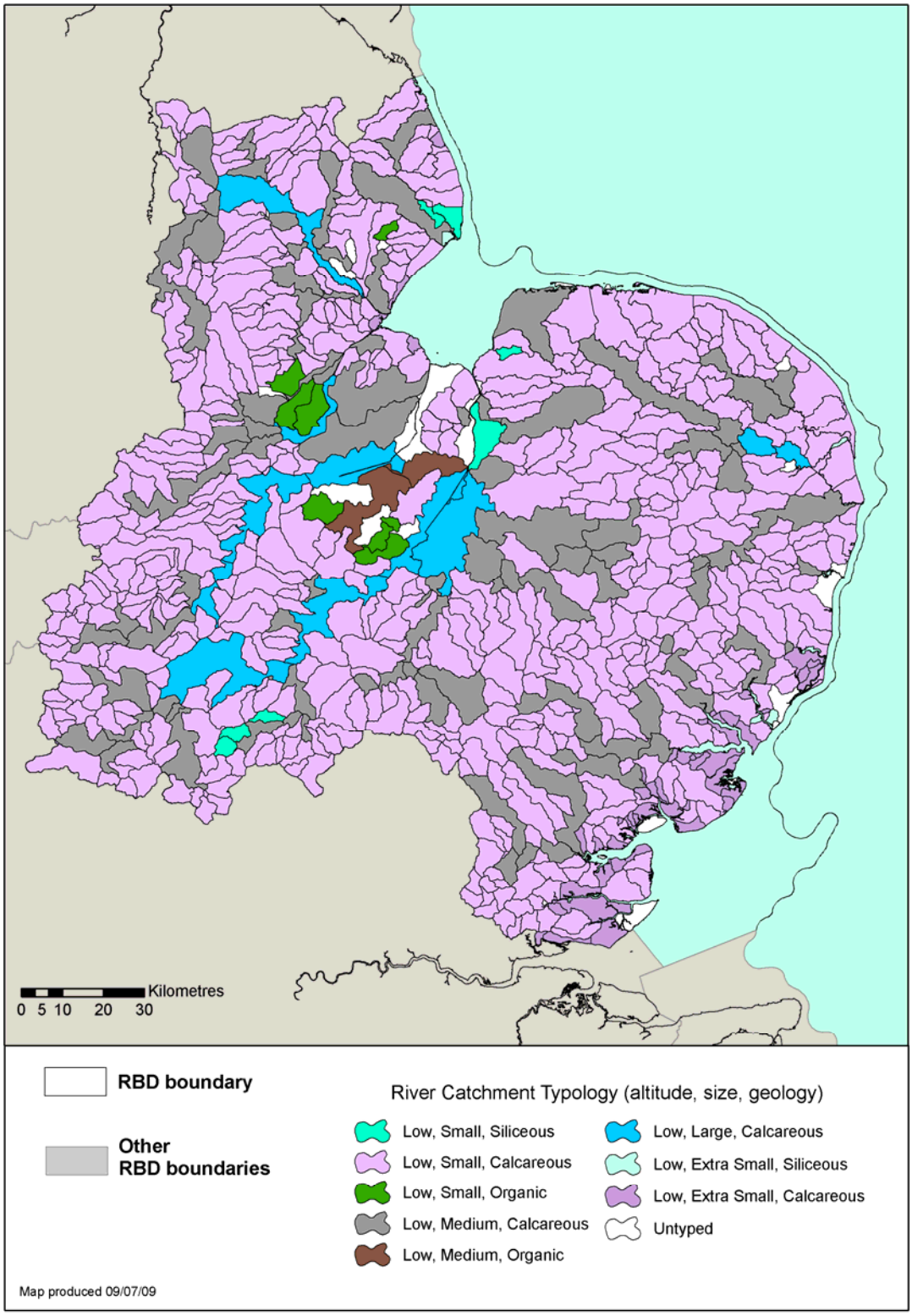


Figure A.13 **Lake water body types in Anglian river basin district**

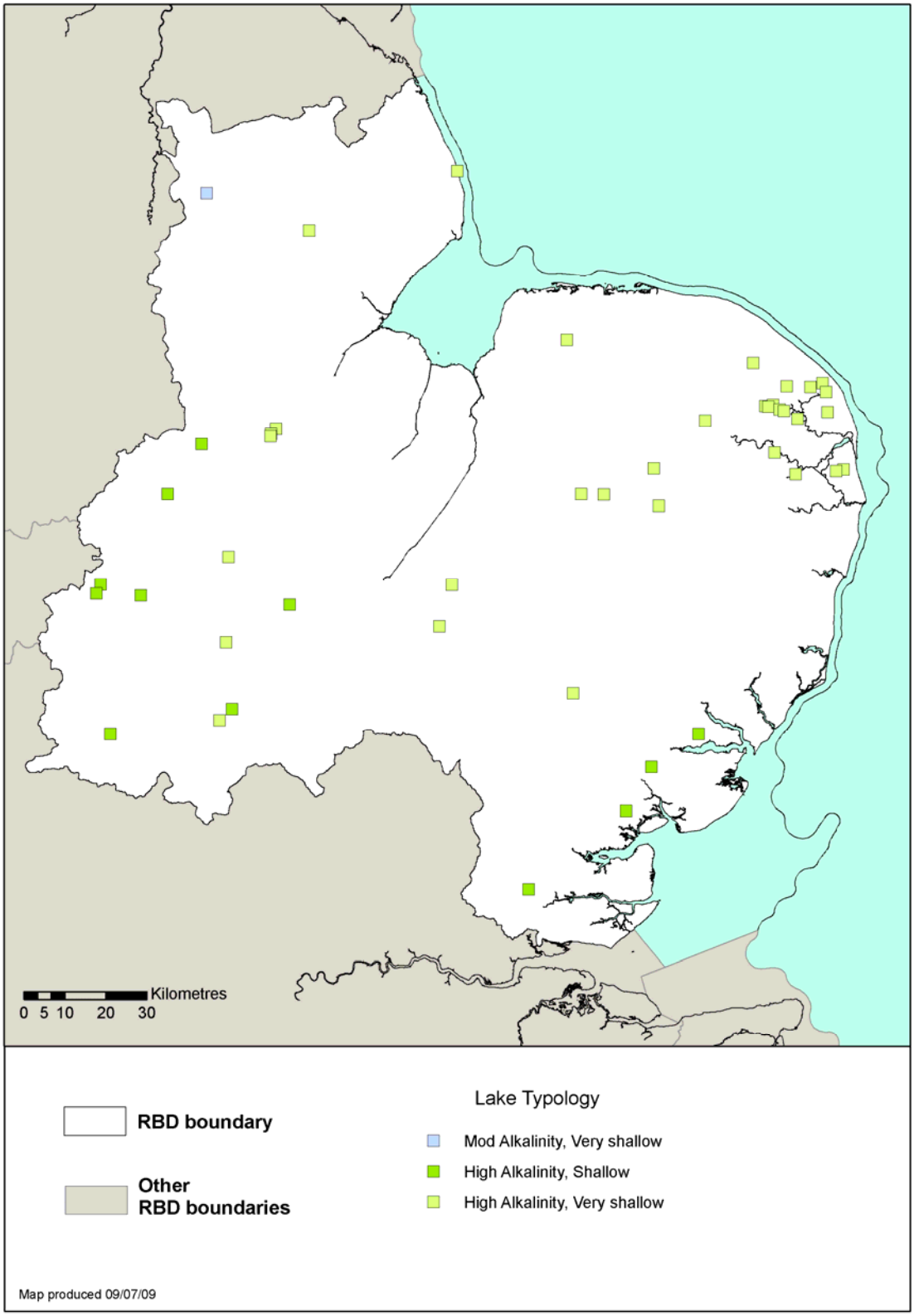
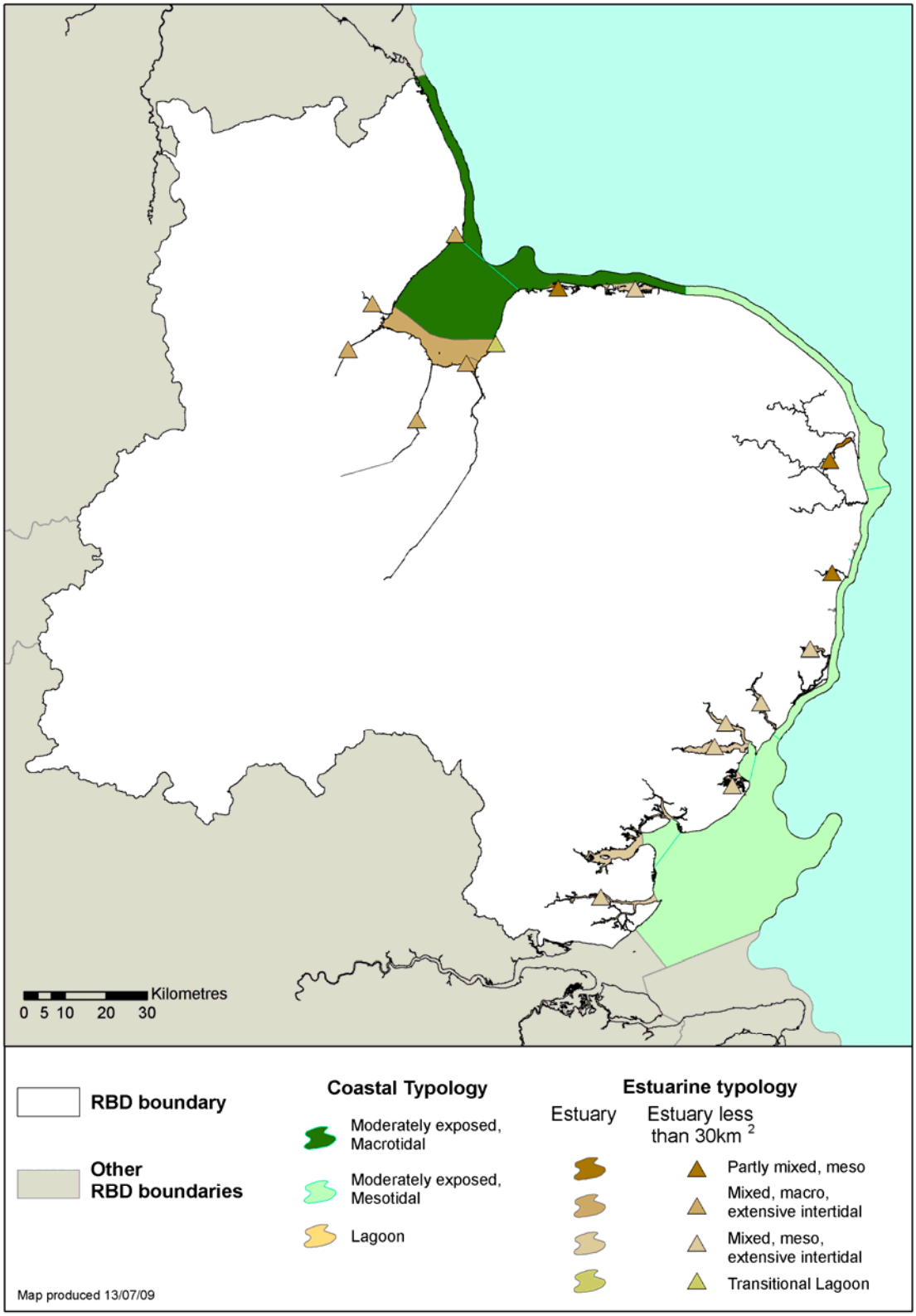


Figure A.14 **Estuarine and coastal water body types in Anglian river basin district**



A.5 Surface water body types and reference conditions

In the Anglian river basin district there are six river types, three lakes types, four estuarine water types and three coastal water types. A descriptive overview for each of these water body types is given below.

Reference condition descriptions covering the sorts of plants and animals expected to be found in the different types of water bodies in undisturbed conditions have been produced for each type or group of types (see references below). These types are the ones that have been used in the initial characterisation of each river basin district. In some cases there are no examples of reference condition in the UK and descriptions are based on similar types in other Member States, or extrapolation from modelling studies, or historic data.

Reference conditions and the conditions found in high status waters is the same thing. For example, if a classification tool shows that the diatom community in water body is at high status, then the species composition and abundance of diatoms in that type of water body are what would be expected under reference or undisturbed conditions. The way reference values have been determined for each of the biological elements is given in the UKTAG Assessment Methodologies which can be found on the UKTAG website (UKTAG website) The Ministerial Directions on Environmental Standards (reference) give the values for high status for both biological and physico-chemical elements and include screening approaches for high status hydrology and morphology. It is important to understand, that to be in overall reference condition a water body would need to comply with all the criteria including hydrological regime and morphological criteria.

The reference conditions descriptions are given in detail on the UK Technical Advisory Group website:

For rivers at:
WFD UK TAG - Type Specific Reference Conditions for Rivers

For lakes at:
WFD UK TAG - Type Specific reference conditions for Lakes

For estuarine and coastal waters at:
WFD UK TAG - Reference conditions for Estuarine and Coastal Waters

Types of water in the river basin district

Rivers

River Type 1: small catchment area (10-100km^2), mean catchment altitude- low (<200m), with a predominantly siliceous geology.

Type overview: in England and Wales, this type of river is predominantly found in the South West (particularly Cornwall), Kent/Sussex, around the New Forest in Hampshire, the western part of Wales, Anglesey and in the Lake District. Across Great Britain it covers 11% of the typed river length.

River Type 2: small catchment area (10-100km^2), mean catchment altitude- low (<200m), with a predominantly calcareous geology.

Type overview: In England and Wales, this river type is found in virtually all lowland regions. It is the most common type covering 26% of typed river length across Great Britain.

River Type 3: small catchment area (10-100km^2), mean catchment altitude- low (<200m), with predominantly organic surface deposits.

Type overview: in England, it is restricted to streams draining into the Wash. In Scotland acidic conditions dominate, whereas in East Anglia base rich conditions prevail. It covers less than 2% of typed river length across Great Britain.

River Type 5: medium size catchment area (100-1000 km^2), mean catchment altitude- low altitude (<200m), with a predominantly calcareous geology

Type overview: in England and Wales, this type of river is widespread in all but the most upland areas. It is the third most common type and covers 12% of the typed river length across the Great Britain.

River Type 6: medium size catchment area (100-1000 km$^{2)}$, mean catchment altitude- low (<200m), with a predominantly organic surface geology.

Type overview: This is a rare river type being restricted to the lowlands draining into the Wash in England, covering less than 1% of the typed river length across Great Britain. In East Anglia base rich conditions prevail.

River Type 8: large catchment area (>1000 km^2), mean catchment altitude- low (<200m), catchments with a predominantly calcareous geology

Type overview: This type occurs exclusively in England and Wales, and whilst it is present over geographical area, it only covers 3% of the typed river length across Great Britain.

In addition to the UKTAG river types (1 to 17) the Environment Agency has included extra-small river water bodies (catchment area less than 10km^2). These are not official UKTAG river types so do not have a number but are shown in the maps in section A.4.

Lakes

Standing Water Type: Medium alkalinity, shallow.

Type overview: This is an uncommon lake type with scattered locations across west Wales and southern England. Due to the shallow nature, there will be no summer thermal stratification.

Standing Water Type: High Alkalinity, shallow

Type overview: These lake types are productive and support a rich macrophyte assemblage. The majority occur in low lying areas of the Midlands and northern England with scattered sites in Wales. Typical underlying geology includes limestone, chalk and red sandstones, which provide a basal influence. Most lakes are formed on soft rocks but wave-washed rocky shores can form an important part of the habitat on larger lakes. Extensive beds of submerged macrophytes and reed fringes characterise these lakes.

Standing Water Type: Brackish, Shallow

Type overview: A rare site type, confined to coastal areas in Britain where freshwater mixes with seawater carried as sea spray, ground water or direct inflow. The type is less defined by geology than by proximity to seawater and can therefore be variable. Substrate varies depending on location and can range from stony shores on northern sites to soft mud in more southerly lakes. Salinity also varies with the degree of influence by sea water. It is distinguished from true saline lagoons by the dominance of freshwater fauna and flora.

Estuarine Waters (Estuaries)

Estuarine Type 2

Type overview: Type 2 estuarine waters are partly mixed or stratified, with a tendency for salinity to be moderately brackish (mesohaline) or brackish (polyhaline). They have moderate tidal ranges, normally of between 2 and 4 metres (mesotidal). They are sheltered, intertidal or shallow subtidal estuaries that have a predominantly sand and mud substratum.

Estuarine Type 3

Type overview: Type 3 estuarine waters are fully mixed, predominantly brackish (polyhaline) and have tidal ranges normally between 4 and 6 metres (macrotidal). They are sheltered, with a sand or mud substratum and tend to have have extensive intertidal areas.

Estuarine Type 4

Type overview: Type 4 estuarine waters are fully mixed or stratified, with a tendency for salinity to be predominantly brackish (polyhaline). They are moderate tidal ranges, normally of between 2 and 4 metres (mesotidal), sheltered, intertidal or shallow subtidal estuaries that have a predominantly sand and mud substratum.

Estuarine Type 6

Type overview: Type 6 waters are estuarine lagoons. These are sheltered bodies of water, which are oligohaline to brackish (polyhaline). They may be partly mixed or stratified.

Coastal Waters

Coastal Type 4

Type overview: Type 4 waters are sea waters (euhaline waters), have tidal ranges normally between 4 and 6 metres (macrotidal) and moderately exposed. They occur on the north-west coast of England, the east Anglian, Kent and Sussex coasts.

Coastal Type 5

Type overview: Type 5 is widespread around the coasts of the whole of the UK. These areas are sea waters (euhaline waters), moderate tidal ranges, normally of between 2 and 4 metres (mesotidal) and moderately exposed.
Since this is exclusive to Scotland and the RoI it is presumably not needed for the E&W RBDs

Coastal Type 10

Type overview: Coastal Lagoons, which are occur in many parts around the UK coast. They are sea waters (euhaline waters) and sheltered.

A.6 Confidence and precision of monitoring

Surface waters

Our assessments of water body status are accompanied by a description of how certain we can be that the water body is below good status. These assessments can be found in annex B for each quality element in each water body, and for the overall water body status.

The Environment Agency has used three expressions to describe how certain we are that a water body does not achieve the objective of good status. Although the terms confidence and certainty can be interchangeable, the Environment Agency has taken the decision to use an expression of *certainty* to describe all surface water classifications.

How certain we are that the water body is less than good status	Threshold
Very certain	≥95% certain that the water body does not meet the objective of good status
Quite certain	≥75to ≤95% certain that the water body does not meet the objective of good status
Uncertain	>50% to <75% certain that the water body does not meet the objective of good status

This description of certainty takes account of the precision of our results. Precision is influenced by natural variation in the data over time, as well as errors in the assessment process. The Environment Agency can assess how the probability of misclassification changes in relation to the amount of sampling for each biological element. This allows us to estimate the most likely levels certainty we can achieve with a given sampling effort. For example, a diatom sample from spring and autumn will allow no more than a 70% certainty of being at a particular status, but often gives high certainty (>95%) of being somewhere below good status.

In some situations our expression of certainty is based on weight of evidence or expert opinion. There are three examples of this.

- The way different water bodies respond to nutrient enrichment can be complicated. Sometimes we find that the water body does not meet the required standard for phosphorus but the biological community shows no sign of damage. In such situations it would be misleading to say we are very certain that the water body is at less than good status. In other situations, the water body does not meet the required standard for phosphorus, and the biological community – the diatoms and macrophytes – also show signs of damage: The result for each element on its own may be uncertain. But the fact that all elements suggest the same thing – weight of evidence that there is an impact – means that we become more certain that there is a problem.
- As our monitoring programme for estuarine and coastal water bodies is new, certainty in our draft classifications for these water bodies is partly based on the amount of

data available for each of the classification tools. We say we are uncertain where our data sets are limited. Our marine monitoring programme will continue to provide more data, so the certainty of our assessments in estuarine and coastal waters should steadily improve over time.

- Where expert judgement (see section A.2) has been used to provide a classification we can only ever be uncertain in our assessment.

» The confidence of the results from both programmes (taking precision into account) are stated in annex B of the river basin plans.

Groundwater status

Groundwater classification comprises 4 quantitative and 5 chemical status tests (ref UKTAG paper 11b(i) and 11b (ii)). Each of the status test results is reported as a face value class accompanied by an assessment of our confidence in the result.

For groundwater confidence is reported as a qualitative statement, and is used as an indicator for prioritising action. All poor status classifications for groundwater, irrespective of confidence, will require some form of action. This is because the classification criteria for both chemical and quantitative status comprise a rigorous weight of evidence approach.

Confidence in poor status will be reported as either “high” or “low”, depending on the test. These terms are defined as follows:

- “High” confidence will usually mean that competent authorities can proceed immediately to considering restorative action, or, for example, improvement to existing measures, according to procedures in the Directive. In some cases there may be “high” confidence in the poor status, but uncertainty over the measures that should be implemented, and an options appraisal of measures/objectives will be required

- “Low” confidence will usually mean that further investigation should be carried out as a priority to improve confidence and measures taken in the first River Basin Cycle where appropriate.

It is stressed that the assessment of confidence in status should not be used as the only driver for instigating measures. Good status groundwater bodies may require higher priority attention if they are predicted to fail either the trend objective in the long term or some other measure of the risk of future deterioration in status.
Confidence in good status will be reported as either “high” or “low”, depending on the test. These terms are defined as follows:

- “High” confidence will usually mean that the only requirement is to assess potential future deterioration using surveillance monitoring.

- “Low” confidence is associated with a more limited evidence base, often in groundwater bodies that are at risk. Further operational monitoring will be required to improve the level of confidence.

The decisions on which level of confidence to assign to each status test are reached by using a combination of statistical and weight of evidence criteria. The principles for this are outlined in the UKTAG paper - Reporting Confidence in Groundwater Status Assessments

As a principle guiding the assessment of confidence in each of the individual status tests, the key criteria are: a) the strength of the overall “weight of evidence” supporting the status assessment, and b) a combined assessment of the monitoring data in terms of the

magnitude of overall departure from the poor/good status boundary and the variability of the data.

Confidence in chemical status and quantitative status will be determined and reported separately. For poor status groundwater bodies, the highest level of confidence from each of the individual tests should be reported. For good status groundwater bodies, the lowest level of confidence from each of the individual tests should be reported. An example is provided in Figure A.15.

Figure A.15. Classification and Confidence: example results and procedure for defining overall confidence.

Quality Element (Status Test)	Status result	Confidence
No saline or other intrusions	Good	High
Drinking Water Protected Areas (DWPA).	Good	Low
Groundwater Dependent Terrestrial Ecosystem (GWDTE).	Poor	Low
No significant diminution of surface water chemistry and ecology	Poor	High
General Chemical Test	Poor	Low

Overall Chemical Status: Poor Status (High Confidence)

Quality Element (Status Test)	Status result	Confidence
Water Balance Test	Good	High
Surface Water Element	Good	High
Groundwater Dependent Terrestrial Ecosystem (GWDTE).	Good	Low
No saline or other intrusions	Good	High

Overall Quantitative Status: Good Status (Low Confidence)

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Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex B: Water body status objectives

Annex B Erratum sheet

The following changes were made to this document in January 2011.

WBID	Catchment	Element	Changes	
			Decision code deleted	Decision code added
GB105031045600	Welland	Invertebrates	B2a	S3d
GB105031045630	Welland	Fish	B2a	S2b
GB105032045540	Nene	Invertebrates	n/a	S3b
GB105033043070	Cam and Ely Ouse (including South Level)	Phytobenthos	n/a	B2s
GB105033043070	Cam and Ely Ouse (including South Level)	Phytobenthos	n/a	S2b
GB105033043250	Upper and Bedford Ouse	Phytobenthos	n/a	S2b
GB105033047830	Cam and Ely Ouse (including South Level)	Phytobenthos	n/a	S2b
GB105035040360	East Suffolk	Fish	n/a	S2b
GB105035045950	East Suffolk	Fish	n/a	S2b

Contents

B.1 Introduction

This annex sets out the environmental objectives for each of the 866 water bodies in the Anglian river basin district. This information is presented in tables; one table for each water body. The annex is organised so that the tables are grouped by catchments. Groundwater, estuary and coastal water bodies and canals, surface water transfers and Sites of Special Scientific Interest (SSSI) ditches are grouped separately at a river basin district level.

In this annex we explain the reasoning behind the status objectives for each water body. You can find further information on how we considered and assessed the actions to meet the objectives in Annex E.

B.2 The objectives of the Water Framework Directive

The Water Framework Directive (WFD) sets a number of different objectives. In summary the environmental objectives for surface waters are:

- Prevent deterioration in status for water bodies
- Aim to achieve good ecological and good surface water chemical status in water bodies[1] by 2015
- For water bodies that are designated as artificial or heavily modified, aim to achieve good ecological potential by 2015
- Comply with objectives and standards for protected areas where relevant
- Reduce pollution from priority substances and cease discharges, emissions and losses of priority hazardous substances.

In summary the environmental objectives for groundwater are:

- Prevent deterioration in the status of groundwater bodies
- Aim to achieve good quantitative and good groundwater chemical status[2] by 2015 in all those bodies currently at poor status
- Implement actions to reverse any significant and sustained upward trends in pollutant concentrations in groundwater
- Comply with the objectives and standards for protected areas where relevant
- Prevent or limit the input of pollutants into groundwater.

Good status

The Directive sets a target of aiming to achieve at least 'good status' in all waters. For surface waters there are two separate classifications for water bodies; ecological and chemical. For a surface water body to be in overall 'good' status both ecological and chemical status must be at least 'good'. Ecological status is recorded on a scale high, good, moderate, poor and bad; chemical status is recorded as good or fail. If a water body is at less than good ecological status we also report how certain we are that the water body does not meet good status. For groundwater, there are also two separate classifications for water bodies; quantitative and chemical. For a groundwater water body to be in overall 'good' status, both quantitative and chemical status must be 'good'. Groundwater status is recorded as good or poor.

[1] Also known as ‘good surface water status’: Article 2.17.

[2] Also known as ‘good groundwater status’: Article 2.20.

Status is measured through a series of specific standards and targets that have been developed by the UK administrations, supported by the Water Framework Directive UK Technical Advisory Group (UKTAG; www.wfduk.org). You can find more information about how we monitored and classified water bodies in Annex A.

Artificial or heavily modified water bodies

Whilst good ecological status is defined as a slight variation from undisturbed natural conditions in natural water bodies, artificial and heavily modified water bodies are unable to achieve natural conditions. Instead, artificial and heavily modified water bodies have a target to achieve good ecological potential, which recognises their important uses, whilst making sure ecology is protected as far as possible. Ecological potential is also measured on the scale high, good, moderate, poor and bad. The chemical status of these water bodies is measured in the same way as for natural water bodies.

Protected Areas

The Directive specifies that areas requiring special protection under other EC Directives and waters used for the abstraction of drinking water are identified as protected areas. These areas have their own objectives and standards.

Article 4 of the Water Framework Directive requires Member States to achieve compliance with any standards and objectives set for each protected area by 22 December 2015, unless otherwise specified in the Community legislation under which the protected area was established. Where a protected area also has a surface water or groundwater objective the most stringent objective applies.

The objectives reported in this annex (B) are those related to WFD water body status only. However, where a protected area coincides with a water body, this is indicated in the water body tables in this annex. The presence of a Site of Special Scientific Interest (SSSI), which is not also designated as a protected area (under the Birds Directive or Habitats Directive), is indicated in the water body tables.

It is not possible to link the water body status objectives in this annex with the protected area objectives in Annex D since the two sets of objectives are not always directly comparable. In addition, in some cases the size and scale of water bodies under the WFD are not the same as waters identified as protected areas.

Some areas may require special protection under more than one EC Directive. In these cases, all of the appropriate objectives and standards must be achieved. More information about protected areas and their objectives and standards are shown in Annex D.

Prevent or limit

The Water Framework Directive and the new Groundwater Directive (2006/118/EC) extend the existing groundwater quality protection regime implemented via the current Groundwater Regulations. New Groundwater Regulations are expected during 2009 to incorporate the changes. Hazardous substances[3] must be prevented from entry into groundwater and the entry into groundwater of all other pollutants must be limited to prevent pollution. A wider range of substances and activities are controlled under the new Directives and there are

[3] Substances or groups of substances that are toxic, persistent and liable to bioaccumulate, and other substances or groups of substances which give rise to an equivalent level of concern.

fewer exemptions compared with the existing regime. The aim is to make the existing regime both more flexible and risk based but also more effective, in particular, in controlling diffuse pollution. Actions to prevent or limit the input into groundwater of pollutants are a high priority and can be viewed as a principal means of achieving all of the other groundwater quality objectives.

Implement measures to reverse significant and sustained upward trends

Actions to reverse any significant and sustained upward trends in pollutant concentrations in groundwater must be implemented in the first river basin management planning cycle, or in later cycles as soon as a trend has been identified. It is not possible to use a less stringent objective or extended deadline for this requirement.

Prevent deterioration in status and exceptions

Other than in very exceptional circumstances, the objective to prevent deterioration in status of a water body must always be met, for example, when the deterioration is caused by physical modifications. These new activities may change the physical characteristics of a surface water body, which may be the case in building new flood defences or the water level in a groundwater body, where a new public supply borehole is put into use. Even in these cases it is necessary to comply with a number of conditions before this derogation can be relied upon.

Water bodies where deterioration of status has been permitted under the terms of WFD Article 4(7)

One of the objectives of the Water Framework Directive is to ensure the status of rivers, lakes, estuaries, coastal waters and groundwater is protected from deterioration. This objective applies to all water bodies no matter what their status. However, in specific circumstances, the Directive does provide for exemptions or reasons why this objective should not be applied. Although protecting the water environment is a priority, some new modifications may provide important benefits to human health, human safety and/or sustainable development.

Such benefits can include:

- public water supply;
- flood defence/alleviation;
- hydropower generation;
- navigation.

It is sometimes not possible to undertake such activities without causing deterioration of status to the water body or preventing the water body from reaching its environmental objectives. The benefits such developments can bring need to be balanced against the social and economic benefits gained by maintaining the status of the water body.

No developments occurring between 1st December 2006 and 31st March 2009 were identified as likely to cause deterioration in the ecological status or potential of water bodies within the Anglian RBD.

B.3 Catchments in the Anglian River Basin District

You can use the sections below to find information on the management catchments within the Anglian river basin district, these are river catchments, groundwater, estuaries, coastal catchments, canals, surface water transfers and Sites of Special Scientific Interest (SSSI) ditches. The locations of the river management catchments are shown in Figure B.3.1.

Each river catchment section contains:

- a map showing the river and lake water bodies within the catchment;
- a table summarising status objectives across the catchment;
- tables, one per water body, detailing current status and objectives.

The groundwater, estuaries and coastal waters and canals, surface water transfer and SSSI ditches sections each contain:

- a map showing the relevant water bodies within the river basin district;
- tables, one per water body, detailing current status and objectives.

Figure B.3.1 **Anglian river basin district and river catchment divisions**

The status objectives, by water body type, for the Anglian river basin district are summarised in Figure B.3.2 below.

Figure B.3.2 **Status objectives for water bodies in the Anglian river basin district**

	Current Status	Status objective				
Water body category	**Good or high now**	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Overall						
Rivers	135	142	142	757	615	757
Lakes	14	17	17	49	32	49
Coasts	3	3	3	11	8	11
Estuaries	0	0	0	18	18	18
Groundwater	14	14	14	31	17	31
Natural water bodies						
Rivers	54	59	59	232	173	232
Lakes	3	6	6	11	5	11
Coasts	0	0	0	4	4	4
Estuaries	0	0	0	4	4	4
Groundwater	14	14	14	31	17	31
Artificial/Heavily modified water bodies						
Heavily modified water bodies	42	44	44	431	387	431
Artificial water bodies	53	53	53	153	100	153

You can look at the information in this annex in another way through the 'What's in your backyard?' (WIYBY) feature on our website. This allows you to search by place name or postcode to get the details of an individual water body. Link through www.environment-agency.gov.uk/WIYBY. This will be available in early 2010 following publication of this plan.

B.4 Water body tables explained

Figures B.4.1. to B.4.4 below (and the supporting 'explanatory notes' which follow) provide explanations of the information included in the water body tables.

Figure B 4.1 **Surface water body tables explained – part 1**

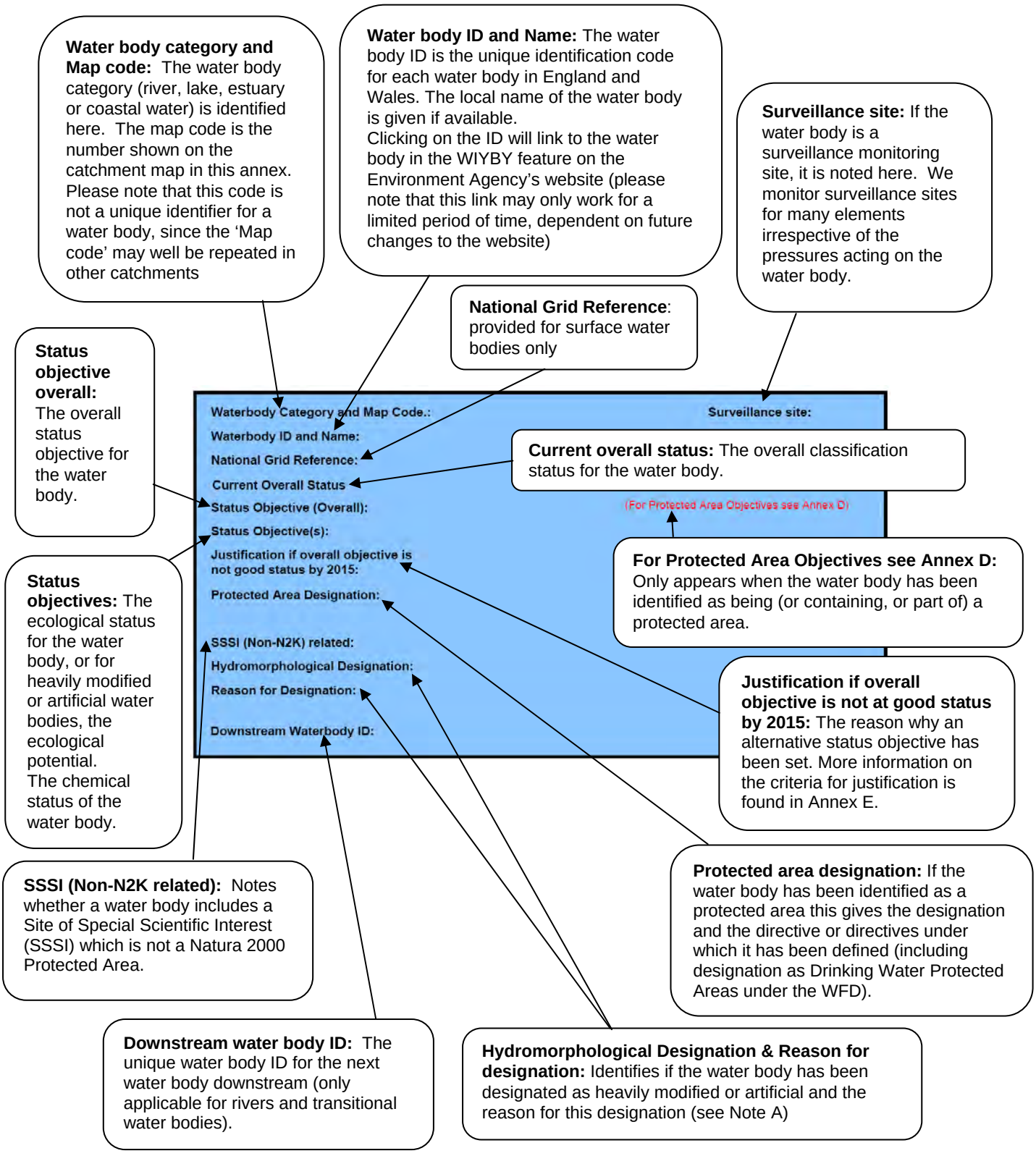


Figure B 4.2. **Surface water body tables explained – part 2**

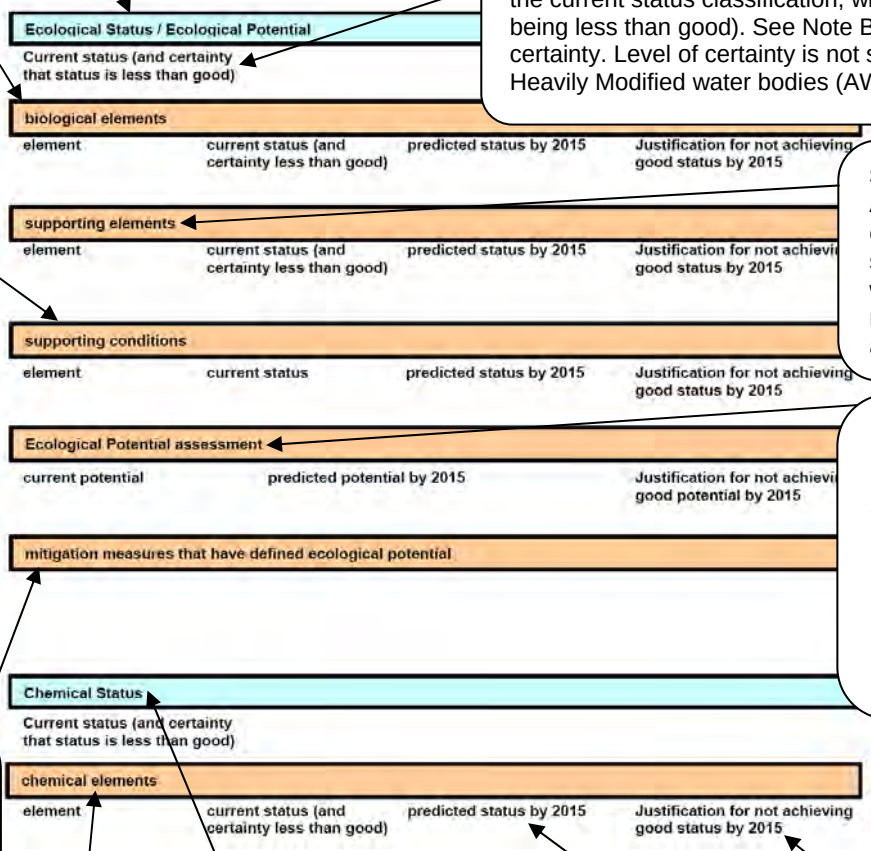
Ecological status or potential: Current classification status is shown. Ecological classification comprises:

- The condition of biological elements, for example fish
- Concentrations of supporting physico-chemical elements, for example ammonia levels
- Concentrations of specific pollutants, for example copper.
- Supporting conditions of morphology and hydrology
- And for high status, largely undisturbed hydromorphology

Ecological status is recorded on the scale of high, good, moderate, poor or bad. For water bodies that are heavily modified or artificial, the results of ecological potential classification may be determined by assessing the level of mitigation actions required to achieve good potential and that do not have a significant impact on the specified uses. For water bodies for which we do not have monitoring data, the classification recorded here is based on modelling or estimations. Further information on classification see Annex A.

Biological elements: A list of the biological elements of status classification for which monitoring or modelling data are available.

Current status (and certainty less than good): This is the current status classification, with level of certainty (of being less than good). See Note B for explanation of certainty. Level of certainty is not supplied for Artificial or Heavily Modified water bodies (AWB/HMWB).



Supporting elements: A list of the physico-chemical elements of status classification for which monitoring or modelling data are available.

Supporting conditions: A list of the supporting morphological conditions and hydrological conditions (quantity & dynamics of flow) for which monitoring or modelling data are available. These elements show as 'support good', 'high' or 'not support good' only.

Ecological potential assessment: Current ecological potential for the AWB/HMWB is given, with a prediction of when the water body will meet good ecological potential. More information in Note C

Mitigation measures: A list of the mitigation actions, stating which are in place and adequate and which were not in place resulting in moderate ecological potential or worse' being assigned. See Note C for more information.

Chemical status: The current classification status for the water body against the environmental standards for chemicals that are priority substances and priority hazardous substances. Chemical status is recorded as good or fail - See Note E.

Predicted status by 2015: The predicted status for each of the elements or conditions listed by 2015

Justification for not achieving good status by 2015: The reason for an alternative status objective if the default status objective has not been used. This is shown with the relevant decision tree codes(s) in brackets. See Note D for more information on these codes.

Chemical elements: A list of the chemical elements of status classification for which monitoring or modelling data are available.

Figure B. 4.3 **Groundwater body tables explained part 1**

Descriptions are the same as surface water bodies except where stated.

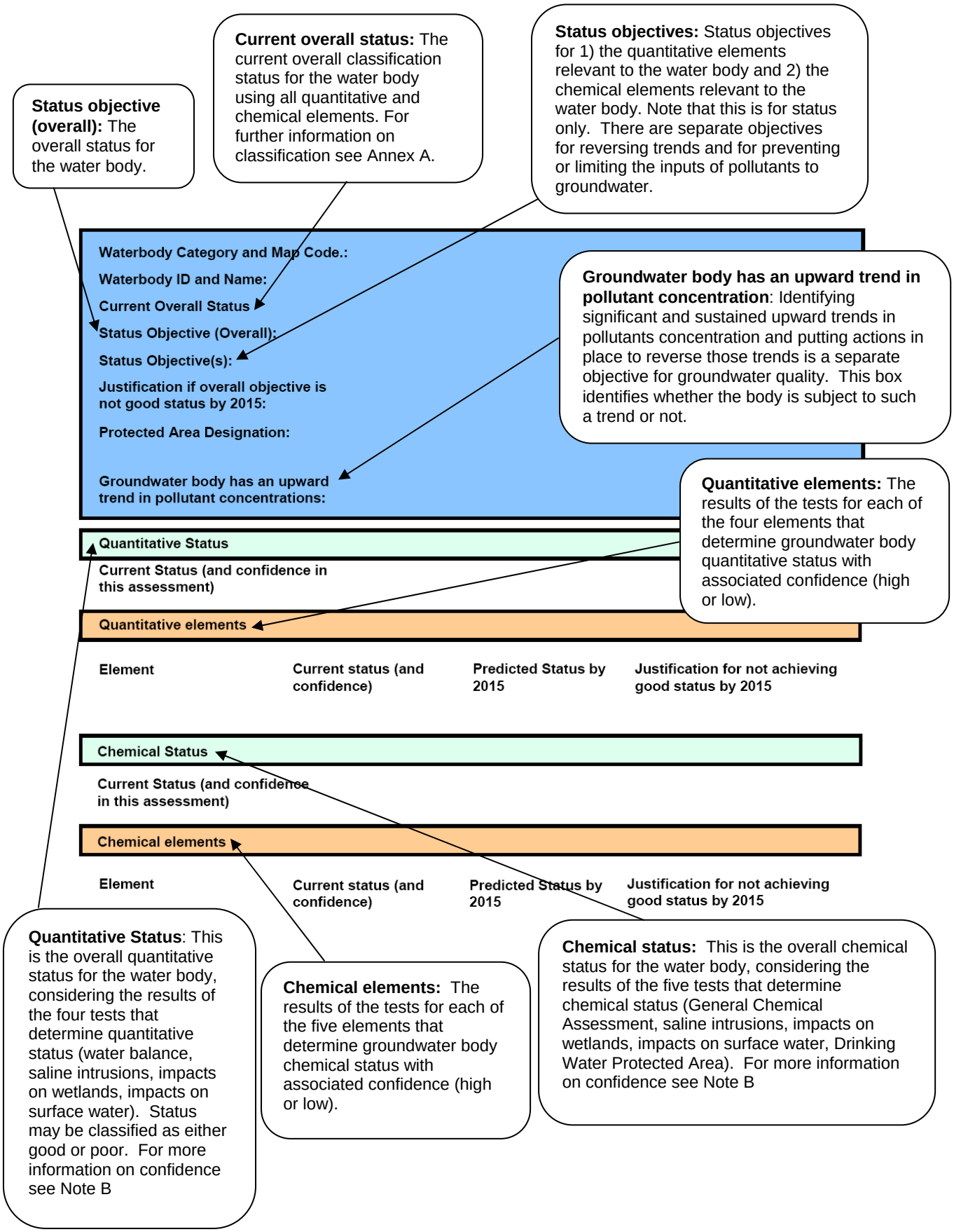
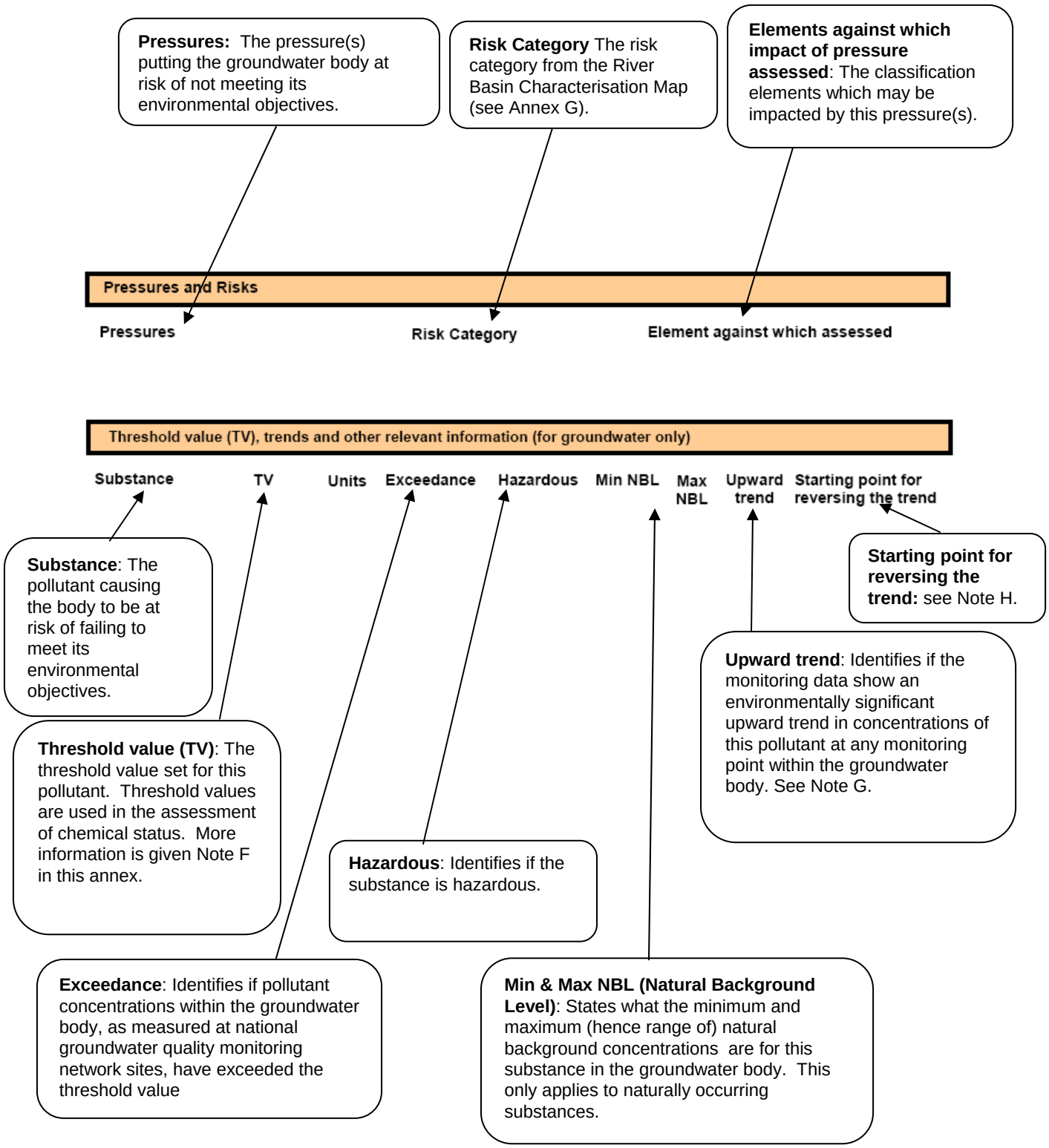


Figure B. 4.4 **Groundwater tables explained - part 2**



Explanatory notes

Note A: Hydromorphological Designation & Reason for designation

These fields in the water body tables identify whether the water body has been designated as being heavily modified or artificial for one or more of the following reasons (see also Annex I): Drinking Water; Flood Protection; Irrigation; Land Drainage; Navigation; Other; Power Generation; Recreation; Structure; Urbanisation; Wider Environment; Water Regulation (impoundment release); Water Regulation (strategic transfer); Water Storage - non-specific; Coastal Protection; Shell Fisheries; Fin Fisheries; Dredge Disposal.

Note B: Certainty and confidence

Surface waters
Our assessments of surface water body status are accompanied by a description of how certain we can be that the water body is below good status[4]. These assessments are reported in this annex for each quality element in each water body, and for the overall water body status.

The Environment Agency has used three expressions to describe how certain we are that a water body does not achieve the objective of good status. Although the terms confidence and certainty can be interchangeable, the Environment Agency has taken the decision to use an expression of certainty to describe all surface water classifications.

How certain we are that the water body is less than good status	Threshold
Very certain	≥95% certain that the water body does not meet the objective of good status
Quite certain	≥75to ≤95% certain that the water body does not meet the objective of good status
Uncertain	>50% to <75% certain that the water body does not meet the objective of good status

This description of certainty takes account of the precision of our results. Precision is influenced by natural variation in the data over time, as well as errors in the assessment process. The Environment Agency can assess how the probability of misclassification changes in relation to the amount of sampling for each biological element. This allows us to estimate the most likely levels of certainty we can achieve with a given sampling effort. For example, a diatom sample from spring and autumn will allow no more than a 70% certainty of being at a particular status, but often gives high certainty (>95%) of being somewhere below good status.

[4] This does not apply to Artificial or Heavily Modified water bodies because the designation and classification processes included expert opinions provided by Environment Agency staff and external stakeholders. The information used was therefore partly qualitative and so it was not appropriate to assign an assessment of certainty.

In some situations our expression of certainty is based on weight of evidence or expert opinion. There are three examples of this:

- The way different water bodies respond to nutrient enrichment can be complicated. Sometimes we find that the water body does not meet the required standard for phosphorus but the biological community shows no sign of damage. In such situations it would be misleading to say we are very certain that the water body is at less than good status. In other situations, the water body does not meet the required standard for phosphorus, and the biological community – the diatoms and macrophytes – also show signs of damage. The result for each element on its own may be uncertain. But the fact that all elements suggest the same thing – weight of evidence that there is an impact – means that we become more certain that there is a problem. So we modify the overall certainty according to the statistical certainty of each test. Where this has happened it is indicated by "WoE" (weight of evidence) against the certainty rating.
- As our monitoring programme for estuarine and coastal water bodies is new, certainty in our draft classifications for these water bodies is partly based on the amount of data available for each of the classification tools. We say we are uncertain where our data sets are limited. Our marine monitoring programme will continue to provide more data, so the certainty of our assessments in estuarine and coastal waters should steadily improve over time.
- We don't yet have assessments for all of our water bodies. Where we lack data we have used expert judgements to provide an initial assessment of the water body (see Annex A for more detail) and this is stated in the water body tables as 'Note: Current Status and Status Objectives for this water body are based on Expert Judgement'. Where expert judgement has been used to provide a classification we can only ever be uncertain in our assessment.

Where a water body is Good or High Ecological Status and biology is not classified (i.e. no biology data was used) then this is indicated with 'no biology data'

Groundwater status

Groundwater classification comprises four quantitative and five chemical status tests. Each of the status test results is reported as a face value class accompanied by an assessment of our confidence in the result.

For groundwater, confidence is reported as a qualitative statement, and is used as an indicator for prioritising action. All poor status classifications for groundwater, irrespective of confidence, will require some form of action. This is because the classification criteria for both chemical and quantitative status comprise a rigorous weight of evidence approach. Further details of how confidence is determined are given in Annex A.

The decisions on which level of confidence to assign to each of the tests undertaken to determine status are reached by using a combination of statistical and weight of evidence criteria. The principles for this are outlined in the UK TAG paper 'Reporting Confidence in Groundwater Status Assessments' (available at http://www.wfduk.org/tag_guidance/Article_08/Groundwater confidence).

As a principle guiding the assessment of confidence in each of the individual status tests, the key criteria are a) the strength of the overall "weight of evidence" supporting the status assessment and b) a combined assessment of the monitoring data in terms of the magnitude of overall departure from the poor/good status boundary and the variability of the data.

Confidence in chemical status and quantitative status will be determined and reported separately. For poor status groundwater bodies, the highest level of confidence from each of

the individual tests should be reported. For good status groundwater bodies, the lowest level of confidence from each of the individual tests should be reported.

Note C: Explanation of hydromorphological measures

The assessment of ecological potential looks at mitigation measures which relate to hydromorphological pressures and ecological impacts that are present in Artificial and Heavily Modified water bodies (AWB/HMWBs).

Each AWB/HMWB is designated for at least one use. Please see 'reason for designation' in the water body objective tables. For each of these water body uses we have defined a number of associated mitigation measures that are required to reduce the hydromorphological impacts of the use. This is in line with the UK TAG guidance which can be found at: www.wfduk.org/st_workshops/LibraryPublicDocs/gep_hmwb_final

For a water body to reach GEP all the associated mitigation measures need to be in place. For each AWB/HMWB we reviewed, mitigation measures fit into one of these categories:

- **in place** for the water body in question and operating adequately OR
- **not applicable** to that particular water body - some measures have been screened out during the assessment process because they could not be put in place without significantly adversely affecting the use of the water body or the wider environment, or they are not practicable given the physical characteristics of the water body. OR
- **are required** to reduce the hydromorphological impacts on ecology and to achieve good ecological potential or better.

In the water body objective tables in Annex B mitigation measures relating to ecological potential are listed for each AWB/HMWB as follows:

a) mitigation measures that are in place and adequate are identified as "in place" and
b) mitigation measures that are required to reach Good Ecological Potential or better are identified as "not in place".

Mitigation measures that are not applicable are not included in these tables.

In AWB/HMWBs currently classified as moderate ecological potential or worse for hydromorphological pressures there is at least one mitigation measure that is not currently in place or has not been screened out on the basis of practicability or impact on use or the wider environment.

It should be noted that mitigation measures identified as "not in place" is a comprehensive list of actions that could be adopted, rather than the final proposed actions. Further appraisal is required to relate these general measures to specific actions within a water body. Specific actions that will be occurring appear in Annex C.

We have appraised these mitigation measures, including:

- mapping these potential measures to existing Environment Agency plans (such as medium term flood risk management plans) and local schemes (see Annex E for explanation of mapping exercise)
- working with co-deliverers to identify options for implementing these measures, where it is their management and/or structures that contribute to the hydromorphological pressure/s
- assigned measures to a particular sector, where this is possible, and aligned where possible with any sectoral plans and processes

- taken account of comments received as part of the consultation process on the draft river basin management plans.

Some measures alone or in combination may only achieve a slight ecological improvement. In these cases the measures only contribute to maximum ecological potential. Where we are confident of this, the measure/s will not be required to achieve good ecological potential. Currently we are not able to predict slight ecological benefit satisfactorily, but as our understanding increases we will be able to assess the mitigation measures fully.

For AWB/HMWBs designated for water supply use and currently not achieving GEP, a programme of investigation in partnership with water companies is planned. This will enable us to identify appropriate and cost effective measures for implementation in the second and third River Basin Management Plans.

Note D: Decision trees codes

Decision tree codes have been used to indicate how we have made decisions about alternative objectives. Each pressure has a unique decision tree with a set of decision tree codes which are shown in the water body tables, for example S1a is from Sediments tree, P1a from the Phosphorus tree. These decision trees show the main steps taken in appraising the potential measures to address a pressure and set out which of those decisions can lead to the setting of an alternative objective. Further information on decision tree codes can be found in Annex E.

Note E: Chemical status reporting

An assessment of chemical status is required in water bodies where priority substances and other specific pollutants are known to be discharged in significant quantities. If a water body is labelled as "Does not require assessment" it is because these pollutants are not discharged into this water body in significant quantities.

The Water Framework Directive requires us to classify chemical status as either Good or Fail (i.e. failing to achieve good).

The Directive also requires us to produce an overall status assessment (and objective) for water bodies, inferring that we need to combine ecology and chemistry into one overall assessment. To do this, we convert our chemical status assessments using the following translation: Good = High, Fail = Moderate.

The translation of Good = High was agreed by UKTAG on the basis that it would be unfair to downgrade an otherwise pristine water body (one that reaches high for all other elements) simply because the chemical status can only ever achieve a maximum of Good.

Therefore, in our Annex B tables we report:

- the status of individual chemical elements as High or Moderate (so the translation described above can occur)
- the current chemical status as Good or Fail (as required by the Directive)

Note F: Summary of how exceedances of groundwater quality standards/threshold values at monitoring network sites have been used in the assessment of chemical status of groundwater bodies

The Groundwater Daughter Directive (GWDD) states that for assessing chemical status, we should use prescribed groundwater quality standards for nitrates and pesticides, and locally derived threshold values for other pollutants that have been identified as contributing to the characterisation of the groundwater bodies as being at risk of failing to meet one or more of its environmental objectives.

Threshold values are groundwater quality standards approved by Defra/Welsh Assembly Government (WAG) for the purpose of assessing groundwater chemical status. They can be set nationally, or on a local groundwater body scale. Threshold values are triggers that if exceeded at groundwater monitoring points require us to investigate whether the conditions for good status have been met. They do not represent the boundary between good and poor status. The EU (GWDD) groundwater quality standards prescribed for nitrate and pesticides have also been used in the assessment process in the same way. Note however that threshold values for these pollutants may be established at lower concentrations to ensure that all status objectives are being met. All this follows the requirements of the GWDD. Note that the groundwater monitoring points used for WFD classification are those included in the Environment Agency's national groundwater quality monitoring programme.

If standards and/or threshold values are not exceeded at any of the relevant monitoring points within the groundwater body then, in accordance with the GWDD, the groundwater body is at good status and no further investigation is necessary. The standards and conditions that we apply to environmental permits should reflect the need to meet all WFD objectives, including good chemical status, but these permit conditions are not threshold values.

Threshold values have been derived for each of the tests for good chemical status. Once each of the relevant tests for a groundwater body has been applied the individual tests must then be assessed together, on a one-out all-out basis. The most stringent relevant threshold for each pollutant will be reported for the groundwater body. This indicates that the threshold will apply to least one monitoring point within the groundwater body. Threshold values for a single substance could vary across a groundwater body, particularly for those substances where there is a highly variable natural background concentration. For simplicity, we have avoided this wherever possible, but it is needed in some cases.

The threshold value for each test is appropriate to the receptor being considered in that test, e.g. a groundwater abstraction, an associated surface water body, or a groundwater dependent terrestrial ecosystem. The way in which we have compared monitoring data to the thresholds values during classification varies between the individual classification tests. See the table below.

If a threshold value has been exceeded, we have investigated whether the pollution is of sufficient magnitude to prevent the groundwater body achieving its status objectives under the WFD (i.e. it is not just a localised impact). This has been undertaken, for example, using status assessments for surface ecosystems, assessments of loadings to surface receptors or aggregations of groundwater data.

Only where the concentration of pollutants exceeds the groundwater chemical threshold, and any supporting evidence confirms the presence of an impact that compromises the achievement of WFD status objectives, have we classified the groundwater body as at poor status. Where there was insufficient data to conduct a particular test, then in the absence of

contrary information, the groundwater body has been assigned good status for that test, but with low confidence in this assessment. We will aim to undertake additional monitoring and/or investigation so that the test can be properly conducted at the next round of classification.

Status classification test	Where threshold value applies
Saline or other intrusions (where poor quality water has been pulled into the body as a result of groundwater abstraction)	Relevant individual monitoring points e.g. those in areas at risk from intrusion
Impact on Surface Water Bodies	Relevant individual monitoring points e.g. those close to the surface water body
Impact on Wetlands (groundwater dependent terrestrial ecosystems)	Relevant individual monitoring points e.g. those close to the wetland
Drinking Water Protected Areas	Relevant individual monitoring points e.g. those that are abstractions used for drinking water
General Chemical Assessment	Aggregated across the body, e.g. compared to groundwater body average concentration(s).

Note G: Summary of how groundwater body chemical trend assessment was carried out.

The Water Framework Directive and the Groundwater Daughter Directive require us to identify statistically and environmentally significant upward pollutant trends in groundwater bodies. This section describes the procedure we used to carry out this assessment.

1. We collated groundwater quality monitoring data using data between 1997 and 2007. The data came from both our National Groundwater Quality Monitoring Network and water company monitoring where this was made available.
2. We used a simple modelling tool to calculate whether these data showed a statistically significant upward trend. The tool was specifically designed and developed for this purpose, and uses two different statistical tests to assess trends in the data. If a statistically significant trend was detected the tool also predicted the expected pollutant concentration in 2021.
3. We then assessed the environmental significance of each of the significant upward trends. This was done by comparing the predicted pollutant concentration in 2021 to the threshold value(s) for the relevant groundwater body chemical classification test. A trend is environmentally significant if the predicted concentration in 2021 is greater than one or more threshold values. Threshold values are explained in Note E.

A map showing which groundwater bodies have statistically and environmentally significant trends can be seen in Annex A.

Note H: Starting point for reversing the trend

This is the pollutant concentration measured in the groundwater body at which we must implement actions to reverse upward trends. The default is 75% of the threshold value, unless we can justify a later starting point (because the rise in concentrations is low and there is less risk to the environment) or an earlier starting point (because the risk to the environment is high).

B.5 Broadland Rivers river catchment

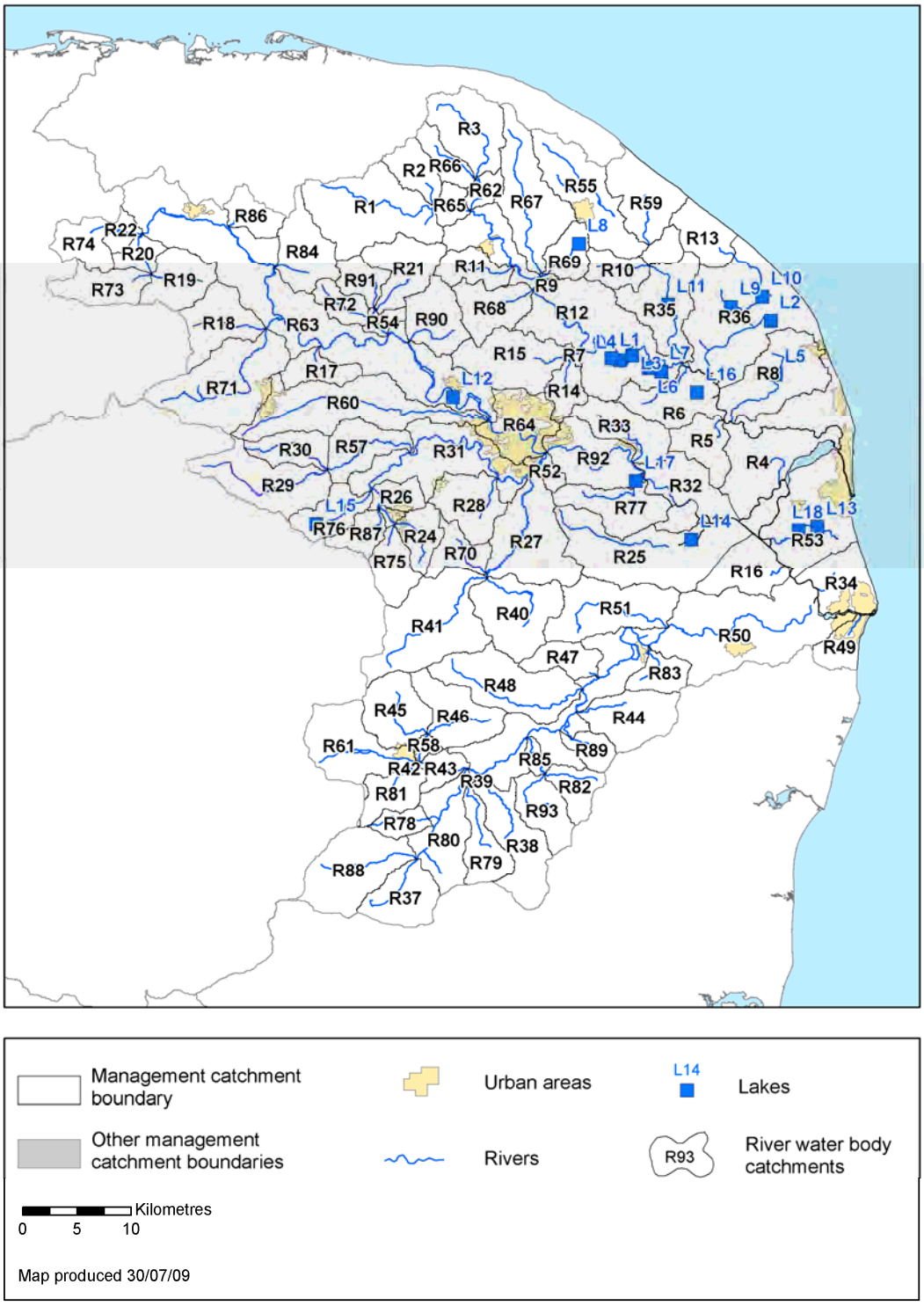
Rivers and lakes

There are 93 river water bodies (of which 55 are designated as heavily modified and 3 artificial) and 18 lake water bodies (of which 9 are designated as heavily modified and 1 artificial) within the Broadland Rivers river catchment.

Figure B.5.1 **Status objectives for rivers and lakes in the Broadland Rivers river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	8	8	35	27	35
Lakes	4	4	8	4	8
Heavily modified Water bodies	1	1	64	63	64
Artificial water bodies	0	0	4	4	4

Figure B.5.2 **River and lake water bodies in the Broadland Rivers river catchment**



Water body tables for rivers and lakes in the Broadland Rivers catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105034055690 Bure	
National Grid Reference:	TG 09799 30943	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034055660	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Technically infeasible (B2p)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105034055700 Bure	
National Grid Reference:	TG 14321 31735	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055660	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105034055740	Scarrow Beck
National Grid Reference:	TG 18899 37224	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055680	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105034050810	The Fleet
National Grid Reference:	TG 46842 06912	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB510503410700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105034050830	Bure (Tidal) and Thurne
National Grid Reference:	TG 40726 09929	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB510503410700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105034050840	South Walsham Broad
National Grid Reference:	TG 36094 13890	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB205034051470	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Improve floodplain connectivity	**In Place**
Set-back embankments	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105034050850	Bure (Tidal) and Ant
National Grid Reference:	TG 27967 16908	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050930	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105034050860	Muck Fleet
National Grid Reference:	TG 45484 13133	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB510503410700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105034050880	King's Brook
National Grid Reference:	TG 24499 23941	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034050930	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105034050890	Smallburgh Watercourse
National Grid Reference:	TG 32023 24709	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:	GB105034051330	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Increase in-channel morphological diversity	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Sediment management	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Modify vessel design	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105034050900	Mermaid Stream
National Grid Reference:	TG 19628 24654	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050930	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034050930 Bure	
National Grid Reference:	TG 29436 17532	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation, Urbanisation	
Downstream Waterbody ID:	GB510503410700	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Uncertain)	Moderate	Not Required (MS)
Invertebrates	High	High	
Macrophytes	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Increase in-channel morphological diversity	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Set-back embankments	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Sediment management	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Manage disturbance	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Selective vegetation control regime	**In Place**
Alter timing of dredging / disposal	**In Place**
Vessel Management	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Modify vessel design	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Quite Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Tributyltin Compounds	Moderate (Quite Certain)	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105034050940	New Cut
National Grid Reference:	TG 41692 26140	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034051360	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	Good	Good	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Set-back embankments	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Increase in-channel morphological diversity	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105034050960	Spixworth Beck
National Grid Reference:	TG 26868 15616	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
pH	High	High	
Iron	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105034050970	Spixworth Beck
National Grid Reference:	TG 25520 16235	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR4a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105034050980	Landspring Beck
National Grid Reference:	TM 46344 96570	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB510503410700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105034051010	Penny Spot Beck
National Grid Reference:	TG 03611 17034	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055881	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034051050	Blackwater
National Grid Reference:	TF 95671 19240	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034055881	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (B1a)
Invertebrates	High	High	
Macrophytes	Moderate (Uncertain)	Moderate	Technically infeasible (B2r)
Phytobenthos	Moderate (Quite Certain)	Moderate	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105034051100 Wensum	
National Grid Reference:	TF 90771 23945	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051110	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105034051110 Wensum	
National Grid Reference:	TF 87396 26202	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055881	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105034051120	Blackwater Drain
National Grid Reference:	TG 10424 22265	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051030	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Poor (Quite Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105034051140 Tat	
National Grid Reference:	TF 85816 27864	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055881	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105034051170 Tiffey	
National Grid Reference:	TG 10264 02007	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB105034051220	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Good	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105034051180 Tiffey	
National Grid Reference:	TG 13467 00139	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051170	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Good	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105034051190 River Chet	
National Grid Reference:	TM 30109 99912	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB510503410700	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (P1d)
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1d)
Phytobenthos	Poor (Very Certain)	Moderate	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105034051220 Tiffey	
National Grid Reference:	TG 09563 03757	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051280	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105034051230 Tas	
National Grid Reference:	TG 23174 04004	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Urbanisation	
Downstream Waterbody ID:	GB105034051250	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105034051240	Intwood Stream
National Grid Reference:	TG 19705 03513	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Urbanisation	
Downstream Waterbody ID:	GB105034051280	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105034051260	River Blackwater
National Grid Reference:	TF 97921 04086	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051290	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Technically infeasible (B2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R30 **Surveillance site:** No
Waterbody ID and Name:	GB105034051270 Yare
National Grid Reference:	TF 99405 07964
Current Overall Status	Moderate
Status Objective (Overall):	Good by 2027 (For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive
SSSI (Non-N2K) related:	No
Hydromorphological Designation:	Not Designated A/HMWB
Reason for Designation:	
Downstream Waterbody ID:	GB105034051290

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (B1a), Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105034051280 Yare	
National Grid Reference:	TG 16383 08532	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034051250	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (B1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034051300	Yare (Tidal)
National Grid Reference:	TG 36311 04257	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB510503410700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Set-back embankments	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Increase in-channel morphological diversity	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Fail (Quite Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	Moderate (Quite Certain)	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
para - para DDT	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105034051310 Witton Run	
National Grid Reference:	TG 33050 08853	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051370	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105034051320	Waveney(Sth) (Tidal)
National Grid Reference:	TM 51022 95366	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB510503410700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105034051330 Ant	
National Grid Reference:	TG 37033 20309	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Navigation, Wider Environment	
Downstream Waterbody ID:	GB205034051480	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Zinc	High	High	
Ammonia (Annex 8)	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Iron	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3a, M3c, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Increase in-channel morphological diversity	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Set-back embankments	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Sediment management	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Manage disturbance	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Selective vegetation control regime	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Alter timing of dredging / disposal	**In Place**
Vessel Management	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Modify vessel design	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034051360 Thurne	
National Grid Reference:	TG 41228 17498	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Navigation, Wider Environment	
Downstream Waterbody ID:	GB510503410700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)
Phytobenthos	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	Good	Good	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3a, M3c, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Increase in-channel morphological diversity	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Set-back embankments	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Selective vegetation control regime	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Sediment management	**In Place**
Vessel Management	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Modify vessel design	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105034045650	Mendlesham Stream
National Grid Reference:	TM 11324 67224	
Current Overall Status	Bad	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045710	

Ecological Status

Current Status (and certainty that status is less than good)	Bad (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Disproportionately expensive (P1c), Technically infeasible (B2m, S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105034045690	Chickering Beck
National Grid Reference:	TM 20962 75206	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045700	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105034045700	Chickering Beck
National Grid Reference:	TM 17598 77246	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045710	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105034045720	Hempnall Beck
National Grid Reference:	TM 21006 95028	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051230	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (B1a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105034045730 Tas	
National Grid Reference:	TM 15452 91819	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051230	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105034045770 Waveney	
National Grid Reference:	TM 13131 78988	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034045780	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105034045780 Waveney	
National Grid Reference:	TM 15550 78414	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034045900	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Quite Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105034045830	The Beck
National Grid Reference:	TM 29889 84186	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045900	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105034045840	Frenze Beck
National Grid Reference:	TM 10856 83629	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045800	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a), Technically infeasible (DO2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105034045850	Dickleburgh Stream
National Grid Reference:	TM 16801 82726	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045800	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105034045870 Waveney	
National Grid Reference:	TM 29456 87220	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045900	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105034045880	Starston Brook
National Grid Reference:	TM 22101 84448	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045900	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105034045890	Waveney(Sth) (Tidal)
National Grid Reference:	TM 53492 91744	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB510503410700	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034045900	River Waveney
National Grid Reference:	TM 42212 91482	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB510503410700	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Sediment management	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Manage disturbance	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Alter timing of dredging / disposal	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Vessel Management	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Modify vessel design	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Isoproturon	Moderate (Uncertain)	High	
Lead And Its Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
para - para DDT	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105034045930	Broome Beck
National Grid Reference:	TM 33760 92669	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB105034045900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105034051250 Yare	
National Grid Reference:	TG 24453 07025	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034051460	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** No
Waterbody ID and Name:	GB105034050990	Fritton Lake
National Grid Reference:	TG 49650 00814	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Freshwater Fish Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB510503410700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105034051040	Blackwater Drain
National Grid Reference:	TG 09559 19367	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034055881	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** No
Waterbody ID and Name:	GB105034055710 Ant	
National Grid Reference:	TG 26828 34698	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Urbanisation, Wider Environment	
Downstream Waterbody ID:	GB105034050910	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3a, M3b, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Sediment management	**In Place**
Manage disturbance	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Modify vessel design	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R56	**Surveillance site:**	No
Waterbody ID and Name:	GB105034051030	Blackwater Drain	
National Grid Reference:	TG 08885 20444		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027		
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible		
Protected Area Designation:	Not Designated		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Land Drainage		
Downstream Waterbody ID:	GB105034051040		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105034051290 Yare	
National Grid Reference:	TG 08514 08683	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051280	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105034045800	Frenze Beck
National Grid Reference:	TM 13412 80409	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045780	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** No
Waterbody ID and Name:	GB105034055670	East Ruston Stream
National Grid Reference:	TG 34407 29325	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050910	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105034051000 Tud	
National Grid Reference:	TG 02920 12420	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Urbanisation	
Downstream Waterbody ID:	GB105034055882	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR4a)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB105034045820	Waveney
National Grid Reference:	TM 10891 79345	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045770	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Technically infeasible (DO2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105034055680	Scarrow Beck
National Grid Reference:	TG 18980 31238	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050930	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034055881	Wensum US Norwich
National Grid Reference:	TG 15871 13715	
Current Overall Potential	Bad	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:		
Downstream Waterbody ID:	GB105034055882	

Ecological Potential

Current Status (and certainty that status is less than good) Bad (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Very Certain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	High	High	
Phytobenthos	Bad (Very Certain)	Poor	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Phenol	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1k)

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	Moderate (Uncertain)	High	

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034055882	Wensum DS Norwich
National Grid Reference:	TG 22647 08985	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034051460	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Good	
Invertebrates	High	High	
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a)

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Isoproturon	Moderate (Uncertain)	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105034055660 Bure	
National Grid Reference:	TG 16235 30146	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050930	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R66	**Surveillance site:** No
Waterbody ID and Name:	GB105034055720	Kings Beck
National Grid Reference:	TG 16739 34622	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055680	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R67	**Surveillance site:** No
Waterbody ID and Name:	GB105034055730	King's Beck
National Grid Reference:	TG 22854 30641	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034050880	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R68	**Surveillance site:** No
Waterbody ID and Name:	GB105034050870	Hevingham Watercourse
National Grid Reference:	TG 21540 21661	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB105034050930	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R69	**Surveillance site:** No
Waterbody ID and Name:	GB105034050920	Tributary of Bure
National Grid Reference:	TG 26204 24963	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034050880	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R70	**Surveillance site:** No
Waterbody ID and Name:	GB105034050950	Tributary of Tas
National Grid Reference:	TM 17588 97493	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051230	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R71	**Surveillance site:** No
Waterbody ID and Name:	GB105034051020	Wendling Beck
National Grid Reference:	TF 96926 14671	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB105034055881	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Very Certain)	Moderate	Not Required (MS)
Invertebrates	High	High	
Macrophytes	Moderate (Uncertain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Quite Certain)	Moderate	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R72	**Surveillance site:** No
Waterbody ID and Name:	GB105034051060	Tributary of Blackwater Drain
National Grid Reference:	TG 06176 21244	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051040	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R73	**Surveillance site:** No
Waterbody ID and Name:	GB105034051080	Tributary of Wensum
National Grid Reference:	TF 87495 24011	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051110	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R74	**Surveillance site:** No
Waterbody ID and Name:	GB105034051130	East Rudham Stream
National Grid Reference:	TF 83869 28610	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051140	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R75	**Surveillance site:** No
Waterbody ID and Name:	GB105034051150 Tiffey	
National Grid Reference:	TG 10552 00116	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage, Urbanisation	
Downstream Waterbody ID:	GB105034051170	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Good	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R76	**Surveillance site:** No
Waterbody ID and Name:	GB105034051200	Tributary of Tiffey or Hackford Watercourse
National Grid Reference:	TG 07599 03089	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051280	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R77	**Surveillance site:** No
Waterbody ID and Name:	GB105034051210	Hellington Beck
National Grid Reference:	TG 31882 03838	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034051370	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (B1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R78	**Surveillance site:** No
Waterbody ID and Name:	GB105034045670	Tributary of Waveney
National Grid Reference:	TM 11720 73745	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045710	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R79	**Surveillance site:** No
Waterbody ID and Name:	GB105034045680	Tributary of Dove
National Grid Reference:	TM 18491 74180	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045700	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R80	**Surveillance site:** No
Waterbody ID and Name:	GB105034045710	Tributary of Dove
National Grid Reference:	TM 15156 74150	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB105034045900	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R81	**Surveillance site:** No
Waterbody ID and Name:	GB105034045750	Tributary of Waveney
National Grid Reference:	TM 11082 77460	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045770	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R82	**Surveillance site:** No
Waterbody ID and Name:	GB105034045760	Tributary of Waveney
National Grid Reference:	TM 26985 77843	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045790	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R83	**Surveillance site:** No
Waterbody ID and Name:	GB105034045860	Tributary of Waveney
National Grid Reference:	TM 35368 88236	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045900	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R84	**Surveillance site:**	No
Waterbody ID and Name:	GB105034055850	Foulsham Tributary	
National Grid Reference:	TG 01297 24692		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Technically infeasible		
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Land Drainage		
Downstream Waterbody ID:	GB105034055881		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R85	**Surveillance site:** No
Waterbody ID and Name:	GB105034045790	Tributary of Waveney
National Grid Reference:	TM 23800 79904	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045900	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R86	**Surveillance site:** No
Waterbody ID and Name:	GB105034055860	Little Ryburgh Tributary
National Grid Reference:	TF 96076 29057	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034055881	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R87	**Surveillance site:** No
Waterbody ID and Name:	GB105034051160 Tiffey	
National Grid Reference:	TG 09559 01159	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051220	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R88	**Surveillance site:** No
Waterbody ID and Name:	GB105034045660	Tributary of Dove
National Grid Reference:	TM 07071 69544	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045710	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R89	**Surveillance site:** No
Waterbody ID and Name:	GB105034045810	Tributary of Waveney
National Grid Reference:	TM 27462 81084	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034045900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R90	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034051070	Swannington Beck
National Grid Reference:	TG 14264 18795	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105034055881	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a)
Macrophytes	Moderate (Very Certain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R91	**Surveillance site:**	No
Waterbody ID and Name:	GB105034051090	Tributary of Blackwater Drain	
National Grid Reference:	TG 09229 22108		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Technically infeasible		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Land Drainage		
Downstream Waterbody ID:	GB105034051030		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R92	**Surveillance site:** No
Waterbody ID and Name:	GB105034051370	River Yare (Tidal)
National Grid Reference:	TG 30341 07144	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB510503410700	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Set-back embankments	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Increase in-channel morphological diversity	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R93	**Surveillance site:** No
Waterbody ID and Name:	GB105034045740	Tributary of Waveney
National Grid Reference:	TM 22883 76266	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105034045790	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** Yes
Waterbody ID and Name:	GB30535953	Wroxham Broad
National Grid Reference:	TG 30969 16555	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (P2a)
Phytoplankton	Poor (Very Certain)	Poor	Technically infeasible (P2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	Moderate (Very Certain)	Moderate	Technically infeasible (P2a)
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3h)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Increase in-channel morphological diversity	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:** No
Waterbody ID and Name:	GB30535738	Martham Broad or Martham Broad (North and South)
National Grid Reference:	TG 45758 19966	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Moderate (Very Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Total Phosphorus	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30535959	Decoy Broad
National Grid Reference:	TG 32884 16824	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L4	**Surveillance site:** No
Waterbody ID and Name:	GB30535977	Hoveton Great Broad
National Grid Reference:	TG 31752 16368	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L5	**Surveillance site:** No
Waterbody ID and Name:	GB30535981	Rollesby Broad or Ormesby Broad
National Grid Reference:	TG 46231 15062	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Drinking Water, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1d)
Phytoplankton	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Total Phosphorus	Moderate (Very Certain)	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Increase in-channel morphological diversity	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L6	**Surveillance site:**	No
Waterbody ID and Name:	GB30536029	Cockshoot Broad	
National Grid Reference:	TG 34435 15667		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Wider Environment		
Downstream Waterbody ID:			

Ecological Potential

Current Status (and certainty that status is less than good) Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c)

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L7	**Surveillance site:**	No
Waterbody ID and Name:	GB30536050	Ranworth Broad	
National Grid Reference:	TG 35573 15344		
Current Overall Potential	Poor		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Drinking Water Protected Area, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Navigation, Wider Environment		
Downstream Waterbody ID:			

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Increase in-channel morphological diversity	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L8	**Surveillance site:** No
Waterbody ID and Name:	GB30535397	Captains Pond
National Grid Reference:	TG 27975 27093	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L9	**Surveillance site:** Yes
Waterbody ID and Name:	GB30535640	Hickling Broad
National Grid Reference:	TG 42036 21230	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytobenthos	Good	Good	
Phytoplankton	Poor (Very Certain)	Poor	Disproportionately expensive (B1a, P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	Moderate (Very Certain)	Good	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3h)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Sediment management	**In Place**
Increase in-channel morphological diversity	**In Place**
Manage disturbance	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Lake - L10	**Surveillance site:**	No
Waterbody ID and Name:	GB30535645	Horsey Mere	
National Grid Reference:	TG 44936 22174		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Recreation, Wider Environment		
Downstream Waterbody ID:			

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
Total Phosphorus	Good	Good	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3h)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Sediment management	**In Place**
Increase in-channel morphological diversity	**In Place**
Manage disturbance	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L11	**Surveillance site:** No
Waterbody ID and Name:	GB30535655	Barton Broad
National Grid Reference:	TG 36212 21456	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Moderate (Very Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	Moderate (Quite Certain)	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3h)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Sediment management	**In Place**
Increase in-channel morphological diversity	**In Place**
Manage disturbance	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L12	**Surveillance site:**	No
Waterbody ID and Name:	GB30536219	Costessey Pit No. 2	
National Grid Reference:	TG 16327 12980		
Current Overall Status	Fail		
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Status by 2015, Good Chemical Status by 2015		
Justification if overall objective is not good status by 2015:			
Protected Area Designation:	Drinking Water Protected Area		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Not Designated A/HMWB		
Reason for Designation:			
Downstream Waterbody ID:			

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phenol	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Quite Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	Moderate (Quite Certain)	High	

Waterbody Category and Map Code.:	Lake - L13	**Surveillance site:**	No
Waterbody ID and Name:	GB30536980	Lound Mill Water	
National Grid Reference:	TG 50053 00971		
Current Overall Status	Good		
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Status by 2015		
Justification if overall objective is not good status by 2015:			
Protected Area Designation:	Drinking Water Protected Area		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Not Designated A/HMWB		
Reason for Designation:			
Downstream Waterbody ID:			

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good (Quite Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Copper	High	High	
Iron	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L14	**Surveillance site:** No
Waterbody ID and Name:	GB30537033	Hardley Flood
National Grid Reference:	TM 38361 99777	
Current Overall Status	Bad	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Ecological Status

Current Status (and certainty that status is less than good) Bad (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Macrophytes	Bad (Very Certain)	Bad	Disproportionately expensive (P1d), Technically infeasible (B2p)
Phytoplankton	Poor (Very Certain)	Poor	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Bad (Very Certain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HL4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L15	**Surveillance site:** No
Waterbody ID and Name:	GB30536975	Sea Mere or Hingham Sea Mere
National Grid Reference:	TG 03702 01228	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L16	**Surveillance site:** Yes
Waterbody ID and Name:	GB30536202	Upton Broad
National Grid Reference:	TG 38875 13392	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Good	Good	
Macrophytes	Moderate (Quite Certain)	Good	
Phytobenthos	High	High	
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Lake - L17	**Surveillance site:** No
Waterbody ID and Name:	GB30536730	Rockland Broad
National Grid Reference:	TG 33231 05165	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Poor (Very Certain)	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Increase in-channel morphological diversity	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L18	**Surveillance site:** No
Waterbody ID and Name:	GB30536989	Fritton Decoy
National Grid Reference:	TG 48308 00622	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Poor (Very Certain)	Poor	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Moderate (Very Certain)	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3h)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Increase in-channel morphological diversity	**In Place**
Modify vessel design	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.6 Cam & Ely Ouse (Including South Level) river catchment

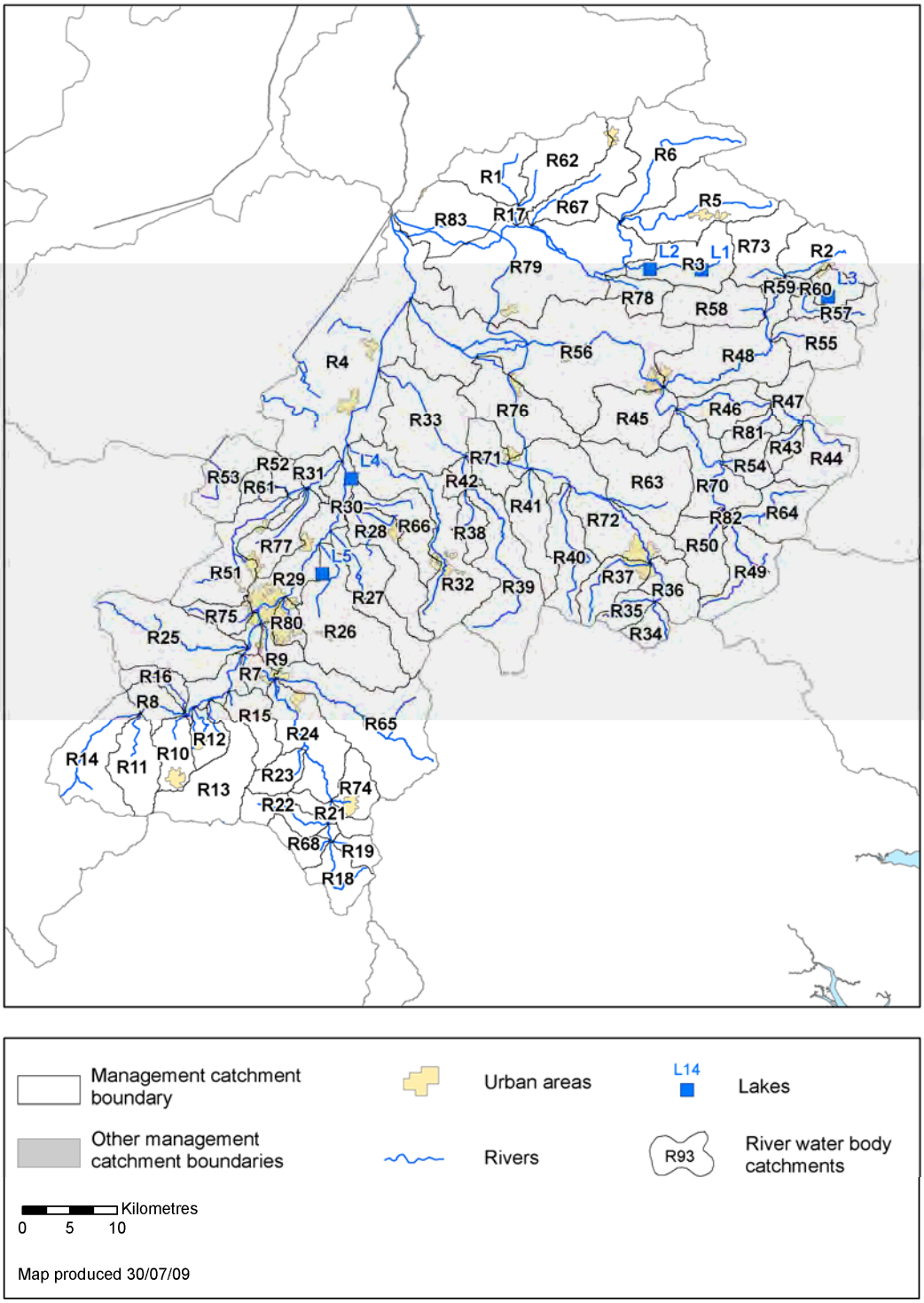
Rivers and lakes

There are 83 river water bodies (of which 61 are designated as heavily modified and 2 artificial) and 5 lake water bodies (of which 1 is designated as heavily modified and 2 artificial) within the Cam & Ely Ouse (Including South Level) river catchment.

Figure B.6.1 **Status objectives for rivers and lakes in the Cam & Ely Ouse (Including South Level) river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	8	8	20	12	20
Lakes	2	2	2	0	2
Heavily modified Water bodies	6	6	62	56	62
Artificial water bodies	0	0	4	4	4

Figure B.6.2 **River and lake water bodies in the Cam & Ely Ouse (Including South Level) river catchment**



Water body tables for rivers and lakes in the Cam & Ely Ouse (Including South Level) river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105033047810	Stringside Stream
National Grid Reference:	TF 70322 04491	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047640	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105033047830 Thet	
National Grid Reference:	TM 03504 95457	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043440	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (B2r, S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105033047840	Thompson Stream
National Grid Reference:	TL 89076 95242	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047650	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** Yes
Waterbody ID and Name:	GB105033047850	Ten Mile River
National Grid Reference:	TL 58493 88844	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Flood Protection, Land Drainage, Navigation, Urbanisation	
Downstream Waterbody ID:	GB530503300300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	
Macrophytes	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3c, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques (invasive species)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Selective vegetation control regime	**In Place**
Appropriate timing (vegetation control)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate vegetation control technique	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Manage disturbance	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Sediment management	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Simazine	High	High	
Tributyltin Compounds	Moderate (Uncertain)	Moderate	Technically infeasible (C2a)
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105033047870	Watton Brook
National Grid Reference:	TF 89804 00830	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047650	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105033047890 Wissey	
National Grid Reference:	TF 87288 07539	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047650	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a, M5a)
Invertebrates	High	High	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P5c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P5c)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105033037600	River Cam
National Grid Reference:	TL 43378 52532	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042750	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Mecoprop	High	High	
Phenol	High	High	
Toluene	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Simazine	High	High	
Trichloromethane	High	High	
Carbon Tetrachloride	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105033037610	River Rhee
National Grid Reference:	TL 41450 51944	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042750	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105033037620	Hobson's Brook
National Grid Reference:	TL 45499 55934	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation, Wider Environment	
Downstream Waterbody ID:	GB105033042750	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105033038020	Whaddon Brook
National Grid Reference:	TL 35897 46659	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037610	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a, A5c)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a, A5c)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105033038030 Mill River	
National Grid Reference:	TL 31943 45826	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037610	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105033038060 Rhee	
National Grid Reference:	TL 38750 47066	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037610	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Quite Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105033038080 Shep	
National Grid Reference:	TL 39749 47231	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033037610	

Ecological Potential

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105033038100	River Rhee
National Grid Reference:	TL 27662 45877	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037610	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Quite Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105033038120 Rhee	
National Grid Reference:	TL 41731 49466	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037610	

Ecological Potential

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105033038150 Rhee	
National Grid Reference:	TL 35402 50568	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037610	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105033047640	Stringside Stream
National Grid Reference:	TF 71592 00632	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047650	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105033037480	River Cam or Granta
National Grid Reference:	TL 52633 31909	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037520	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105033037490	Debden Water
National Grid Reference:	TL 53629 34099	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Regulation (impoundment release), Wider Environment	
Downstream Waterbody ID:	GB105033037520	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good) Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105033037520	River Cam
National Grid Reference:	TL 51982 35221	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033037550	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105033037550 River Cam	
National Grid Reference:	TL 52120 36958	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037590	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105033037560	Wendon Brook
National Grid Reference:	TL 48339 37050	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033037550	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105033037570 Cam	
National Grid Reference:	TL 49020 42423	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033037590	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105033037590	River Cam
National Grid Reference:	TL 50405 42674	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033037600	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Simazine	High	High	
Trichloromethane	High	High	
Carbon Tetrachloride	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105033042690	Bourn Brook
National Grid Reference:	TL 30537 57889	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042750	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105033042700	Bottisham Lode-Quy Water
National Grid Reference:	TL 53005 62440	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033042750	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105033042710	Swaffham-Bulbeck Lode
National Grid Reference:	TL 54899 64365	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033042750	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105033042720 Burwell Lode	
National Grid Reference:	TL 56277 66876	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation, Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R29 **Surveillance site:** No
Waterbody ID and Name:	GB105033042750 River Cam
National Grid Reference:	TL 46959 59980
Current Overall Potential	Moderate
Status Objective (Overall):	Good by 2027 (For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive
SSSI (Non-N2K) related:	No
Hydromorphological Designation:	Heavily Modified
Reason for Designation:	Flood Protection, Navigation, Urbanisation, Wider Environment
Downstream Waterbody ID:	GB105033047850

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3a, M3b, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques (invasive species)	**In Place**
Selective vegetation control regime	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Reduce impact of dredging	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Manage disturbance	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Modify vessel design	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Trichloromethane	High	High	
Carbon Tetrachloride	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	
1,2-dichloroethane	High	High	
Atrazine	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Simazine	High	High	

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105033042760 Burwell Lode	
National Grid Reference:	TL 53885 69796	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	Moderate (Very Certain)	Moderate	Technically infeasible (PH2b)
Phosphate	Poor (Very Certain)	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Sediment management	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Reduce impact of dredging	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Manage disturbance	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105033042850	Old West River
National Grid Reference:	TL 51243 72719	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Moderate (Uncertain)	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Manage disturbance	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Sediment management	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105033042860 Soham Lode	
National Grid Reference:	TL 60615 72786	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105033042900	River Lark
National Grid Reference:	TL 62105 80405	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105033042920 River Lark	
National Grid Reference:	TL 86955 58251	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033042940	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105033042930 Lark	
National Grid Reference:	TL 83123 59593	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033042940	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P5c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R36	**Surveillance site:**	No
Waterbody ID and Name:	GB105033042940	River Lark	
National Grid Reference:	TL 87275 61880		
Current Overall Potential	Bad		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Flood Protection		
Downstream Waterbody ID:	GB105033043051		

Ecological Potential

Current Status (and certainty that status is less than good) Bad (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Disproportionately expensive (HR4a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P5c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105033042950	River Linnet
National Grid Reference:	TL 80968 62679	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Urbanisation	
Downstream Waterbody ID:	GB105033043051	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105033042970 Lee Brook	
National Grid Reference:	TL 67233 69635	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043020	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105033042990	River Kennett-Lee Brook
National Grid Reference:	TL 72217 60482	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043020	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR4a)
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105033043000	Cavenham Stream
National Grid Reference:	TL 78997 64909	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043051	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Quite Certain)	Moderate	Disproportionately expensive (HR4a)
Invertebrates	Poor (Quite Certain)	Moderate	Disproportionately expensive (HR4a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105033043010	Tuddenham Stream
National Grid Reference:	TL 73260 72002	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033043051	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR4a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105033043020	River Kennett-Lee Brook
National Grid Reference:	TL 66221 73272	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042900	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Quite Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105033043040	Little Ouse
National Grid Reference:	TM 00959 77121	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043110	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105033043060 Little Ouse	
National Grid Reference:	TM 04236 76603	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043110	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105033043090 Little Ouse	
National Grid Reference:	TL 86633 80235	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043400	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105033043100	Little Ouse
National Grid Reference:	TL 93881 81769	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043090	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105033043110 Little Ouse	
National Grid Reference:	TL 99956 80463	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043100	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Poor	Technically infeasible (A2b)
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Poor	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105033043190 Thet	
National Grid Reference:	TL 95399 84422	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043400	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105033043280	Black Bourn
National Grid Reference:	TL 94797 60948	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043290	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** No
Waterbody ID and Name:	GB105033043300	Pakenham Stream
National Grid Reference:	TL 92318 66274	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043070	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105033043320	Cottenham Lode
National Grid Reference:	TL 43863 68359	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043360	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105033043360	Old West River
National Grid Reference:	TL 48737 71439	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB105033042850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Improve floodplain connectivity	**Not In Place**
Manage disturbance	**Not In Place**
Set-back embankments	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Sediment management	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** Yes
Waterbody ID and Name:	GB105033043370	Old West River
National Grid Reference:	TL 40231 71259	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:	GB105033043350	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1c)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105033043380 Stanton Tributary	
National Grid Reference:	TL 94828 74630	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043070	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Quite Certain)	Poor	Disproportionately expensive (A1a)
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Poor (Quite Certain)	Poor	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** No
Waterbody ID and Name:	GB105033043390 Whittle	
National Grid Reference:	TM 00665 88084	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Drinking Water, Land Drainage, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033043190	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R56	**Surveillance site:** No
Waterbody ID and Name:	GB105033043400	Little Ouse River
National Grid Reference:	TL 81489 88161	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation, Urbanisation	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P5c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques (invasive species)	**In Place**
Selective vegetation control regime	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Manage disturbance	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105033043410	Buckenham Stream
National Grid Reference:	TM 04478 90221	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Drinking Water, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033043430	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105033043420 Larling Brook	
National Grid Reference:	TL 97323 90670	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043190	

Ecological Potential

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** No
Waterbody ID and Name:	GB105033043430	Buckenham Stream
National Grid Reference:	TM 01371 92983	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043190	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105033043460 Buckenham Stream	
National Grid Reference:	TM 03028 92717	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043430	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB105033043350	Old West River
National Grid Reference:	TL 46380 71709	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:	GB105033043360	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105033047820	Old Carr Stream
National Grid Reference:	TF 73776 02992	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047640	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** No
Waterbody ID and Name:	GB105033043030	Culford Stream
National Grid Reference:	TL 85109 69523	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043051	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** No
Waterbody ID and Name:	GB105033043340	Stowlangtoft Stream
National Grid Reference:	TL 99441 71154	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043290	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a), Technically infeasible (DO2b)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105033037810	River Granta
National Grid Reference:	TL 52841 48938	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037600	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR4a), Technically infeasible (S2b)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P5c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Carbon Tetrachloride	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R66	**Surveillance site:** No
Waterbody ID and Name:	GB105033042780 New River	
National Grid Reference:	TL 57796 69820	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Sediment management	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Reduce impact of dredging	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Manage disturbance	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R67	**Surveillance site:** No
Waterbody ID and Name:	GB105033047880	River Gadder
National Grid Reference:	TF 77748 03252	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047650	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R68	**Surveillance site:** No
Waterbody ID and Name:	GB105033037540	Wicken Water
National Grid Reference:	TL 51520 34123	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037520	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R69	**Surveillance site:** No
Waterbody ID and Name:	GB105033043440 Buckenham Stream	
National Grid Reference:	TM 00442 93834	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043190	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R70	**Surveillance site:** No
Waterbody ID and Name:	GB105033043070	Sapiston River
National Grid Reference:	TL 91116 76799	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043090	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a), Technically infeasible (B2s, S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R71	**Surveillance site:** No
Waterbody ID and Name:	GB105033043052	River Lark DS Mill St Bridge
National Grid Reference:	TL 68724 74539	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042900	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P5c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a)

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Trichloromethane	High	High	
Carbon Tetrachloride	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R72	**Surveillance site:** No
Waterbody ID and Name:	GB105033043051	River Lark US Mill St Bridge
National Grid Reference:	TL 77250 72663	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation, Wider Environment	
Downstream Waterbody ID:	GB105033043052	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P5c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a, M1g, M1h)

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Trichloromethane	High	High	
Carbon Tetrachloride	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R73	**Surveillance site:** No
Waterbody ID and Name:	GB105033047860	Stow Bedon Stream
National Grid Reference:	TL 98399 94913	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043440	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Technically infeasible (B2p)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R74	**Surveillance site:** No
Waterbody ID and Name:	GB105033037580 Slade	
National Grid Reference:	TL 53298 38512	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033037590	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1c)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R75	**Surveillance site:** No
Waterbody ID and Name:	GB105033042680 Bin Brook	
National Grid Reference:	TL 41331 58461	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033042750	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R76	**Surveillance site:** No
Waterbody ID and Name:	GB105033043120	Twelve Foot Drain/ Cut-off Channel
National Grid Reference:	TL 71820 80817	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043400	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R77	**Surveillance site:** No
Waterbody ID and Name:	GB105033043330	Beach Ditch
National Grid Reference:	TL 47708 67871	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033042850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R78	**Surveillance site:** No
Waterbody ID and Name:	GB105033043450 West Tofts Stream	
National Grid Reference:	TL 82747 93665	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047650	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R79	**Surveillance site:** No
Waterbody ID and Name:	GB105033047630	River Wissey & Cut-off Channel
National Grid Reference:	TL 82766 94962	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047650	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR4a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Atrazine	High	High	
Simazine	High	High	

Waterbody Category and Map Code.:	River - R80	**Surveillance site:** No
Waterbody ID and Name:	GB105033042670	Cherry Hinton Brook
National Grid Reference:	TL 47814 58487	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033042750	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R81	**Surveillance site:** No
Waterbody ID and Name:	GB105033043080 Hopton Brook	
National Grid Reference:	TL 98616 79126	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033043100	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R82	**Surveillance site:** No
Waterbody ID and Name:	GB105033043290	Sapiston River
National Grid Reference:	TL 94042 68953	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043070	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R83	**Surveillance site:** No
Waterbody ID and Name:	GB105033047650	River Wissey & Cut-off Channel
National Grid Reference:	TL 64423 99396	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB105033047850	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Improve floodplain connectivity	**Not In Place**
Manage disturbance	**Not In Place**
Set-back embankments	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Sediment management	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** No
Waterbody ID and Name:	GB30537306	Thompson Water
National Grid Reference:	TL 91524 94912	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Macrophytes	High	High	
Phytoplankton	Moderate (Uncertain)	Moderate	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Oxygen	Good	Good	
Total Phosphorus	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HL2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:** No
Waterbody ID and Name:	GB30537309	Stanford Water
National Grid Reference:	TL 86050 94985	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Oxygen	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30537461	Old Buckenham Fen Mere
National Grid Reference:	TM 04943 92116	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L4	**Surveillance site:** No
Waterbody ID and Name:	GB30538167	Upware North Pit
National Grid Reference:	TL 54441 72769	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L5	**Surveillance site:** No
Waterbody ID and Name:	GB30538633	Stow Cum Quy Fen
National Grid Reference:	TL 51396 62662	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1g)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.7 Combined Essex river catchment

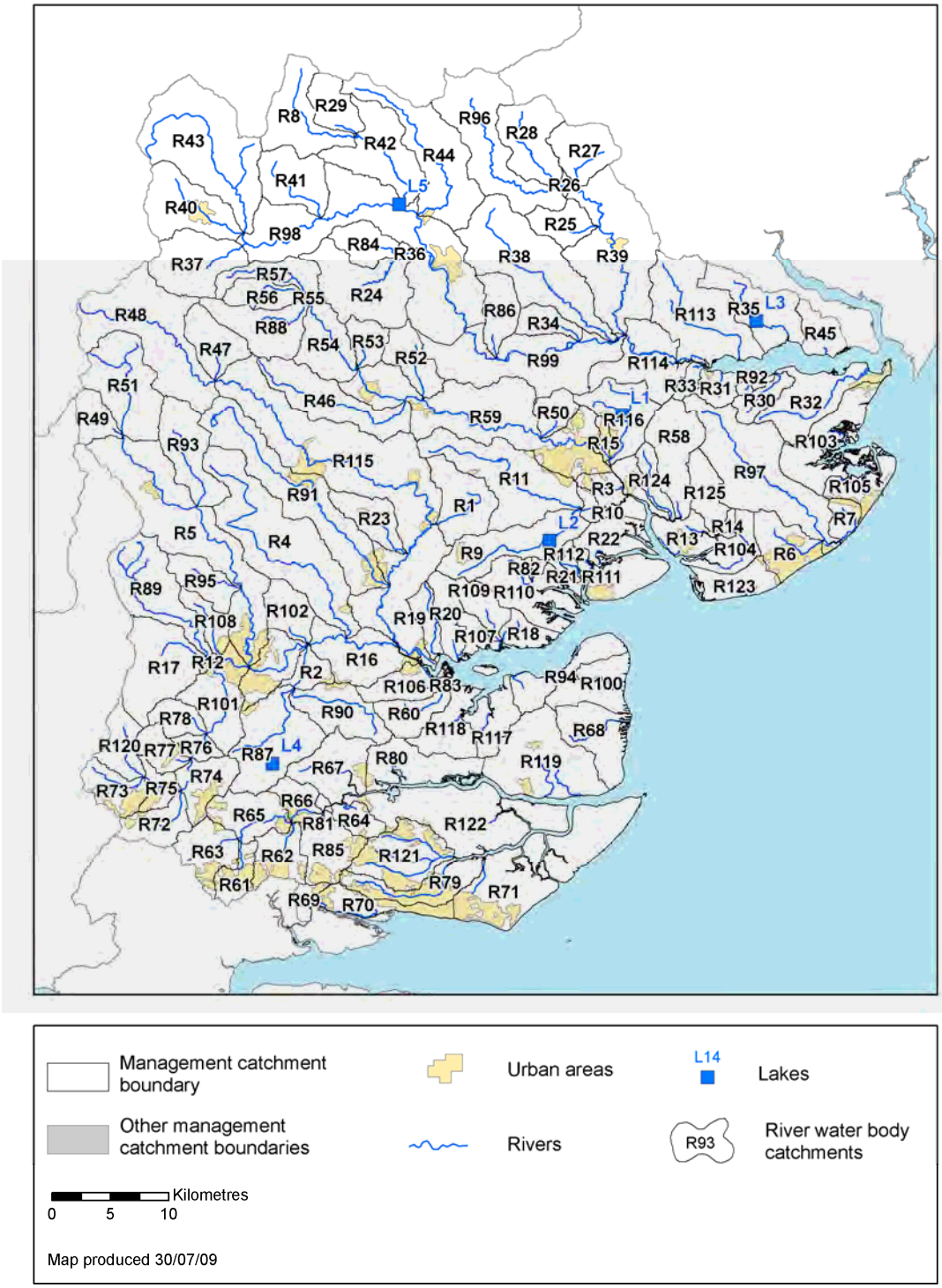
Rivers and Lakes

There are 125 river water bodies (of which 77 are designated as heavily modified) and 5 lake water bodies (of which 5 are designated as artificial) within the Combined Essex river catchment.

Figure B.7.1 **Status objectives for rivers and lakes in the Combined Essex river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	5	5	48	43	48
Lakes	0	0	0	0	0
Heavily modified Water bodies	4	4	77	73	77
Artificial water bodies	0	0	5	5	5

Figure B.7.2 **River and lake water bodies in the Combined Essex river catchment**



Water body tables for rivers and lakes in the Combined Essex river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:**	No
Waterbody ID and Name:	GB105037033870	Domsey Brook	
National Grid Reference:	TL 89862 19858		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Technically infeasible		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Flood Protection		
Downstream Waterbody ID:	GB105037041160		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105037033890 Sandon Brook	
National Grid Reference:	TL 75928 07336	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033530	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1b)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105037033930	Birch Brook
National Grid Reference:	TM 01818 21938	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105037033940 Ter	
National Grid Reference:	TL 71585 17877	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033530	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105037033950 Chelmer	
National Grid Reference:	TL 67010 19015	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037033530	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105037033960	Picker's Ditch
National Grid Reference:	TM 18234 16740	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037077810	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105037033970	Holland and Hamford
National Grid Reference:	TM 22972 18299	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037077810	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105036046400 Glem	
National Grid Reference:	TL 76056 53310	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040970	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105037034130 Layer Brook	
National Grid Reference:	TL 93979 16522	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific, Wider Environment	
Downstream Waterbody ID:	GB105037034140	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2c), Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105037034140	Roman River
National Grid Reference:	TM 00377 20243	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105037034150 Roman River	
National Grid Reference:	TL 95632 21361	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037034140	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105037034160 Can	
National Grid Reference:	TL 68177 07251	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037033900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105037034180	Tendring Streams
National Grid Reference:	TM 07173 16752	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Very Certain)	Moderate	Technically infeasible (A2b)
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Very Certain)	Moderate	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105037034190	Martins Farm Tributary
National Grid Reference:	TM 12210 18204	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105037034210	Tendring Streams
National Grid Reference:	TM 01432 25367	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105037041320	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1b)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** Yes
Waterbody ID and Name:	GB105037033530 River Chelmer	
National Grid Reference:	TL 72743 06493	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	
Macrophytes	Poor (Very Certain)	Poor	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (B2a, P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Technically infeasible (P2b)
Temperature	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Sediment management	**In Place**
Manage disturbance	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Vessel Management	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Modify vessel design	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Quite Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	Moderate (Quite Certain)	Moderate	Technically infeasible (C2a)
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Dichloromethane	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Isoproturon	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Nonylphenol	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105037033540	Roxwell Brook
National Grid Reference:	TL 65374 08593	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037034160	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105037033640	Blackwater Estuary
National Grid Reference:	TL 93580 09640	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105037033670	Spickets Brook
National Grid Reference:	TL 87225 10676	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105037033780	Blackwater Estuary
National Grid Reference:	TL 88780 08218	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105037033810	Blackwater Estuary
National Grid Reference:	TL 97814 14482	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105037033850	Blackwater Estuary
National Grid Reference:	TM 00904 16201	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105037033860	Blackwater Pant
National Grid Reference:	TL 83066 17571	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037041160	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105036040710	Belchamp Brook
National Grid Reference:	TL 82220 39675	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040900	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a, HR2a), Technically infeasible (B2p)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105036040730 Brett	
National Grid Reference:	TL 99858 44039	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036040930	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105036040740 Brett	
National Grid Reference:	TL 98427 48007	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040930	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105036040750	Bildeston Brook
National Grid Reference:	TM 00375 50135	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040930	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Quite Certain)	Poor	Disproportionately expensive (B1a), Technically infeasible (B2l)
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105036040760 Old River Brett	
National Grid Reference:	TL 94079 52171	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040740	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105036040780 Glem	
National Grid Reference:	TL 79662 52782	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040970	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105036040800	Stour Estuary (Suffk)
National Grid Reference:	TM 15441 30349	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105036040810	Stour Estuary (Suffk)
National Grid Reference:	TM 11571 30888	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105036040830	Ramsey River
National Grid Reference:	TM 20776 29258	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503613600	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Quite Certain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105036040850	Stour Estuary (Suffk)
National Grid Reference:	TM 09663 32342	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105036040860	Stour (Suffk.Lower)
National Grid Reference:	TL 98566 35550	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105036040942	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105036040880 Holbrook	
National Grid Reference:	TM 14886 36276	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB520503613600	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** No
Waterbody ID and Name:	GB105036040900	Belchamp Brook
National Grid Reference:	TL 85331 42299	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036040941	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Disproportionately expensive (HR4a)
Invertebrates	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105036040910	Bumpstead Brook
National Grid Reference:	TL 69312 41980	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105036040941	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR4a)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105036040920	River Box
National Grid Reference:	TL 93726 41950	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036040942	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Very Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105036040930 Brett	
National Grid Reference:	TM 03176 38638	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036041000	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105036040950 Stour Brook	
National Grid Reference:	TL 67946 44849	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036040941	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105036040960	Chilton Brook
National Grid Reference:	TL 74796 46980	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105036040941	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105036040970 Glem	
National Grid Reference:	TL 81922 51600	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040941	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105036040980 River Stour	
National Grid Reference:	TL 66107 53953	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036040941	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105036040990 Chad Brook	
National Grid Reference:	TL 85591 51612	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105036040941	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105036041060	Stour Estuary (Suffk)
National Grid Reference:	TM 20759 33823	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105037041150 Bourne Brook	
National Grid Reference:	TL 78624 29073	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037041330	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a), Technically infeasible (B2j, B2p)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105037041170	Blackwater Pant
National Grid Reference:	TL 68635 32534	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105037041160	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105037041180 Pant	
National Grid Reference:	TL 63488 35837	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105037041160	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (HR1a, P1a), Technically infeasible (M3a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105037041200	Chelmer (Upper)
National Grid Reference:	TL 60033 26656	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105037033950	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** No
Waterbody ID and Name:	GB105037041210 St Botolph's Brook	
National Grid Reference:	TL 97208 27023	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037041330	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105037041220 Chelmer	
National Grid Reference:	TL 60984 29782	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033950	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105037041230	Colne (Essex.Lower)
National Grid Reference:	TL 85482 31893	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037041330	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** No
Waterbody ID and Name:	GB105037041240	Colne (Essex.Upper)
National Grid Reference:	TL 80945 32958	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037041260	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105037041260 Colne	
National Grid Reference:	TL 78243 34826	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037041330	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** No
Waterbody ID and Name:	GB105037041270 Colne	
National Grid Reference:	TL 76227 38098	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037041260	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Very Certain)	Moderate	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R56	**Surveillance site:** No
Waterbody ID and Name:	GB105037041280 Stambourne Brook	
National Grid Reference:	TL 73270 39087	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037041270	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105037041290 Colne	
National Grid Reference:	TL 72060 40486	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037041270	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105037041310	Tenpenny Brook
National Grid Reference:	TM 07956 20195	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** Yes
Waterbody ID and Name:	GB105037041330 Colne	
National Grid Reference:	TL 97916 25868	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	
Macrophytes	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Good	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	Moderate (Uncertain)	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105037028440	Mundon Wash
National Grid Reference:	TL 86563 03260	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037034340	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB105037028480	Crouch (Upper)
National Grid Reference:	TQ 70480 90593	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105037028540	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Uncertain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105037028490	Crouch (Upper)
National Grid Reference:	TQ 74420 91978	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105037028550	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Uncertain)	Bad	Disproportionately expensive (P1b)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** No
Waterbody ID and Name:	GB105037028500 Crouch	
National Grid Reference:	TQ 68258 90990	
Current Overall Status	Bad	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037028540	

Ecological Status

Current Status (and certainty that status is less than good) Bad (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Bad (Very Certain)	Bad	Technically infeasible (B2h)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** No
Waterbody ID and Name:	GB105037028520	Crouch Estuary
National Grid Reference:	TQ 79925 94569	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105037028540 Crouch	
National Grid Reference:	TQ 71433 93190	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037028550	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Moderate (Quite Certain)	Moderate	Technically infeasible (B2h)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1b)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R66	**Surveillance site:** No
Waterbody ID and Name:	GB105037028550 River Crouch	
National Grid Reference:	TQ 75775 94338	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503704100	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Disproportionately expensive (B1a), Technically infeasible (B2a, B2h)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1b)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R67	**Surveillance site:** No
Waterbody ID and Name:	GB105037028560	Crouch Estuary
National Grid Reference:	TQ 77625 97796	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R68	**Surveillance site:** No
Waterbody ID and Name:	GB105037028580	Asheldham Brook
National Grid Reference:	TM 01119 00977	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503520001	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R69	**Surveillance site:** No
Waterbody ID and Name:	GB105037028600	Roach and Canvey
National Grid Reference:	TQ 76222 86192	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530603911400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R70	**Surveillance site:** No
Waterbody ID and Name:	GB105037028610	Roach and Canvey
National Grid Reference:	TQ 81587 85215	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530603911400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R71	**Surveillance site:** No
Waterbody ID and Name:	GB105037028620	Roach and Canvey
National Grid Reference:	TQ 91312 88433	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R72	**Surveillance site:** No
Waterbody ID and Name:	GB105037028650	Haverings Grove Brook
National Grid Reference:	TQ 64830 93599	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037028670	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R73	**Surveillance site:** No
Waterbody ID and Name:	GB105037028660	Chainbridge Tributary
National Grid Reference:	TQ 59510 96758	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037028680	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R74	**Surveillance site:** No
Waterbody ID and Name:	GB105037028670 Wid	
National Grid Reference:	TQ 66331 97228	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037028690	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R75	**Surveillance site:** No
Waterbody ID and Name:	GB105037028680 Wid	
National Grid Reference:	TQ 63709 96199	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037028670	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Poor (Very Certain)	Poor	Technically infeasible (B2h, B2j, B2l, INNS2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Does not Support Good	Does not Support Good	Technically infeasible (M1j)

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R76	**Surveillance site:** No
Waterbody ID and Name:	GB105037028690 Wid	
National Grid Reference:	TQ 66964 99715	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033900	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R77	**Surveillance site:** No
Waterbody ID and Name:	GB105037028700 Wid	
National Grid Reference:	TQ 65508 98446	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037028690	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phosphate	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R78	**Surveillance site:** No
Waterbody ID and Name:	GB105037028710 Wid	
National Grid Reference:	TL 66579 01676	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033900	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phosphate	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R79	**Surveillance site:** No
Waterbody ID and Name:	GB105037028730	Prittle Brook
National Grid Reference:	TQ 85572 86933	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Urbanisation	
Downstream Waterbody ID:	GB520503704100	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R80	**Surveillance site:** No
Waterbody ID and Name:	GB105037028780	Crouch Estuary
National Grid Reference:	TQ 83471 98056	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R81	**Surveillance site:** No
Waterbody ID and Name:	GB105037028850	Crouch Estuary
National Grid Reference:	TQ 77753 94588	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R82	**Surveillance site:** No
Waterbody ID and Name:	GB105037033790	Blackwater Estuary
National Grid Reference:	TL 95471 14340	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R83	**Surveillance site:** No
Waterbody ID and Name:	GB105037028450	Mundon Wash
National Grid Reference:	TL 87881 05228	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R84	**Surveillance site:** No
Waterbody ID and Name:	GB105036040720	Belchamp Brook
National Grid Reference:	TL 83395 42538	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R85	**Surveillance site:** No
Waterbody ID and Name:	GB105037028510	Crouch Estuary
National Grid Reference:	TQ 77594 93615	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R86	**Surveillance site:** No
Waterbody ID and Name:	GB105036040870	Stour (Suffk.Lower)
National Grid Reference:	TL 92182 34051	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105036040942	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good) Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R87	**Surveillance site:** No
Waterbody ID and Name:	GB105037028630 Sandon Brook	
National Grid Reference:	TL 74196 01081	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033890	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Technically infeasible (B2a, B2j)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R88	**Surveillance site:** No
Waterbody ID and Name:	GB105037041250	Toppesfield Brook
National Grid Reference:	TL 74484 36094	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037041260	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR4a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R89	**Surveillance site:** No
Waterbody ID and Name:	GB105037033840 Can	
National Grid Reference:	TL 64599 10953	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037034160	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R90	**Surveillance site:** No
Waterbody ID and Name:	GB105037028640	East Tributary Of Sandon Brook
National Grid Reference:	TL 81116 02690	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033890	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R91	**Surveillance site:** No
Waterbody ID and Name:	GB105037041140 Brain	
National Grid Reference:	TL 71867 25141	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037041160	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c), Technically infeasible (S2b, S2d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R92	**Surveillance site:** No
Waterbody ID and Name:	GB105036040790	Stour Estuary (Suffk)
National Grid Reference:	TM 13930 30991	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R93	**Surveillance site:** No
Waterbody ID and Name:	GB105037041190 Stebbing Brook	
National Grid Reference:	TL 66130 23732	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033950	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R94	**Surveillance site:** No
Waterbody ID and Name:	GB105037033510	Blackwater Estuary
National Grid Reference:	TL 94289 05377	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R95	**Surveillance site:** No
Waterbody ID and Name:	GB105037033920	Chelmer (Upper)
National Grid Reference:	TL 68344 13928	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033950	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R96	**Surveillance site:** No
Waterbody ID and Name:	GB105036040770	Lavenham Brook
National Grid Reference:	TL 91996 49317	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105036040740	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R97	**Surveillance site:** No
Waterbody ID and Name:	GB105037077810	Holland Brook
National Grid Reference:	TM 15709 22489	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503520001	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R98	**Surveillance site:** No
Waterbody ID and Name:	GB105036040941 Stour US Lamarsh	
National Grid Reference:	TL 81867 46190	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105036040942	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
2,4-dichlorophenol	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Arsenic	High	High	
Copper	High	High	
Dimethoate	High	High	
Iron	High	High	
Linuron	High	High	
Mecoprop	High	High	
Permethrin	High	High	
Toluene	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a, M1f)

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzene	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Napthalene	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R99	**Surveillance site:** No
Waterbody ID and Name:	GB105036040942	Stour DS Lamarsh
National Grid Reference:	TL 96016 33214	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105036041000	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a, M1f)

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R100	**Surveillance site:** No
Waterbody ID and Name:	GB105037033880	Bradwell Brook
National Grid Reference:	TM 01711 05531	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503200000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R101	**Surveillance site:** No
Waterbody ID and Name:	GB105037033900 Wid	
National Grid Reference:	TL 69028 04953	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033530	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Technically infeasible (B2a, B2h, B2j, INNS2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Does not Support Good	Does not Support Good	Technically infeasible (M1a)

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R102	**Surveillance site:** No
Waterbody ID and Name:	GB105037033910	Boreham Tributary
National Grid Reference:	TL 75425 09229	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033530	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R103	**Surveillance site:** No
Waterbody ID and Name:	GB105037034050 Hamford	
National Grid Reference:	TM 21524 26870	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503713700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R104	**Surveillance site:** No
Waterbody ID and Name:	GB105037034170	St Psyth Drains
National Grid Reference:	TM 13695 16434	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R105	**Surveillance site:** No
Waterbody ID and Name:	GB105037034240 Hamford	
National Grid Reference:	TM 21417 22181	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713700	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R106	**Surveillance site:** No
Waterbody ID and Name:	GB105037033520	Limbourne Creek Tributary
National Grid Reference:	TL 86925 05509	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037034340	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R107	**Surveillance site:** No
Waterbody ID and Name:	GB105037033630	Bowstead Brook (Borrow Dyke)
National Grid Reference:	TL 92658 08508	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R108	**Surveillance site:** No
Waterbody ID and Name:	GB105037033650	Chignall Brook
National Grid Reference:	TL 68101 09899	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105037033900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R109	**Surveillance site:** No
Waterbody ID and Name:	GB105037033730	Bowstead Brook
National Grid Reference:	TL 92224 10185	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R110	**Surveillance site:** No
Waterbody ID and Name:	GB105037033800 Virley Brook	
National Grid Reference:	TL 94568 14835	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1b)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R111	**Surveillance site:** No
Waterbody ID and Name:	GB105037033820	Ray Channel Borrow Dyke
National Grid Reference:	TM 00215 14924	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R112	**Surveillance site:** No
Waterbody ID and Name:	GB105037033830	Sampson's Creek
National Grid Reference:	TL 98763 15298	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037033820	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R113	**Surveillance site:** No
Waterbody ID and Name:	GB105036040890 Stutton Brook	
National Grid Reference:	TM 11446 35440	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (B1a), Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	High	High	

Waterbody Category and Map Code.:	River - R114	**Surveillance site:** Yes
Waterbody ID and Name:	GB105036041000	Lower Stour
National Grid Reference:	TM 07802 32892	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB520503613600	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Macrophytes	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1d)
Temperature	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Sediment management	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Manage disturbance	**In Place**
Selective vegetation control regime	**In Place**
Vessel Management	**In Place**
Alter timing of dredging / disposal	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate vegetation control technique	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Modify vessel design	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
para - para DDT	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R115	**Surveillance site:** Yes
Waterbody ID and Name:	GB105037041160	River Blackwater
National Grid Reference:	TL 71227 30398	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Macrophytes	Moderate (Very Certain)	Moderate	Disproportionately expensive (HR2a)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a), Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Technically infeasible (P2b)
Temperature	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Sediment management	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Manage disturbance	**In Place**
Selective vegetation control regime	**In Place**
Vessel Management	**In Place**
Alter timing of dredging / disposal	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate vegetation control technique	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Modify vessel design	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Very Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	Moderate (Quite Certain)	Moderate	Technically infeasible (C2a)
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	Moderate (Very Certain)	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R116	**Surveillance site:** No
Waterbody ID and Name:	GB105037041320	Salary Brook
National Grid Reference:	TM 03045 25990	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R117	**Surveillance site:** No
Waterbody ID and Name:	GB105037028410	Mayland Creek Tributary
National Grid Reference:	TL 91479 01495	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R118	**Surveillance site:** No
Waterbody ID and Name:	GB105037028430	Mundon Creek Tributary
National Grid Reference:	TL 88885 01949	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503713900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R119	**Surveillance site:** No
Waterbody ID and Name:	GB105037028570	Southminster Ditches
National Grid Reference:	TQ 97497 97089	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503704100	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Bad (Very Certain)	Bad	Disproportionately expensive (A5c)
Dissolved Oxygen	Bad (Very Certain)	Moderate	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1b)
Temperature	High	High	
Ammonia (Annex 8)	Bad (Very Certain)	Bad	Disproportionately expensive (A5c)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R120	**Surveillance site:** No
Waterbody ID and Name:	GB105037028720	Doddinghurst Brook
National Grid Reference:	TQ 60623 98891	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105037028680	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Poor (Very Certain)	Poor	Disproportionately expensive (A1b), Technically infeasible (B2h, B2j, INNS1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Moderate	Disproportionately expensive (A1b)
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Moderate	Disproportionately expensive (A1b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Does not Support Good	Does not Support Good	Technically infeasible (M1j)

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R121	**Surveillance site:** No
Waterbody ID and Name:	GB105037028740	River Roach, Nobles Ditch and Eastwood Brook
National Grid Reference:	TQ 84312 88749	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503704100	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Moderate	Technically infeasible (A2b)
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1b)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Moderate	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R122	**Surveillance site:** No
Waterbody ID and Name:	GB105037028750	Paglesham Creek Tributary
National Grid Reference:	TQ 92157 93396	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503704100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R123	**Surveillance site:** No
Waterbody ID and Name:	GB105037034940 Jaywick	
National Grid Reference:	TM 14208 13136	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Bathing Water Directive, Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503520001	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R124	**Surveillance site:** No
Waterbody ID and Name:	GB105037034200	Sixpenny Brook
National Grid Reference:	TM 05395 21807	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R125	**Surveillance site:** No
Waterbody ID and Name:	GB105037034220	Bentley Brook & Saltwater Brook
National Grid Reference:	TM 10948 18860	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503713900	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** No
Waterbody ID and Name:	GB30539944	Ardleigh Reservoir
National Grid Reference:	TM 03190 28294	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Drinking Water	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Poor (Very Certain)	Poor	Technically infeasible (B2a)
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	High	High	
Copper	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:** No
Waterbody ID and Name:	GB30540418	Abberton Reservoir
National Grid Reference:	TL 96979 17544	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Drinking Water	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Bad (Very Certain)	Good	
Copper	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	High	High	

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30539601	Alton Water Reservoir
National Grid Reference:	TM 14724 36401	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Drinking Water	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytoplankton	Moderate (Very Certain)	Moderate	Disproportionately expensive (B1a), Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	High	High	
Copper	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L4	**Surveillance site:** No
Waterbody ID and Name:	GB30541427	Hanningfield Reservoir
National Grid Reference:	TQ 73189 98320	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	Yes	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Drinking Water	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Macrophytes	Bad (Very Certain)	Poor	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (P2b)
Phytoplankton	Poor (Very Certain)	Poor	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	Bad (Very Certain)	Bad	Technically infeasible (P2b)
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	High	High	
Pentachlorophenol	High	High	

Waterbody Category and Map Code.:	Lake - L5	**Surveillance site:** No
Waterbody ID and Name:	GB30539264	Glemsford pits
National Grid Reference:	TL 84052 46391	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1g)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.8 East Suffolk river catchment

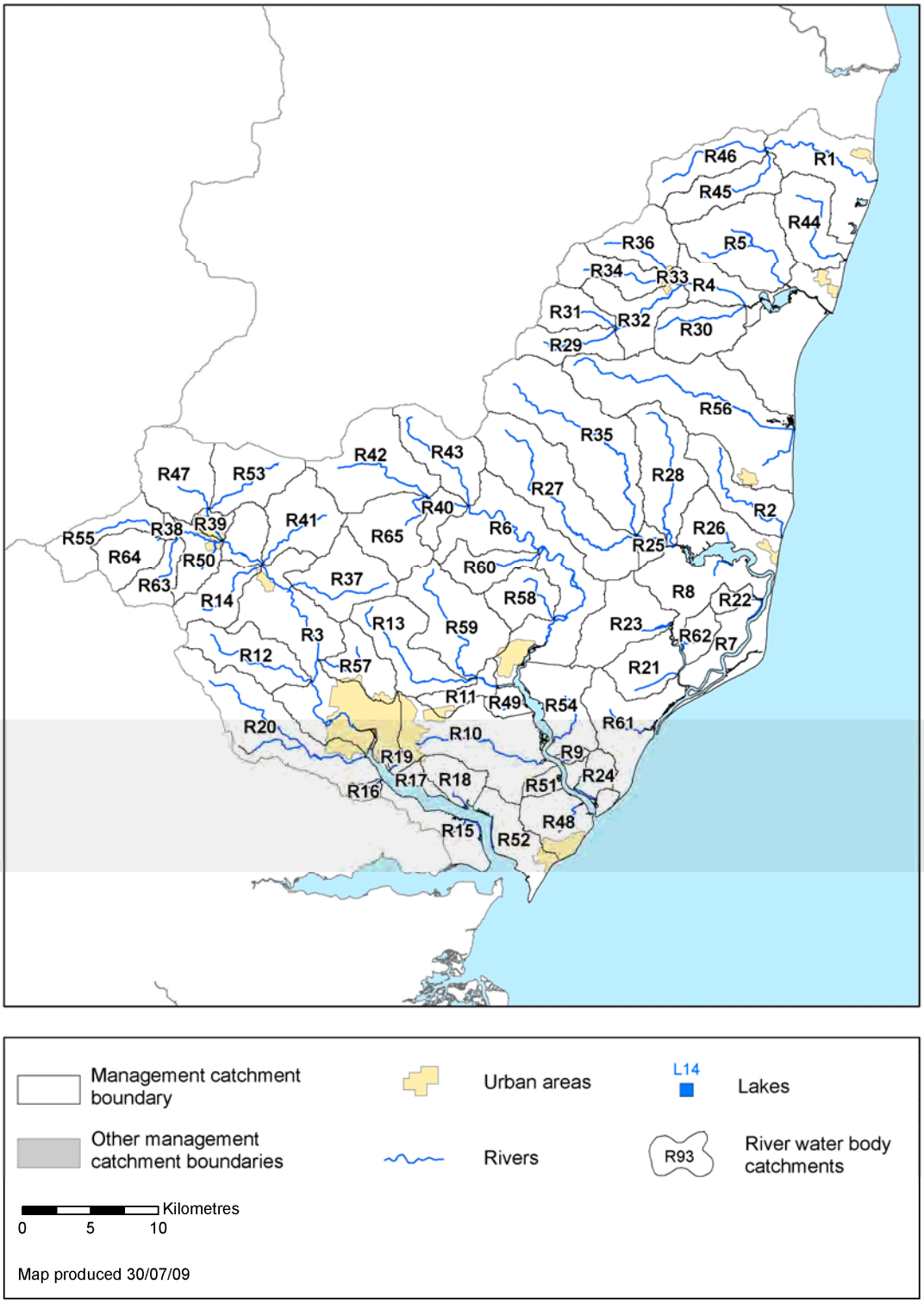
Rivers and Lakes

There are 65 river water bodies (of which 27 are designated as heavily modified and 1 artificial) and 0 lake water bodies within the East Suffolk river catchment.

Figure B.8.1 **Status objectives for rivers and lakes in the East Suffolk river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	4	4	37	33	37
Heavily modified Water bodies	7	7	27	20	27
Artificial water bodies	0	0	1	1	1

Figure B.8.2 **River and lake water bodies in the East Suffolk river catchment**



Water body tables for rivers and lakes in the East Suffolk river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105035046250	Lothingland Hundred
National Grid Reference:	TM 48656 87142	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105035046260	Hundred River
National Grid Reference:	TM 43839 60859	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a)
Invertebrates	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Very Certain)	Moderate	Technically infeasible (DO2a)
pH	High	High	
Phosphate	Moderate (Quite Certain)	Good	
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** Yes
Waterbody ID and Name:	GB105035046280 River Gipping	
National Grid Reference:	TM 12312 50914	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503613600	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Technically infeasible (P2b)
Temperature	Good	Good	
2,4-dichlorophenoxyacetic acid	High	High	
Copper	High	High	
Iron	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Flood bunds (earth banks, in place of floodwalls)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
para - para DDT	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105035046290 Blyth	
National Grid Reference:	TM 42043 76665	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB510503503700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105035046300 Wang	
National Grid Reference:	TM 46530 78546	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB510503503700	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105035046310 Deben	
National Grid Reference:	TM 26735 59250	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503503900	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (HR4a)
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105035077790	Alde and Ore (Tidal)
National Grid Reference:	TM 45062 52728	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503503800	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105035077800	Alde and Ore (Tidal)
National Grid Reference:	TM 42201 56446	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503503800	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105035040260	Deben (Tidal)
National Grid Reference:	TM 30922 41717	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503503900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105035040280	Bucklesham Mill River
National Grid Reference:	TM 26869 42005	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503900	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a), Technically infeasible (B2r, S2b)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105035040300	Lark/Fynn
National Grid Reference:	TM 25645 47264	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB520503503900	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105035040310	Somersham Watercourse
National Grid Reference:	TM 08240 48858	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046280	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105035040330 Fynn	
National Grid Reference:	TM 19268 48638	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035040300	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Technically infeasible (B2b, B2l, S3b)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105035040350	Wattisham Watercourse
National Grid Reference:	TM 06456 54379	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046280	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105035040380	Orwell (Tidal)
National Grid Reference:	TM 23717 37315	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105035040400	Orwell (Tidal)
National Grid Reference:	TM 16940 39947	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105035040410	Orwell (Tidal)
National Grid Reference:	TM 19746 40246	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105035040420	Orwell (Tidal)
National Grid Reference:	TM 23225 38851	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105035040430 Orwell (Tidal)	
National Grid Reference:	TM 18158 41235	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105035040440 Belstead Brook	
National Grid Reference:	TM 08298 45506	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503613600	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (B1a)
Invertebrates	High	High	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105035040160 Tang	
National Grid Reference:	TM 37687 47532	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503800	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105035040180	Alde and Ore (Tidal)
National Grid Reference:	TM 44803 53757	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503800	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** Yes
Waterbody ID and Name:	GB105035040190	Butley River
National Grid Reference:	TM 36209 51353	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503503800	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Disproportionately expensive (HR2a)
Macrophytes	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)
Phytobenthos	Moderate (Quite Certain)	Moderate	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105035040250	Deben (Tidal)
National Grid Reference:	TM 32404 39207	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105035045950 Alde	
National Grid Reference:	TM 37447 58110	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035077800	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a, HR2a), Technically infeasible (S2b)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105035045960	Alde and Ore (Tidal)
National Grid Reference:	TM 42773 58535	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503503800	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105035045970 Ore	
National Grid Reference:	TM 29994 61084	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035045950	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Technically infeasible (B2p)
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a), Technically infeasible (B2p)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105035045980	Fromus
National Grid Reference:	TM 38662 63568	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503800	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a, P1a)
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a), Technically infeasible (B2p)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105035046000 Blyth (Suffk)	
National Grid Reference:	TM 31984 72613	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046030	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105035046010	Wenhaston Watercourse
National Grid Reference:	TM 41006 74426	
Current Overall Status	Bad	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB510503503700	

Ecological Status

Current Status (and certainty that status is less than good)	Bad (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a), Technically infeasible (DO2b)
Phytobenthos	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105035046020 Blyth (Suffk)	
National Grid Reference:	TM 33332 74565	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046030	

Ecological Potential

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105035046030 Blyth (Suffk)	
National Grid Reference:	TM 37283 75182	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046290	

Ecological Potential

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105035046040 Blyth	
National Grid Reference:	TM 38963 77368	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046290	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Disproportionately expensive (HR2a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Educate landowners on sensitive management practices (urbanisation)	**In Place**
Appropriate techniques (invasive species)	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105035046050	Chediston Watercourse
National Grid Reference:	TM 35431 77556	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046040	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105035046060 Alde	
National Grid Reference:	TM 35304 62873	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035045950	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a, HR2a), Technically infeasible (S2b)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** No
Waterbody ID and Name:	GB105035046070 Blyth	
National Grid Reference:	TM 36500 79345	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046040	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105035046100	Coddenham Watercourse
National Grid Reference:	TM 13966 53679	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046280	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105035046120 Rattlesden River	
National Grid Reference:	TM 01316 58647	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046110	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105035046130 Gipping	
National Grid Reference:	TM 04751 59471	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046280	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105035046160 Deben	
National Grid Reference:	TM 22218 60687	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046310	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a, M5a)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105035046170 Jordan	
National Grid Reference:	TM 10501 58309	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046280	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105035046200 Deben	
National Grid Reference:	TM 17663 62929	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046160	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Quite Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105035046210	Earl Soham Watercourse
National Grid Reference:	TM 21766 64100	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046310	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105035046220	Easton Broad
National Grid Reference:	TM 49293 81112	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB650503520002	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1c), Technically infeasible (B2p)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105035046230	Lothingland Hundred
National Grid Reference:	TM 44472 84094	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046250	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105035046240	Lothingland Hundred
National Grid Reference:	TM 41435 86631	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105035046250	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105035046190	Haughley Watercourse
National Grid Reference:	TM 03887 61532	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046130	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (B1a)
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (B1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105035040200	King's Fleet
National Grid Reference:	TM 31360 37461	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105035040270	Deben (Tidal)
National Grid Reference:	TM 26373 45513	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** No
Waterbody ID and Name:	GB105035046110	Rattlesden River
National Grid Reference:	TM 03591 58331	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046280	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Technically infeasible (B2p, INNS2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105035040240	Deben (Tidal)
National Grid Reference:	TM 30243 40375	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503900	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105035040390	Orwell (Tidal)
National Grid Reference:	TM 25431 36371	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503613600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** No
Waterbody ID and Name:	GB105035046180 Gipping	
National Grid Reference:	TM 06237 61309	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046130	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (B1a), Technically infeasible (B2m)
Invertebrates	Poor (Quite Certain)	Poor	Technically infeasible (B2h, B2p, S2b)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105035040290	Shottisham Mill River
National Grid Reference:	TM 31635 44749	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503900	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** No
Waterbody ID and Name:	GB105035046150	Rattlesden River
National Grid Reference:	TL 98055 59261	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046120	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R56	**Surveillance site:** No
Waterbody ID and Name:	GB105035046270	Leiston Beck and Minsmere Old River
National Grid Reference:	TM 36213 69620	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Flood bunds (earth banks, in place of floodwalls)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105035040320	Tributary of Gipping
National Grid Reference:	TM 14725 48327	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046280	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105035040340	Tributary of Deben
National Grid Reference:	TM 29037 53881	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046310	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** No
Waterbody ID and Name:	GB105035040360 Lark	
National Grid Reference:	TM 22832 51021	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035040300	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Technically infeasible (B2a, B2m, S2b)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105035040370	Tributary of Deben
National Grid Reference:	TM 27027 56341	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046310	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB205035040150 Black Ditch	
National Grid Reference:	TM 35173 44127	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503503800	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105035040170	Tributary of Butley River
National Grid Reference:	TM 39702 50386	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB520503503800	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** No
Waterbody ID and Name:	GB105035046080	Great Finborough Watercourse
National Grid Reference:	TM 01807 56669	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046120	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** No
Waterbody ID and Name:	GB105035046090	Tributary of Rattlesden River
National Grid Reference:	TM 01000 58285	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046120	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105035046140	Framsden Watercourse
National Grid Reference:	TM 19955 60332	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105035046160	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

B.9 Nene river catchment

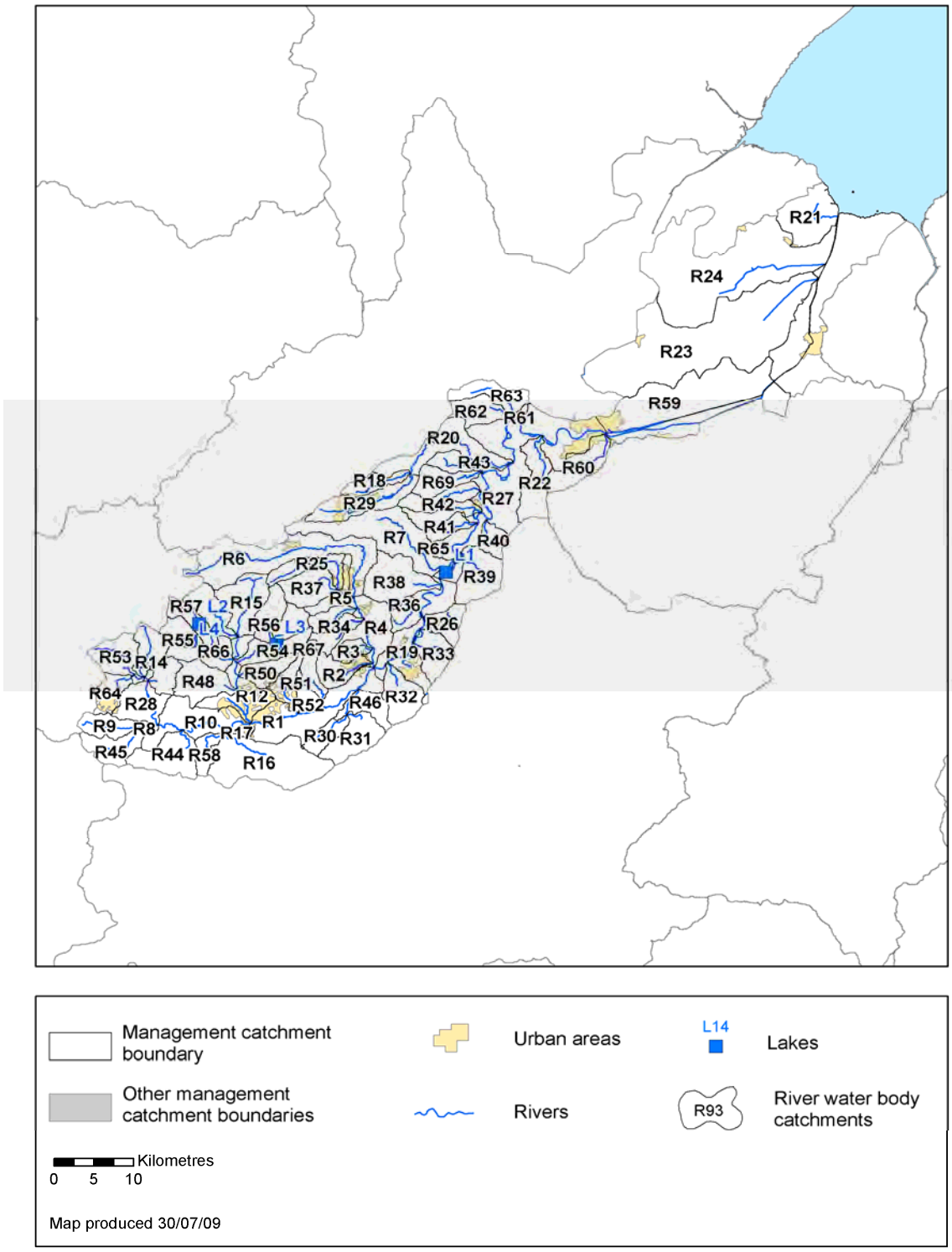
Rivers and Lakes

There are 69 river water bodies (of which 34 are designated as heavily modified and 4 artificial) and 4 lake water bodies (of which 2 are designated as heavily modified and 2 artificial) within the Nene river catchment.

Figure B.9.1 **Status objectives for rivers and lakes in the Nene river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	12	12	31	19	31
Lakes	0	0	0	0	0
Heavily modified Water bodies	2	2	36	34	36
Artificial water bodies	2	2	6	4	6

Figure B.9.2 **River and lake water bodies in the Nene river catchment**



Water body tables for rivers and lakes in the Nene river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105032045050 Nene	
National Grid Reference:	SP 77444 59539	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032050383	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105032045070	Swanspool Brook
National Grid Reference:	SP 88236 66942	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045140	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105032045080	Harrowden Brook
National Grid Reference:	SP 88582 69883	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045140	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105032045140 Ise	
National Grid Reference:	SP 90563 68514	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050383	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105032045160 Slade Brook	
National Grid Reference:	SP 87126 76425	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045140	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Remove obsolete structure	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Preserve and, where possible, restore historic aquatic habitats	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105032045200 Ise	
National Grid Reference:	SP 79154 81835	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	Yes	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045140	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105032045230	Harpers Brook
National Grid Reference:	SP 95801 82840	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032050381	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105032045300 Nene	
National Grid Reference:	SP 62266 59378	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045320	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105032045310 Nene	
National Grid Reference:	SP 57287 59378	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045300	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105032045320 Nene	
National Grid Reference:	SP 67334 58812	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045050	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Bad (Very Certain)	Moderate	Technically infeasible (B2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105032045370	Whilton Branch
National Grid Reference:	SP 62210 65612	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032045340	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105032045390	Brampton Branch
National Grid Reference:	SP 74531 62898	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045050	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105032045450	Brampton Branch
National Grid Reference:	SP 73482 69471	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045390	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Quite Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105032045480 Whilton Branch	
National Grid Reference:	SP 62472 69040	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045370	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:**	No
Waterbody ID and Name:	GB105032045540	Brampton Branch	
National Grid Reference:	SP 74737 74630		
Current Overall Status	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Status by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Not Designated A/HMWB		
Reason for Designation:			
Downstream Waterbody ID:	GB105032045450		

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Technically infeasible (B2j, INNS2a, S3b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105032045550	Wootton Brook
National Grid Reference:	SP 74325 56905	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045570	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105032045570	Wootton Brook
National Grid Reference:	SP 72167 58818	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045320	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105032045590	Northern Stream
National Grid Reference:	SP 92539 91763	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105032050290	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Very Certain)	Moderate	Technically infeasible (A2b)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Very Certain)	Moderate	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105032050383 Nene	
National Grid Reference:	SP 96609 72316	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032050381	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Technically infeasible (B2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105032050290 Willow Brook	
National Grid Reference:	TL 03680 93958	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105032050310 Lutton Leam	
National Grid Reference:	TF 46796 25976	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503311300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105032050330	Billing Brook
National Grid Reference:	TL 11712 94854	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105032050390	North Level Main Drain
National Grid Reference:	TF 43040 15993	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105032050400	South Holland Main Drain
National Grid Reference:	TF 42871 19675	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105032045170	Slade Brook
National Grid Reference:	SP 83488 80588	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105032045160	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105032045120	Hog Dyke
National Grid Reference:	SP 99416 72462	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032050383	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105032050381 Nene	
National Grid Reference:	TL 15899 97206	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032050382	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	Moderate (Uncertain)	Moderate	Technically infeasible (C2a)
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105032045340	Whilton Branch
National Grid Reference:	SP 63207 61064	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032045320	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105032045580	Southern Stream
National Grid Reference:	SP 88529 88117	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105032050290	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105032045030	Castle Ashby Arm (Grendon Brook)
National Grid Reference:	SP 85495 59221	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105032045330	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105032045040	Grendon Brook
National Grid Reference:	SP 88510 60658	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032045330	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105032045060	Knuston Brook
National Grid Reference:	SP 93128 66309	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032050383	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105032045090	Chelveston Brook
National Grid Reference:	SP 96317 70022	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032050383	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105032045100 Hardwick Brook	
National Grid Reference:	SP 87411 72880	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045140	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105032045110	Pytchley Brook
National Grid Reference:	SP 86578 74301	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045140	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** No
Waterbody ID and Name:	GB105032045130	Addington Brook
National Grid Reference:	SP 94966 73633	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050383	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105032045150	Loddington Arm (Ise)
National Grid Reference:	SP 84983 78659	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105032045160	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105032045180	Alledge Brook
National Grid Reference:	SP 97508 77671	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050383	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105032045190	Thorpe Waterville Brook
National Grid Reference:	TL 03203 80807	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105032045210	Barnwell Brook
National Grid Reference:	TL 04820 85154	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105032045240	Lyveden Brook
National Grid Reference:	TL 02547 88119	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105032045250	Glapthorn Brook
National Grid Reference:	TL 01312 90152	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105032045270	Stonepit Dyke
National Grid Reference:	TL 01995 93721	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105032045280 Bugbrooke	
National Grid Reference:	SP 67102 57874	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045320	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105032045290	Everdon Brook
National Grid Reference:	SP 59748 56763	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045300	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105032045330	Wollaston Brook
National Grid Reference:	SP 87771 62738	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032045050	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105032045350	Watford Arm of the Whilton Branch of the R. Nene
National Grid Reference:	SP 61124 65668	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105032045370	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105032045380	Church Brampton Arm
National Grid Reference:	SP 72677 64370	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045390	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105032045400	Tributary of Whilton Branch
National Grid Reference:	SP 62867 65391	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045340	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** No
Waterbody ID and Name:	GB105032045410	Malton Arm of the Brampton Branch
National Grid Reference:	SP 74227 66367	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045390	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105032045420	Billing Brook (Northampton)
National Grid Reference:	SP 80051 62912	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105032045050	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105032045430	Sywell Brook
National Grid Reference:	SP 84378 63602	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045050	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** No
Waterbody ID and Name:	GB105032045460	Grove Farm Feeder Stream
National Grid Reference:	SP 57571 69377	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045350	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105032045470	Pitsford Arm of the Brampton Branch
National Grid Reference:	SP 75863 69391	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032045390	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Preserve and, where possible, restore historic aquatic habitats	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** No
Waterbody ID and Name:	GB105032045490	Ravensthopre arm of Spratton Brook
National Grid Reference:	SP 68492 70119	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105032045440	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	High	High	

Waterbody Category and Map Code.:	River - R56	**Surveillance site:** No
Waterbody ID and Name:	GB105032045520	Scaldwell Stream
National Grid Reference:	SP 77553 72275	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045470	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105032045530	Cottesbrooke Brook
National Grid Reference:	SP 71717 72300	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045450	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105032045560	Kislingbury Arm of Wootton Brook
National Grid Reference:	SP 70233 58156	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045570	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Bad (Very Certain)	Bad	Technically infeasible (A2a)
pH	High	High	
Phosphate	High	High	
Arsenic	High	High	
Copper	High	High	
Cyanide	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Bad (Very Certain)	Bad	Technically infeasible (A2a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** Yes
Waterbody ID and Name:	GB105032050382	Mortons Leam
National Grid Reference:	TL 25427 98332	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Good	
Phytobenthos	Moderate (Very Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Cyanide	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Preserve and, where possible, restore historic aquatic habitats	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Quite Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	Moderate (Quite Certain)	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105032050340	Stanground Lode
National Grid Reference:	TL 19112 94691	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
pH	High	High	
Phosphate	High	High	
Arsenic	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB105032050350	Wittering Brook
National Grid Reference:	TL 08865 99844	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105032050360	Wittering Brook
National Grid Reference:	TF 07065 00607	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050350	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** No
Waterbody ID and Name:	GB105032050370	Southorpe Brook
National Grid Reference:	TF 06379 03051	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050350	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** No
Waterbody ID and Name:	GB105032045360	Welton Village Trib, Whilton branch of R. Nene
National Grid Reference:	SP 58327 65336	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105032045350	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105032045220	Stoke Doyle Brook
National Grid Reference:	TL 01849 85803	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R66	**Surveillance site:** No
Waterbody ID and Name:	GB105032045510	Hollowell Arm of Spratton Brook
National Grid Reference:	SP 69094 72614	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105032045440	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R67	**Surveillance site:** No
Waterbody ID and Name:	GB105032045500 Walgrove Stream	
National Grid Reference:	SP 78448 71335	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032045470	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R68	**Surveillance site:** No
Waterbody ID and Name:	GB105032045440	Holdenby Arm of Spratton Brook
National Grid Reference:	SP 71417 68307	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105032045390	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R69	**Surveillance site:** No
Waterbody ID and Name:	GB105032045260	Southwick Brook
National Grid Reference:	TL 02900 92266	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105032050381	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** No
Waterbody ID and Name:	GB30537913	Thrapston Lake
National Grid Reference:	SP 99891 79684	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Macrophytes	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Oxygen	Good	Good	
Total Phosphorus	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Copper	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:**	No
Waterbody ID and Name:	GB30538132	Hollowell Reservoir	
National Grid Reference:	SP 68758 72900		
Current Overall Potential	Poor		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible		
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Water Storage - non-specific		
Downstream Waterbody ID:			

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Copper	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30538199	Pitsford Water
National Grid Reference:	SP 78538 70221	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	Yes	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Drinking Water	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytoplankton	Moderate (Uncertain)	Moderate	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	Moderate (Quite Certain)	Moderate	Technically infeasible (P2b)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L4	**Surveillance site:** No
Waterbody ID and Name:	GB30538230	Ravensthorpe Reservoir
National Grid Reference:	SP 67669 70731	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Re-engineering of the river where the flow regime cannot be modified.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.10 North Norfolk river catchment

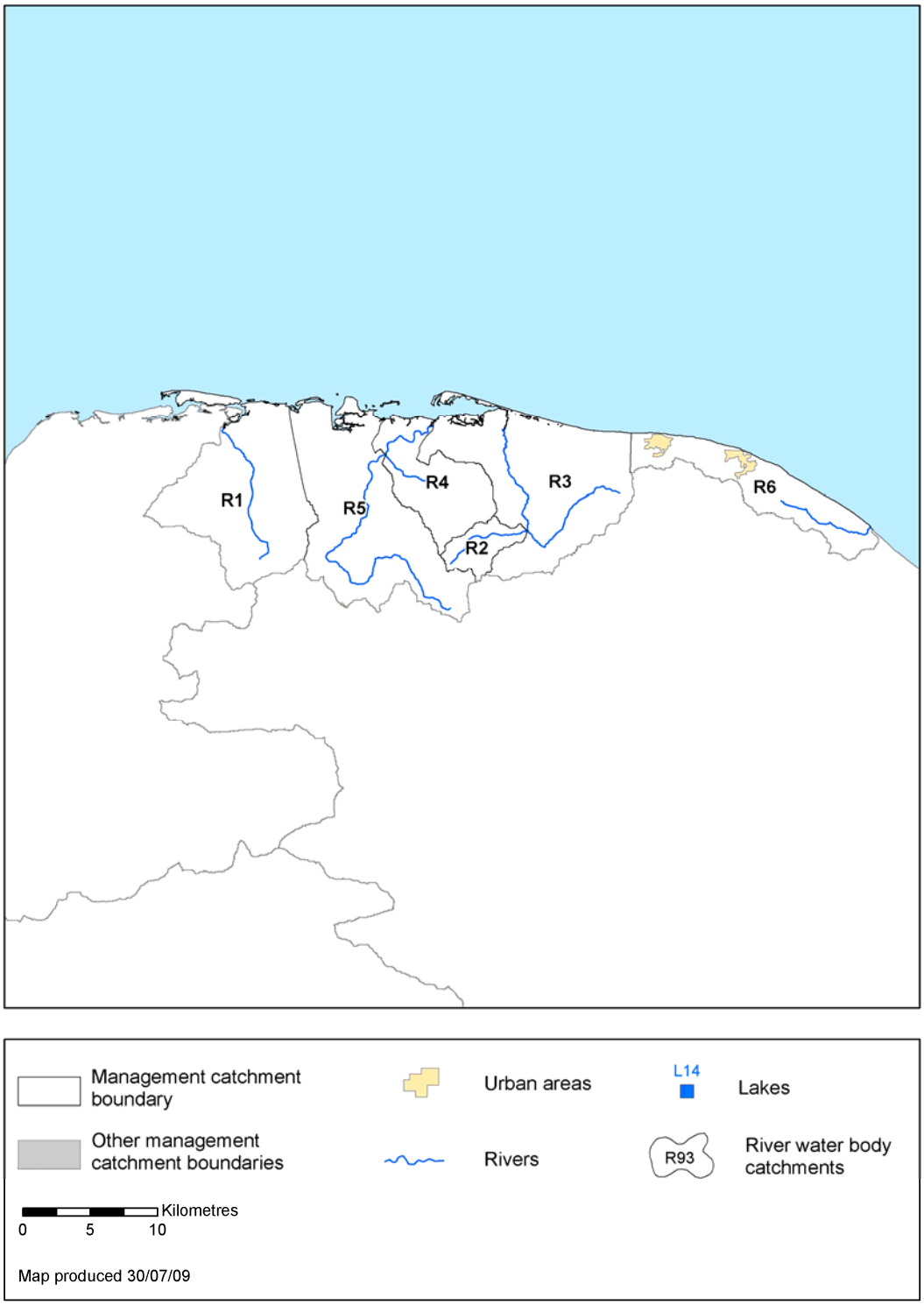
Rivers and Lakes

There are 6 river water bodies (of which 3 are designated as heavily modified) and 0 lake water bodies within the North Norfolk river catchment.

Figure B.10.1 **Status objectives for rivers in the North Norfolk river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	0	0	3	3	3
Heavily modified Water bodies	0	0	3	3	3
Artificial water bodies	0	0	0	0	0

Figure B.10.2 **River and lake water bodies in the North Norfolk river catchment**



Water body tables for rivers and lakes in the North Norfolk river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105034055750 Burn	
National Grid Reference:	TF 85628 39168	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB510503403500	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Set-back embankments	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Increase in-channel morphological diversity	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105034055770	Gunthorpe Stream
National Grid Reference:	TG 02753 35751	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB205034055790	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Disproportionately expensive (B1a)
Invertebrates	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105034055780 Glaven	
National Grid Reference:	TG 09121 37493	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB520503403600	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Very Certain)	Moderate	Disproportionately expensive (M5a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105034055830	Binham Tributary
National Grid Reference:	TF 95688 42672	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB520503403600	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** Yes
Waterbody ID and Name:	GB105034055840 Stiffkey	
National Grid Reference:	TF 92441 33334	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Freshwater Fish Directive, Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB205034055790	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	
Macrophytes	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105034055900 Mun	
National Grid Reference:	TG 28340 36774	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB650503520003	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Disproportionately expensive (M5a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

B.11 North West Norfolk river catchment

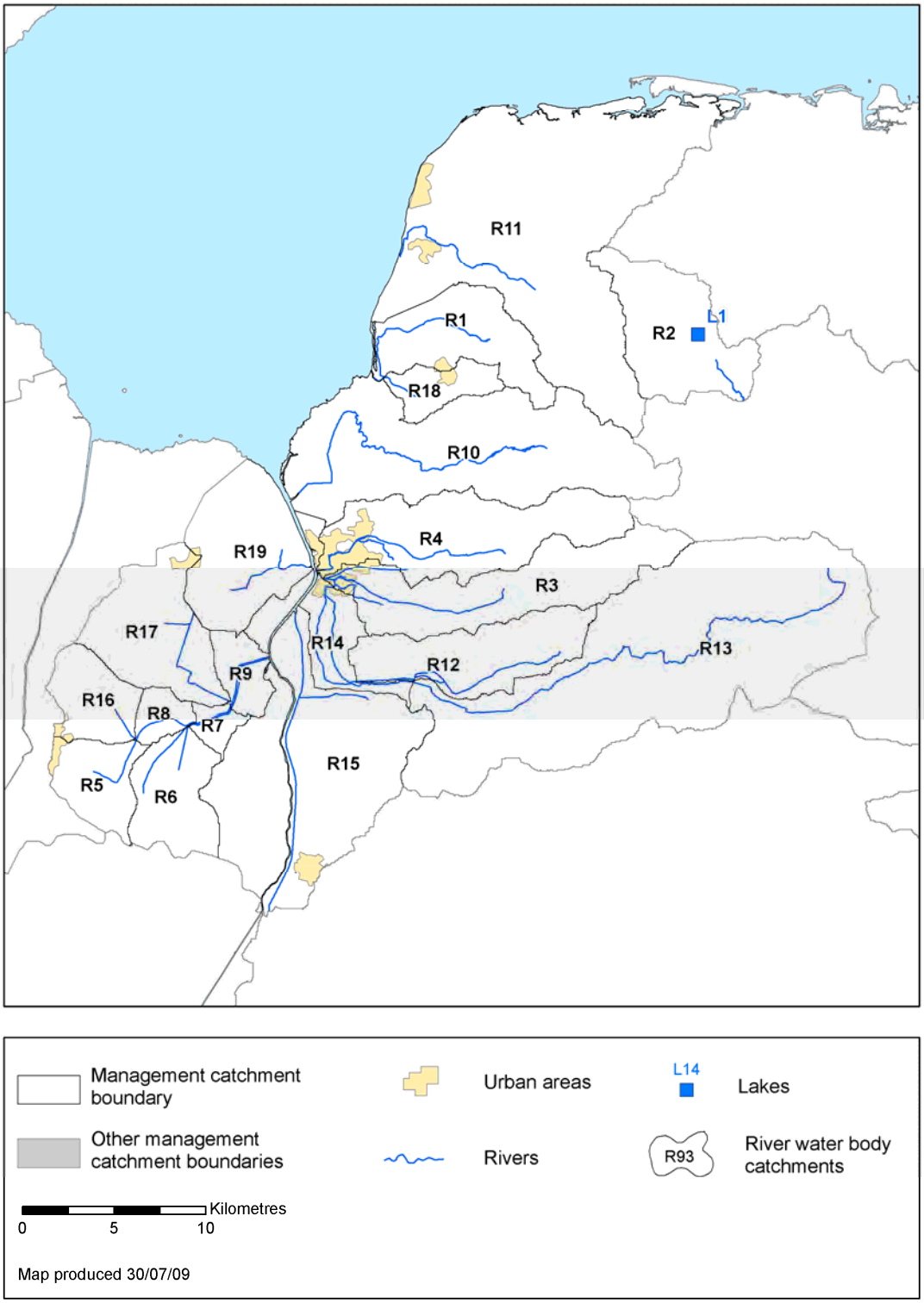
Rivers and Lakes

There are 19 river water bodies (of which 7 are designated as heavily modified and 8 artificial) and 1 lake water bodies (of which 0 are designated as heavily modified or artificial) within the North West Norfolk river catchment.

Figure B.11.1 **Status objectives for rivers and lakes in the North West Norfolk river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	3	3	4	1	4
Lakes	0	0	1	1	1
Heavily modified Water bodies	0	0	7	7	7
Artificial water bodies	0	0	8	8	8

Figure B.11.2 **River and lake water bodies in the North West Norfolk river catchment**



Water body tables for rivers and lakes in the North West Norfolk river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105033053470 Ingol	
National Grid Reference:	TF 66636 32702	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Technically infeasible (B2a)
Invertebrates	Poor (Quite Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105034055870 Tat	
National Grid Reference:	TF 84404 29965	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105034051140	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105033047670	Mintlyn Stream
National Grid Reference:	TF 67901 17529	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation, Water Storage - non-specific	
Downstream Waterbody ID:	GB530503300300	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Iron	Moderate (Uncertain)	Moderate	Technically infeasible (C2a)
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105033047680	Gaywood River
National Grid Reference:	TF 68221 20649	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB530503300300	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105033047720	Smeeth Lode
National Grid Reference:	TF 51046 08507	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047740	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105033047730 Mill Basin	
National Grid Reference:	TF 53889 10254	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047740	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105033047740	Smeeth Lode
National Grid Reference:	TF 56931 11899	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047910	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105033047750	Smeeth Lode
National Grid Reference:	TF 54444 11100	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047740	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105033047910	Smeeth Lode
National Grid Reference:	TF 57290 13418	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503300300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105033047620	Babingley River
National Grid Reference:	TF 64426 26805	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Technically infeasible (B2a)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105033053480	Heacham River
National Grid Reference:	TF 69396 37182	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB640523160000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105033047770	Country Drain
National Grid Reference:	TF 71683 14202	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047790	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105033047791	Nar to confl with Blackborough Drain
National Grid Reference:	TF 80271 15129	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033047792	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
2,4-dichlorophenol	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1g)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105033047792	Nar DS Blackborough Drain
National Grid Reference:	TF 62234 13624	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB530503300300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105033047660	Relief Channel
National Grid Reference:	TF 60472 06115	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB530503300300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105033047760	Smeeth Lode
National Grid Reference:	TF 51174 11134	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047740	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105033047780	Smeeth Lode
National Grid Reference:	TF 54833 14018	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047910	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105033047800	Boat House Creek
National Grid Reference:	TF 66333 29697	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB530503311300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105033047900	West Lynn Drain
National Grid Reference:	TF 58121 19326	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503300300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** No
Waterbody ID and Name:	GB30547028	Syderstone Common
National Grid Reference:	TF 82570 32630	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.12 Old Bedford Including the Middle Level river catchment

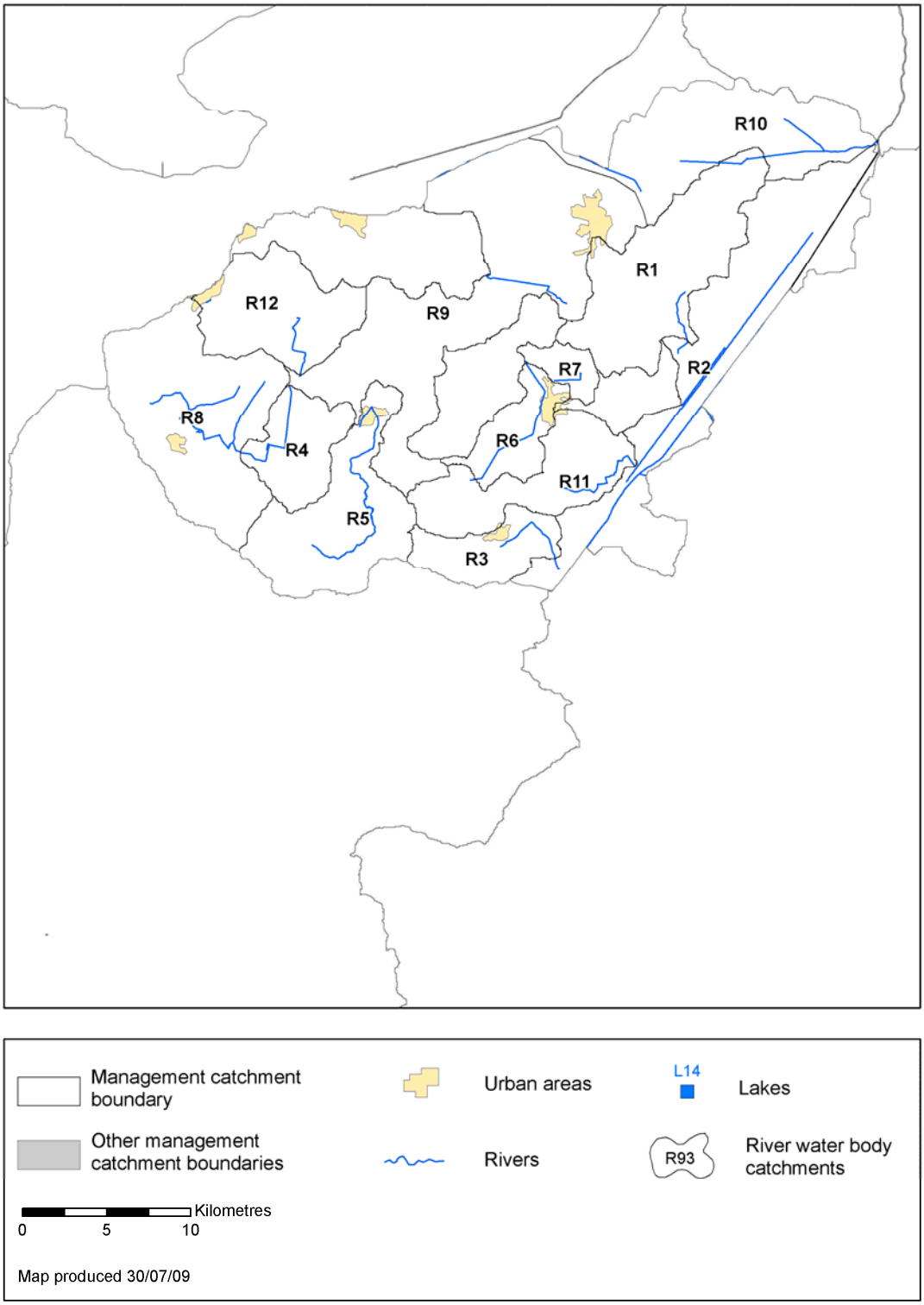
Rivers and Lakes

There are 12 river water bodies (of which 1 is designated as heavily modified and 9 artificial) and 0 lake water bodies within the Old Bedford Including the Middle Level river catchment.

Figure B.12.1 **Status objectives for rivers and lakes in the Old Bedford Including the Middle Level river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	2	2	2	0	2
Heavily modified Water bodies	0	0	1	1	1
Artificial water bodies	1	1	9	8	9

Figure B.12.2 **River and lake water bodies in the Old Bedford Including the Middle Level river catchment**



Water body tables for rivers and lakes in the Old Bedford Including the Middle Level river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105033047700	Well Creek
National Grid Reference:	TF 51134 00550	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047710	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105033047922 Counter Drain	
National Grid Reference:	TL 49255 88702	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Flood Protection, Water Storage - non-specific	
Downstream Waterbody ID:	GB530503300300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105033042880	Cranbrook Drain
National Grid Reference:	TL 38386 78482	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047922	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105033043130	Great Raveley Drain
National Grid Reference:	TL 23465 84664	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033043170	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Moderate	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Moderate (Quite Certain)	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105033043140	High Lode
National Grid Reference:	TL 28102 80719	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:	GB105033047710	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105033043150	Twenty Foot Drain
National Grid Reference:	TL 38090 84086	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033043160	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Good	
Dissolved Oxygen	Bad (Very Certain)	Moderate	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105033043160	Forty Foot Drain
National Grid Reference:	TL 40356 87329	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033042910	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Quite Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Uncertain)	Poor	Disproportionately expensive (A1a)
Dissolved Oxygen	Bad (Quite Certain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Poor (Uncertain)	Poor	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105033043170	New Dyke
National Grid Reference:	TL 17774 85563	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033043200	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** Yes
Waterbody ID and Name:	GB105033047711	Floods Drain
National Grid Reference:	TL 38099 93055	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047712	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1b)

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** Yes
Waterbody ID and Name:	GB105033047712	Well Creek
National Grid Reference:	TF 55426 01034	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503300300	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (B2r, S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1b)

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
para - para DDT	High	High	

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105033042890	Crooked Drain
National Grid Reference:	TL 42511 81152	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Flood Protection, Land Drainage	
Downstream Waterbody ID:	GB105033047922	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105033043200	Old Course River Nene
National Grid Reference:	TL 23759 89149	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047690	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

B.13 Upper & Bedford Ouse river catchment

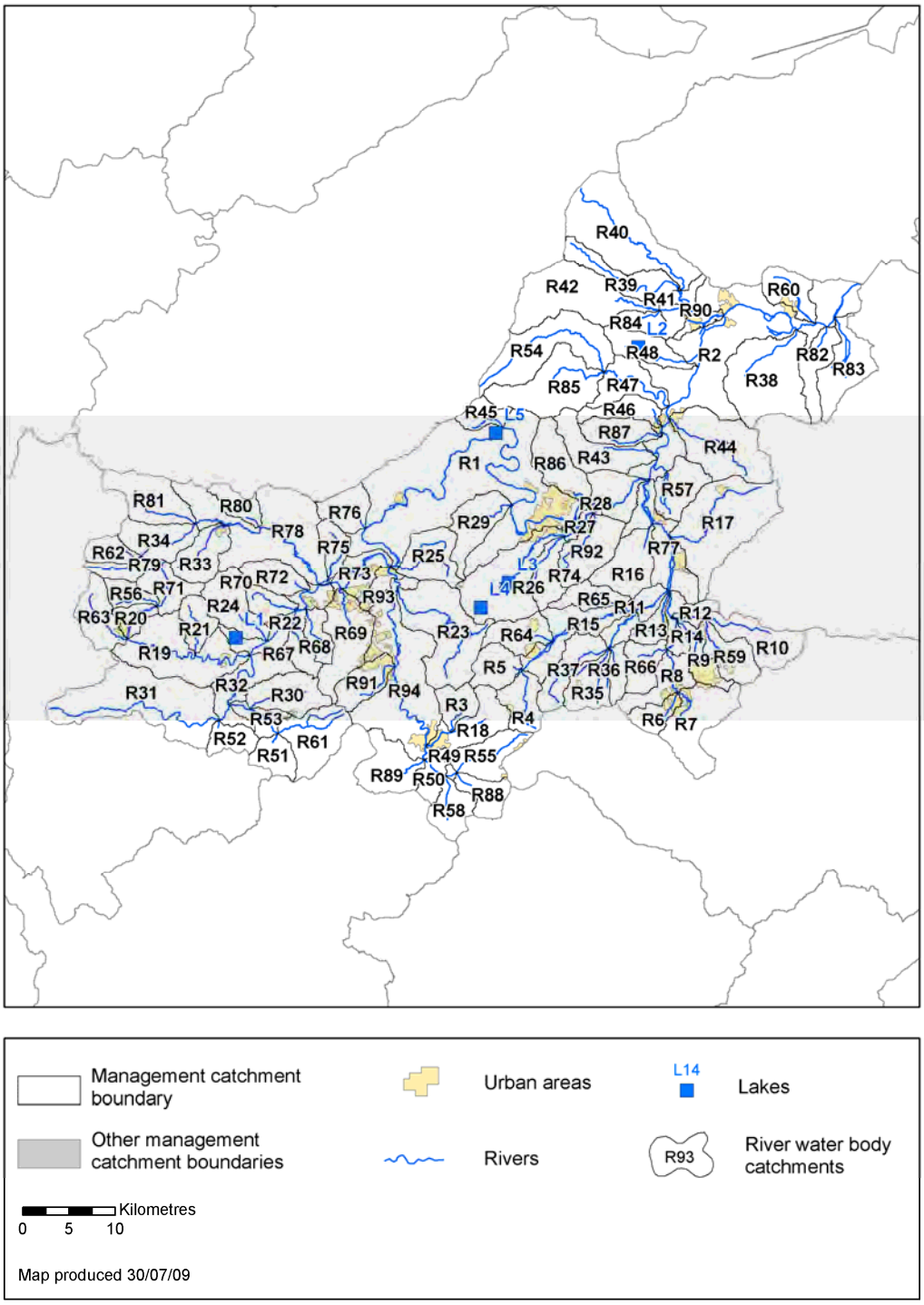
Rivers and Lakes

There are 94 river water bodies (of which 80 are designated as heavily modified and 2 artificial) and 5 lake water bodies (of which 4 are designated as heavily modified and 1 artificial) within the Upper & Bedford Ouse river catchment.

Figure B.13.1 **Status objectives for rivers and lakes in the Upper & Bedford Ouse river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	7	7	12	5	12
Lakes	0	0	0	0	0
Heavily modified Water bodies	20	20	81	61	81
Artificial water bodies	2	2	6	4	6

Figure B.13.2 **River and lake water bodies in the Upper & Bedford Ouse river catchment**



Water body tables for rivers and lakes in the Upper & Bedford Ouse river Catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105033047923 Ouse	
National Grid Reference:	TL 03557 51283	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation, Urbanisation	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
2,4-dichlorophenoxyacetic acid	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3b, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques (invasive species)	**In Place**
Selective vegetation control regime	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Manage disturbance	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	

Waterbody Category and Map Code.:	River - R2 **Surveillance site:** No
Waterbody ID and Name:	GB105033047921 Ouse
National Grid Reference:	TL 36040 70967
Current Overall Potential	Moderate
Status Objective (Overall):	Good by 2027 (For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive
SSSI (Non-N2K) related:	No
Hydromorphological Designation:	Heavily Modified
Reason for Designation:	Flood Protection, Navigation
Downstream Waterbody ID:	GB105033047922

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques (invasive species)	**In Place**
Selective vegetation control regime	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Sediment management	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Manage disturbance	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Isoproturon	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105033037630	Clipstone Brook Tributary
National Grid Reference:	SP 94764 27446	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037970	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** Yes
Waterbody ID and Name:	GB105033037640	River Flit
National Grid Reference:	TL 02578 30492	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037790	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Quite Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	
Macrophytes	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Technically infeasible (P2b)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Phenol	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105033037650 Flit	
National Grid Reference:	TL 01715 32916	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037790	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105033037680 Hiz	
National Grid Reference:	TL 18444 28853	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105033037690 Purwell	
National Grid Reference:	TL 19600 28205	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033037700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105033037700 Hiz	
National Grid Reference:	TL 18629 33354	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Water Regulation (strategic transfer)	
Downstream Waterbody ID:	GB105033037780	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105033037730	Pix Brook
National Grid Reference:	TL 21256 36042	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037780	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105033037740 Cat Ditch	
National Grid Reference:	TL 25444 37720	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037760	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105033037750	Campton Brook
National Grid Reference:	TL 12332 36729	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037790	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105033037760 Ivel	
National Grid Reference:	TL 20254 38378	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037780	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105033037770	Henlow Brook
National Grid Reference:	TL 17541 38109	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038170	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105033037780 Ivel	
National Grid Reference:	TL 18705 38311	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033038170	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105033037790	Ivel Navigation
National Grid Reference:	TL 06452 36689	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038170	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105033037800 Ivel	
National Grid Reference:	TL 15821 47521	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038170	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105033037820	Millbridge-Common Brooks
National Grid Reference:	TL 24200 51878	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038170	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Poor	Disproportionately expensive (HR4a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105033037830	Clipstone Brook
National Grid Reference:	SP 95132 26317	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037971	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Very Certain)	Moderate	Disproportionately expensive (HR2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105033037860 Ouse	
National Grid Reference:	SP 67075 34242	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033037920	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Good	
Temperature	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R20 **Surveillance site:** No
Waterbody ID and Name:	GB105033037880 Ouse
National Grid Reference:	SP 60637 39147
Current Overall Status	Good
Status Objective (Overall):	Good by 2015 (For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive
SSSI (Non-N2K) related:	No
Hydromorphological Designation:	Not Designated A/HMWB
Reason for Designation:	
Downstream Waterbody ID:	GB105033037860

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105033037890	Ouse (Beds)
National Grid Reference:	SP 66694 37182	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033037860	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105033037920 Ouse	
National Grid Reference:	SP 78908 41322	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033038000	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105033037930	Broughton Brook
National Grid Reference:	SP 90798 38996	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033037971	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105033037960 Ouse	
National Grid Reference:	SP 72980 38006	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037920	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105033038040	Chicheley Brook
National Grid Reference:	SP 93165 46713	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047923	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Quite Certain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105033038050	Elstow Brook
National Grid Reference:	TL 01880 43318	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033038110	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	Moderate (Quite Certain)	Moderate	Disproportionately expensive (PH1a)
Phosphate	Poor (Quite Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105033038110 Elstow Brook	
National Grid Reference:	TL 08646 48643	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033038130	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105033038130	Elstow Brook
National Grid Reference:	TL 10451 50230	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047923	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105033038140 Ouse (Beds)	
National Grid Reference:	SP 99798 50032	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047923	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105033038200	Horwood Tributary
National Grid Reference:	SP 75475 29820	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033030580	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105033038210	Padbury Brook (The Twins)
National Grid Reference:	SP 57773 28583	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038220	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105033038220	Padbury Brook
National Grid Reference:	SP 72177 32823	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037920	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105033038250	Silverstone Brook
National Grid Reference:	SP 67409 45865	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033038180	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105033038260 Tove	
National Grid Reference:	SP 62555 46160	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033038180	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105033037500	Barton Brook
National Grid Reference:	TL 10477 31461	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037750	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** No
Waterbody ID and Name:	GB105033037510	Hexton Brook
National Grid Reference:	TL 12083 33238	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037750	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105033037530	Campton Brook
National Grid Reference:	TL 06307 32178	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037750	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Quite Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105033042730 West Brook	
National Grid Reference:	TL 29413 67243	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Copper	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105033042810	Cock Brook
National Grid Reference:	TL 13254 74514	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042790	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105033042820	Alconbury Brook
National Grid Reference:	TL 13095 80310	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042790	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105033042840	Ellington Brook
National Grid Reference:	TL 18600 71979	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042790	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105033042870	Ellington Brook
National Grid Reference:	TL 13651 72717	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042840	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105033043230	Begwary Brook
National Grid Reference:	TL 14720 56672	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047921	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105033043240	Abbotsley & Hen Brooks
National Grid Reference:	TL 23143 57769	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105033043250	Sharn Brook
National Grid Reference:	SP 98520 60135	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047923	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1a), Technically infeasible (S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105033043260	Duloe Brook
National Grid Reference:	TL 16708 60075	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047921	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105033043270 Kym	
National Grid Reference:	TL 15085 64154	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Quite Certain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105033043310	Diddington Brook
National Grid Reference:	TL 17247 66849	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047921	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Iron	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Where structures or other mechanisms are in place to enable fish to access waters upstream of the impounding works, the volume and timing of flow releases is sufficient to enable and, where relevant, trigger fish migration.	**In Place**
Enable access to relevant feeder-streams draining into the reservoir at appropriate times for spawning and migration.	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105033030510 Ouzel	
National Grid Reference:	SP 94535 21307	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033030520	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** No
Waterbody ID and Name:	GB105033030520	Ouzel
National Grid Reference:	SP 92547 22064	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033037971	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105033030550 Twin	
National Grid Reference:	SP 75439 25387	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033030580	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105033030560 Twin	
National Grid Reference:	SP 69248 27149	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038220	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** No
Waterbody ID and Name:	GB105033030580	Claydon Brook
National Grid Reference:	SP 73418 28146	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033038220	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105033042980 Kym	
National Grid Reference:	TL 05078 69114	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043270	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** Yes
Waterbody ID and Name:	GB105033030530	Ouzel Brook
National Grid Reference:	TL 00589 24577	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033030510	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Tetrachloroethylene	High	High	

Waterbody Category and Map Code.:	River - R56	**Surveillance site:** No
Waterbody ID and Name:	GB105033037940	Radstone Brook
National Grid Reference:	SP 61483 40340	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033037880	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105033038190	Stone Brook
National Grid Reference:	TL 17446 52444	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047921	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105033030490 Whistle Brook	
National Grid Reference:	SP 93995 18967	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033030520	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** No
Waterbody ID and Name:	GB105033037720 Ivel	
National Grid Reference:	TL 22727 35964	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037760	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105033042800	Marley Gap Brook
National Grid Reference:	TL 31309 74889	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Bad (Very Certain)	Bad	Technically infeasible (B2a)
Invertebrates	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB105033030570	Claydon Brook
National Grid Reference:	SP 80299 27581	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033030580	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105033038240 Tove	
National Grid Reference:	SP 59335 45637	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033038260	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** No
Waterbody ID and Name:	GB105033037950	Ouse (Beds)
National Grid Reference:	SP 56517 37954	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033037860	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** No
Waterbody ID and Name:	GB105033037660	Running Waters-Steppingley
National Grid Reference:	TL 04647 36274	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037790	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Poor	Disproportionately expensive (A5c)
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Poor	Disproportionately expensive (A5c)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105033037670	Chicksands Brook
National Grid Reference:	TL 11842 40172	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037790	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R66	**Surveillance site:** No
Waterbody ID and Name:	GB105033037710	Stondon Brook
National Grid Reference:	TL 16426 34545	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037780	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R67	**Surveillance site:** No
Waterbody ID and Name:	GB105033037850	Beachampton Brook
National Grid Reference:	SP 77635 36717	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037920	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R68	**Surveillance site:** No
Waterbody ID and Name:	GB105033037870	Weald Brook
National Grid Reference:	SP 79355 37610	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037920	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R69	**Surveillance site:** No
Waterbody ID and Name:	GB105033037900	Minor Trib of Ouse (Beds)
National Grid Reference:	SP 82795 39910	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033038000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Educate landowners on sensitive management practices (urbanisation)	**Not In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R70	**Surveillance site:** No
Waterbody ID and Name:	GB105033037910	Deanshanger Brook
National Grid Reference:	SP 74287 40579	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037920	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R71	**Surveillance site:** No
Waterbody ID and Name:	GB105033037980	Syresham Stream
National Grid Reference:	SP 63533 41950	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033037880	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R72	**Surveillance site:** No
Waterbody ID and Name:	GB105033037990	Potterspury Brook
National Grid Reference:	SP 78197 41747	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037920	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R73	**Surveillance site:** No
Waterbody ID and Name:	GB105033038000 Ouse	
National Grid Reference:	SP 83359 42287	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047923	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R74	**Surveillance site:** No
Waterbody ID and Name:	GB105033038010 Harrowden Brook	
National Grid Reference:	TL 04925 45168	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033038110	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R75	**Surveillance site:** No
Waterbody ID and Name:	GB105033038070	Tathall Brook
National Grid Reference:	SP 82515 45173	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033038180	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R76	**Surveillance site:** No
Waterbody ID and Name:	GB105033038160	Ravenstone Brook
National Grid Reference:	SP 84857 48619	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047923	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R77	**Surveillance site:** No
Waterbody ID and Name:	GB105033038170 Ivel	
National Grid Reference:	TL 15582 51180	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R78	**Surveillance site:** No
Waterbody ID and Name:	GB105033038180	Tove
National Grid Reference:	SP 72428 48163	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033038000	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R79	**Surveillance site:** No
Waterbody ID and Name:	GB105033038230	Helmdon Brook
National Grid Reference:	SP 57668 43945	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033038260	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P5c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R80	**Surveillance site:** No
Waterbody ID and Name:	GB105033038270	Shutlanger Brook
National Grid Reference:	SP 73201 49090	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033038180	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R81	**Surveillance site:** No
Waterbody ID and Name:	GB105033038280	Caswell Brook
National Grid Reference:	SP 62924 49789	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033038180	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R82	**Surveillance site:** No
Waterbody ID and Name:	GB105033042740	Fen Drayton
National Grid Reference:	TL 34835 68970	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105033047921	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R83	**Surveillance site:** No
Waterbody ID and Name:	GB105033042770 Swavesey Drain	
National Grid Reference:	TL 36366 70840	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047921	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Iron	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R84	**Surveillance site:** No
Waterbody ID and Name:	GB105033042830	Ellington Brook (Trib)
National Grid Reference:	TL 15918 71280	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033042840	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R85	**Surveillance site:** No
Waterbody ID and Name:	GB105033042960	Pertenhall Brook
National Grid Reference:	TL 08419 65496	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033043270	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R86	**Surveillance site:** No
Waterbody ID and Name:	GB105033043210	Renhold Brook
National Grid Reference:	TL 08789 51746	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033047923	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R87	**Surveillance site:** No
Waterbody ID and Name:	GB105033043220	Colmworth Brook
National Grid Reference:	TL 14921 57814	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105033047921	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R88	**Surveillance site:** No
Waterbody ID and Name:	GB105033030500	Eaton Bray Brook
National Grid Reference:	SP 95676 20718	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105033030510	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R89	**Surveillance site:** No
Waterbody ID and Name:	GB105033030540	Ledburn Brook
National Grid Reference:	SP 90011 22113	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033037971	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R90	**Surveillance site:** No
Waterbody ID and Name:	GB105033042790	Alconbury & Brampton Brooks
National Grid Reference:	TL 21282 71752	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033047921	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Bad (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Isoproturon	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R91	**Surveillance site:** No
Waterbody ID and Name:	GB105033037840	Newton Longville Brook
National Grid Reference:	SP 87029 31414	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:	GB105033037971	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R92	**Surveillance site:** No
Waterbody ID and Name:	GB105033038090	Cople Brook
National Grid Reference:	TL 08587 46188	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:	GB105033038130	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R93	**Surveillance site:** No
Waterbody ID and Name:	GB105033037972	Ouzel DS Caldecote Mill
National Grid Reference:	SP 87936 43236	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Urbanisation	
Downstream Waterbody ID:	GB105033047923	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a, M1c)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R94	**Surveillance site:** No
Waterbody ID and Name:	GB105033037971	Ouzel US Caldecote Mill
National Grid Reference:	SP 88573 30162	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105033037972	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1a)

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** No
Waterbody ID and Name:	GB30539699	Foxcote Reservoir
National Grid Reference:	SP 71148 36393	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	Yes	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:** No
Waterbody ID and Name:	GB30538310	Grafham Water
National Grid Reference:	TL 14847 67983	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	Yes	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Very Certain)	Moderate	Technically infeasible (B2a)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (P2b)
Phytoplankton	Moderate (Very Certain)	Moderate	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
Total Phosphorus	Bad (Very Certain)	Bad	Technically infeasible (P2b)
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30539450	Stewartby Lake
National Grid Reference:	TL 00755 42402	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
littoral Invertebrates	High	High	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (P2a)
Phytoplankton	Moderate (Uncertain)	Moderate	Technically infeasible (P2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Bad (Uncertain)	Bad	Technically infeasible (DO2a)
Total Phosphorus	Bad (Very Certain)	Bad	Technically infeasible (P2a)
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L4	**Surveillance site:** No
Waterbody ID and Name:	GB30539554	Brogborough Reservoir
National Grid Reference:	SP 97741 39678	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	High	High	
Copper	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L5	**Surveillance site:** No
Waterbody ID and Name:	GB30538826	Felmersham Gravel Pits
National Grid Reference:	SP 99355 58674	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1g, M1i)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.14 Welland river catchment

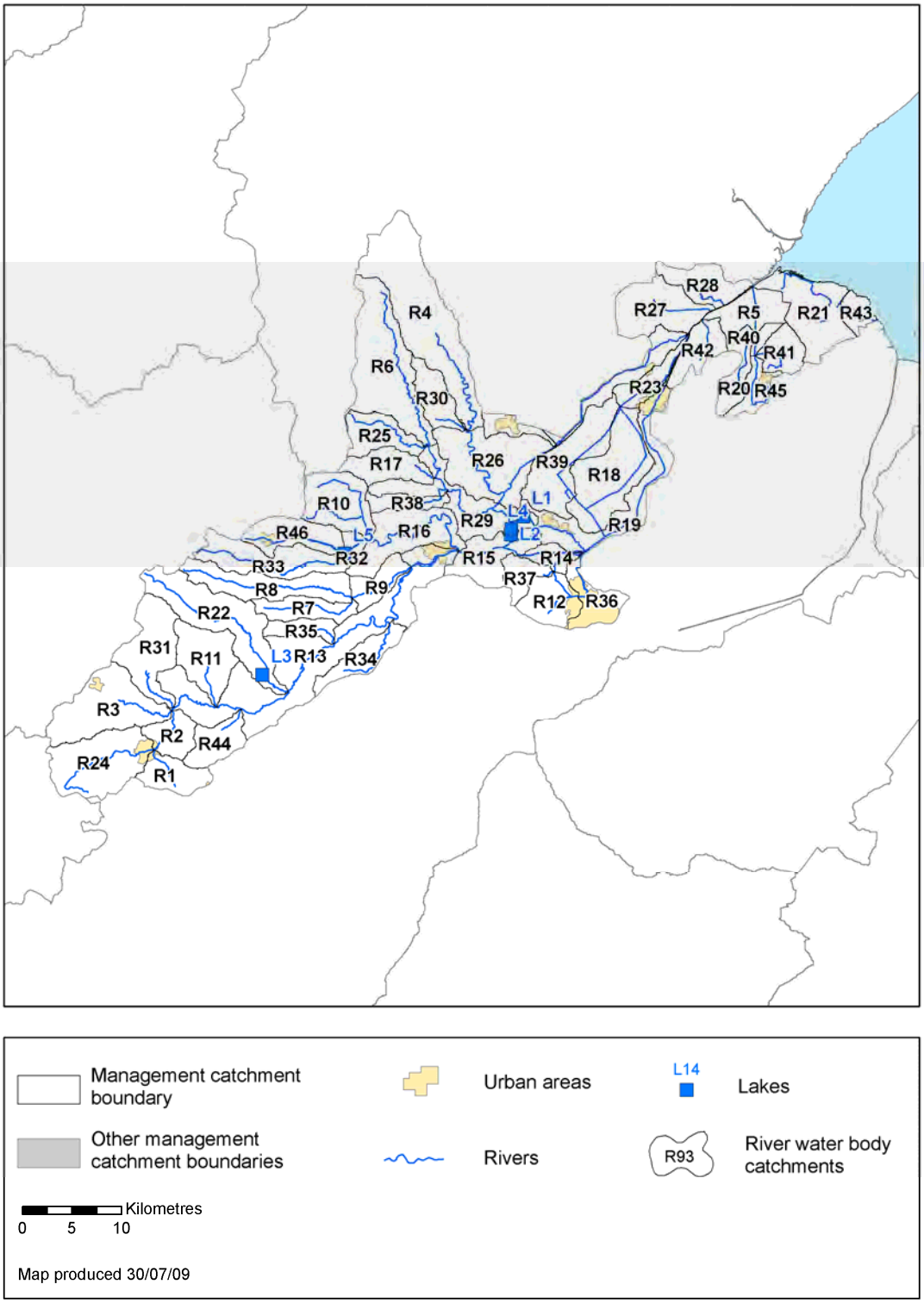
Rivers and Lakes

There are 46 river water bodies (of which 17 are designated as heavily modified and 15 artificial) and 5 lake water bodies (of which 1 is designated as heavily modified and 4 artificial) within the Welland river catchment.

Figure B.14.1 **Status objectives for rivers and lakes in the Welland river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	4	4	14	10	14
Lakes	0	0	0	0	0
Heavily modified Water bodies	0	0	18	18	18
Artificial water bodies	8	8	19	11	19

Figure B.14.2 **River and lake water bodies in the Welland river catchment**



Water body tables for rivers and lakes in the Welland river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105031045600 Jordan	
National Grid Reference:	SP 75519 85004	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031045610	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Quite Certain)	Moderate	Technically infeasible (S3d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105031045610 Welland	
National Grid Reference:	SP 75728 88838	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Urbanisation	
Downstream Waterbody ID:	GB105031050580	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Appropriate techniques (invasive species)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105031045620	Langton Brook
National Grid Reference:	SP 73298 91267	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050580	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:**	No
Waterbody ID and Name:	GB105031055480	East Glen River	
National Grid Reference:	TF 05850 24016		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Technically infeasible		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Land Drainage		
Downstream Waterbody ID:	GB105031050720		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R5	**Surveillance site:** No
Waterbody ID and Name:	GB105031055490	Whaplode River
National Grid Reference:	TF 34854 31852	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503100400	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Good	
Dissolved Oxygen	Bad (Very Certain)	Bad	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105031055510 West Glen	
National Grid Reference:	TF 00685 22140	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050770	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105031050420 Chater	
National Grid Reference:	SK 90415 01872	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050440	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105031050430 Chater	
National Grid Reference:	SK 86312 03949	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050440	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:** No
Waterbody ID and Name:	GB105031050440 Chater	
National Grid Reference:	SK 97443 03443	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050580	

Ecological Status

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Technically infeasible (B2j)
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** No
Waterbody ID and Name:	GB105031050500	North Brook
National Grid Reference:	SK 93820 13607	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050610	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105031050520	Medbourne Brook
National Grid Reference:	SP 79695 93863	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050580	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105031050540	Werrington Brook
National Grid Reference:	TF 16317 02721	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050560	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105031050580 Welland	
National Grid Reference:	SP 81203 91789	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050600	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105031050590	Welland - Peakirk
National Grid Reference:	TF 13441 07253	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050680	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105031050600 Welland	
National Grid Reference:	TF 07192 06993	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050680	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105031050610	Gwash
National Grid Reference:	SK 97870 08703	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050600	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105031050630	West Glen
National Grid Reference:	TF 01582 15266	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050770	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Uncertain)	Poor	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	Poor (Uncertain)	Poor	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105031050660	South Drove Drain
National Grid Reference:	TF 23202 15881	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031050700	

Ecological Potential

Current Status (and certainty that status is less than good) Good (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Phytobenthos	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** Yes
Waterbody ID and Name:	GB105031050680 Welland	
National Grid Reference:	TF 25150 14923	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503100400	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Good	
Invertebrates	High	High	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Technically infeasible (P2b)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Preserve and, where possible, restore historic aquatic habitats	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Flood bunds (earth banks, in place of floodwalls)	**Not In Place**
Set-back embankments	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105031050710	Whaplode River
National Grid Reference:	TF 34087 26532	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031055490	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Uncertain)	Poor	Disproportionately expensive (A1a)
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Poor (Uncertain)	Poor	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105031055500	Fleet Haven Outfall
National Grid Reference:	TF 42487 32845	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503311300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105031050550	Eye Brook
National Grid Reference:	SK 82148 00530	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050580	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Fish	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105031050700	Vernatt's Drain
National Grid Reference:	TF 25652 24647	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503100400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** Yes
Waterbody ID and Name:	GB105031045630 Welland	
National Grid Reference:	SP 68274 86288	
Current Overall Status	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031045610	

Ecological Status

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Technically infeasible (S2b)
Invertebrates	Good	Good	
Macrophytes	Moderate (Uncertain)	Moderate	Technically infeasible (P2a)
Phytobenthos	Poor (Very Certain)	Moderate	Technically infeasible (P2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Technically infeasible (P2a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105031050650 West Glen	
National Grid Reference:	SK 98183 19783	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050770	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	Poor (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** Yes
Waterbody ID and Name:	GB105031050720 Glen	
National Grid Reference:	TF 20743 25134	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage, Water Storage - non-specific	
Downstream Waterbody ID:	GB530503100400	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Good	
Invertebrates	Good	Good	
Macrophytes	Moderate (Very Certain)	Good	
Phytobenthos	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c, M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Hexachlorobenzene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Trichlorobenzenes	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
para - para DDT	High	High	

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105031055520	Risegate Eau
National Grid Reference:	TF 27294 31733	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530503100400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105031055530	Fosdyke Bridge Outfall
National Grid Reference:	TF 30541 33071	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530503100400	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Copper	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105031050770 West Glen	
National Grid Reference:	TF 05085 13436	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050680	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Poor	Technically infeasible (A2b)
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	Poor (Very Certain)	Poor	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105031050450	Grimsthorpe Park Brook
National Grid Reference:	TF 04291 20507	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050720	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105031050460	Stonton Brook
National Grid Reference:	SP 74202 92945	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050580	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Technically infeasible (B2p, S2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105031050470 Gwash	
National Grid Reference:	SK 94510 07936	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050610	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**Not In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105031050480	South Gwash
National Grid Reference:	SK 83526 06459	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050470	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105031050510 Gretton Brook	
National Grid Reference:	SP 96909 96777	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050580	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105031050530	Uppingham Brook
National Grid Reference:	SP 91499 99288	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050580	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** No
Waterbody ID and Name:	GB105031050560	Folly River
National Grid Reference:	TF 17047 05607	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050680	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Educate landowners on sensitive management practices (urbanisation)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105031050570	Brook Drain
National Grid Reference:	TF 14093 04952	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031050590	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Bad (Very Certain)	Bad	Technically infeasible (A2b)
Dissolved Oxygen	High	High	
pH	High	High	
Temperature	High	High	
Mecoprop	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Bad (Very Certain)	Bad	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105031050620	Tributary of West Glen
National Grid Reference:	TF 02811 12499	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050770	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105031050670	North Drove Drain
National Grid Reference:	TF 18622 18112	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031050700	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105031050730	Holbeach River
National Grid Reference:	TF 35035 28375	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031055490	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Uncertain)	Good	
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Poor (Uncertain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105031050740	Holbeach River
National Grid Reference:	TF 37357 27004	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031050730	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Good	
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105031050750	Moulton River
National Grid Reference:	TF 30122 28649	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503100400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** No
Waterbody ID and Name:	GB105031050760	Dawsmere Drain
National Grid Reference:	TF 46427 30941	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503311300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105031045640	Stoke Albany Brook
National Grid Reference:	SP 82171 90047	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105031050580	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105031050690	Whaplode River
National Grid Reference:	TF 34608 23297	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031050730	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Bad (Uncertain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Poor (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105031050490	North Gwash
National Grid Reference:	SK 85488 08543	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105031050470	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**Not In Place**
Sediment management strategies (develop and revise)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Remove obsolete structure	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:**	No
Waterbody ID and Name:	GB30536344	Langtoft Gravel Pits	
National Grid Reference:	TF 11496 10983		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Technically infeasible		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Artificial		
Reason for Designation:	Wider Environment		
Downstream Waterbody ID:			

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M1g)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:** No
Waterbody ID and Name:	GB30536480	Tallington Lakes
National Grid Reference:	TF 10241 09150	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Other	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30537182	Eyebrook Reservoir
National Grid Reference:	SP 85069 94929	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	Yes	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Water Storage - non-specific	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Chironom Invertebrates	Moderate (Quite Certain)	Moderate	Technically infeasible (B2a)
Phytoplankton	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Total Phosphorus	High	High	
Copper	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**Not In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L4	**Surveillance site:**	No
Waterbody ID and Name:	GB30536422	Tallington Lakes	
National Grid Reference:	TF 10276 09705		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Technically infeasible		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Artificial		
Reason for Designation:	Recreation		
Downstream Waterbody ID:			

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	Moderate (Quite Certain)	Moderate	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Oxygen	Good	Good	
Total Phosphorus	High	High	
Copper	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L5	**Surveillance site:** No
Waterbody ID and Name:	GB30536479	Rutland Water
National Grid Reference:	SK 93378 07237	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Drinking Water	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
littoral Invertebrates	High	High	
Macrophytes	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (P2b)
Phytoplankton	Moderate (Very Certain)	Moderate	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Acid Neutralising Capacity	High	High	
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
Total Phosphorus	Moderate (Very Certain)	Moderate	Technically infeasible (P2b)
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3d)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Ensure that good status of dissolved oxygen levels is being achieved downstream of the impounding works	**In Place**
Provide flows to move sediment downstream.	**In Place**
Ensure there is an appropriate baseline flow regime downstream of the impoundment.	**In Place**
Ensure the seasonal pattern of water levels during each year is managed so as to enable the establishment and retention of aquatic plant and animal communities in the shore zone of the impoundment.	**In Place**
Maintain sediment management regime to avoid degradation of the natural habitat characteristics of the downstream river.	**In Place**
Ensure the rate and range of any artificial drawdown is appropriately managed to maintain aquatic plant and animal communities in the shore zones of water storage and supply with gently shelving shore zones.	**Not In Place**
Re-engineering of the river where the flow regime cannot be modified.	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

B.15 Witham river catchment

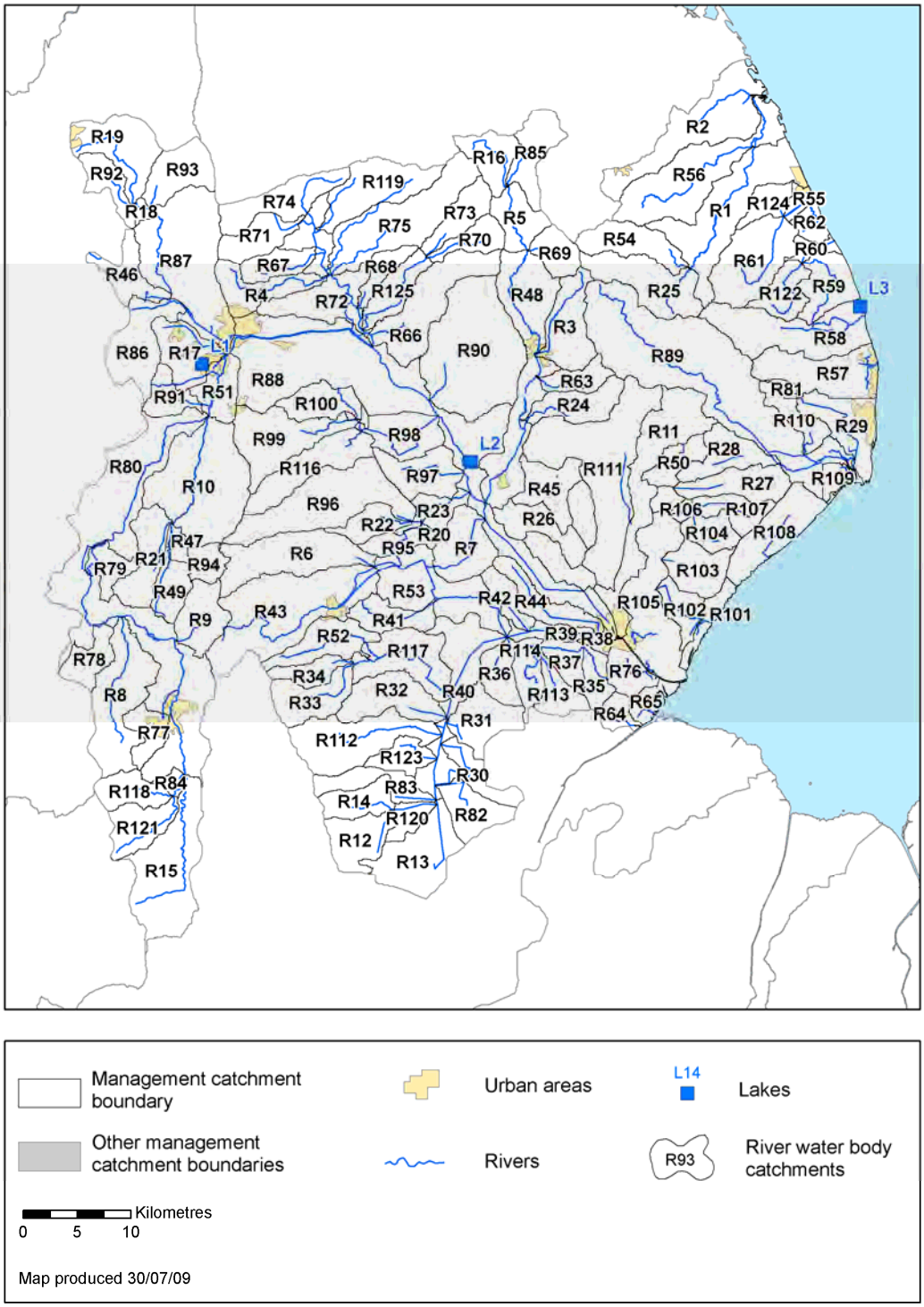
Rivers and Lakes

There are 125 river water bodies (of which 32 are designated as heavily modified and 67 artificial) and 3 lake water bodies (of which 3 are designated as artificial) within the Witham river catchment.

Figure B.15.1 **Status objectives for rivers and lakes in the Witham river catchment**

	Status objective				
Water body category	**Good or high in 2015**	**Good or high in 2021**	**Good or high in 2027**	**Less than good in 2015**	**Total number of water bodies**
Rivers	6	6	26	20	26
Lakes	0	0	0	0	0
Heavily modified Water bodies	0	0	32	32	32
Artificial water bodies	25	25	70	45	70

Figure B.15.2 **River and lake water bodies in the Witham river catchment**



Water body tables for rivers and lakes in the Witham river catchment

This section contains detailed information on the current status and objectives for river and lake water bodies in the catchment. The tables are arranged by water body type (in the order rivers then lakes) and by map code number within these groupings.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	River - R1	**Surveillance site:** No
Waterbody ID and Name:	GB105029061660	Great Eau
National Grid Reference:	TF 45292 85297	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R2	**Surveillance site:** No
Waterbody ID and Name:	GB105029061680 South Dike	
National Grid Reference:	TF 42461 92629	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R3	**Surveillance site:** No
Waterbody ID and Name:	GB105030062200	River Waring
National Grid Reference:	TF 27562 73105	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062450	

Ecological Status

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R4	**Surveillance site:** No
Waterbody ID and Name:	GB105030062210	Nettleham Beck
National Grid Reference:	TF 01302 75682	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062290	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R5	**Surveillance site:**	No
Waterbody ID and Name:	GB105030062300	River Bain	
National Grid Reference:	TF 23513 81484		
Current Overall Status	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Status by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Not Designated A/HMWB		
Reason for Designation:			
Downstream Waterbody ID:	GB105030062450		

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R6	**Surveillance site:** No
Waterbody ID and Name:	GB105030056700	Ruskington Beck
National Grid Reference:	TF 09863 50084	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056690	

Ecological Status

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R7	**Surveillance site:** No
Waterbody ID and Name:	GB105030056710 Kyme Eau	
National Grid Reference:	TF 19374 50631	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)
Invertebrates	Moderate (Quite Certain)	Good	
Phytobenthos	Poor (Very Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R8	**Surveillance site:** No
Waterbody ID and Name:	GB105030056740	Foston Beck
National Grid Reference:	SK 86584 39304	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056780	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R9	**Surveillance site:**	No
Waterbody ID and Name:	GB105030056750	Honington Beck	
National Grid Reference:	SK 93664 43687		
Current Overall Status	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Status by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Not Designated A/HMWB		
Reason for Designation:			
Downstream Waterbody ID:	GB105030056780		

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R10	**Surveillance site:** Yes
Waterbody ID and Name:	GB105030056770 Brant	
National Grid Reference:	SK 93869 58324	
Current Overall Potential	Bad	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062370	

Ecological Potential

Current Status (and certainty that status is less than good)	Bad (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)
Phytobenthos	Bad (Very Certain)	Poor	Technically infeasible (P2b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Technically infeasible (P2b)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Flood bunds (earth banks, in place of floodwalls)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R11	**Surveillance site:** No
Waterbody ID and Name:	GB105030056790	Maud Foster Drain
National Grid Reference:	TF 32937 47377	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503000100	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate vegetation control technique	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R12	**Surveillance site:** No
Waterbody ID and Name:	GB105030051500	South Forty Foot
National Grid Reference:	TF 11404 25361	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030051520	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R13	**Surveillance site:** No
Waterbody ID and Name:	GB105030051510	South Forty Foot Drain
National Grid Reference:	TF 16826 24466	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R14	**Surveillance site:** No
Waterbody ID and Name:	GB105030051540 Old Beck	
National Grid Reference:	TF 10456 27540	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030051520	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R15	**Surveillance site:** No
Waterbody ID and Name:	GB105030051570 Witham	
National Grid Reference:	SK 92776 23430	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056780	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Good	
Invertebrates	High	High	
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1b)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R16	**Surveillance site:** No
Waterbody ID and Name:	GB105030062350 River Bain	
National Grid Reference:	TF 22395 88075	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062300	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R17	**Surveillance site:** No
Waterbody ID and Name:	GB105030062380 Pike Drain	
National Grid Reference:	SK 94014 70891	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R18	**Surveillance site:** No
Waterbody ID and Name:	GB105030062470 Till	
National Grid Reference:	SK 89013 82998	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R19	**Surveillance site:** No
Waterbody ID and Name:	GB105030062500 Till	
National Grid Reference:	SK 86657 87683	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062470	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R20	**Surveillance site:** No
Waterbody ID and Name:	GB105030056150	Dorrington Dike
National Grid Reference:	TF 14657 53828	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056180	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R21	**Surveillance site:** No
Waterbody ID and Name:	GB105030056160 Sand Beck	
National Grid Reference:	SK 90818 51774	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056770	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Educate landowners on sensitive management practices (urbanisation)	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R22	**Surveillance site:** No
Waterbody ID and Name:	GB105030056170	Dorrington Dike
National Grid Reference:	TF 12797 53891	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056150	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R23	**Surveillance site:** No
Waterbody ID and Name:	GB105030056180	Billinghay Skirth
National Grid Reference:	TF 16115 55317	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R24	**Surveillance site:** No
Waterbody ID and Name:	GB105030056260	Haltham Beck
National Grid Reference:	TF 28009 64083	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062450	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R25	**Surveillance site:** No
Waterbody ID and Name:	GB105029061620	Great Eau
National Grid Reference:	TF 38602 75444	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105029061670	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R26	**Surveillance site:** No
Waterbody ID and Name:	GB105030056340	Newham Drain
National Grid Reference:	TF 24682 55390	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R27	**Surveillance site:** No
Waterbody ID and Name:	GB105030056400	Fodder Dike
National Grid Reference:	TF 40725 56879	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056360	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R28	**Surveillance site:** No
Waterbody ID and Name:	GB105030056430	Bell Water Drain
National Grid Reference:	TF 43983 59796	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Disproportionately expensive (HR2a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R29	**Surveillance site:** No
Waterbody ID and Name:	GB105030056440	Cow Bank Drain
National Grid Reference:	TF 54237 63876	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503016300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R30	**Surveillance site:** No
Waterbody ID and Name:	GB105030056470	Hammond Beck
National Grid Reference:	TF 18632 32886	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R31	**Surveillance site:** No
Waterbody ID and Name:	GB105030056500	Hammond Beck
National Grid Reference:	TF 17571 35044	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Poor	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Moderate (Very Certain)	Moderate	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	Moderate (Quite Certain)	Moderate	Disproportionately expensive (T1a)
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R32	**Surveillance site:** No
Waterbody ID and Name:	GB105030056510	South Forty Foot
National Grid Reference:	TF 15598 36146	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R33	**Surveillance site:** No
Waterbody ID and Name:	GB105030056520 South Beck	
National Grid Reference:	TF 07574 38220	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056610	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R34	**Surveillance site:** No
Waterbody ID and Name:	GB105030056530 North Beck	
National Grid Reference:	TF 07745 40890	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056610	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R35	**Surveillance site:** No
Waterbody ID and Name:	GB105030056560	Frampton Town Drain
National Grid Reference:	TF 31061 40606	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056600	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Poor (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Bad (Very Certain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Very Certain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Tributyltin Compounds	Moderate (Very Certain)	Moderate	Technically infeasible (C3a)
Aldrin, Dieldrin, Endrin & Isodrin	Moderate (Quite Certain)	High	

Waterbody Category and Map Code.:	River - R36	**Surveillance site:** No
Waterbody ID and Name:	GB105030056570	New Hammond Beck
National Grid Reference:	TF 22244 41361	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056620	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Moderate	Technically infeasible (A2b)
Dissolved Oxygen	Poor (Very Certain)	Good	
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Moderate	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R37	**Surveillance site:** No
Waterbody ID and Name:	GB105030056580	Old Hammond Beck
National Grid Reference:	TF 27443 42079	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R38	**Surveillance site:** No
Waterbody ID and Name:	GB105030056600	Old Hammond Beck
National Grid Reference:	TF 30352 42852	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056620	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R39	**Surveillance site:** No
Waterbody ID and Name:	GB105030056620	South Forty Foot Drain
National Grid Reference:	TF 27826 43581	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503000100	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Flood bunds (earth banks, in place of floodwalls)	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R40	**Surveillance site:** No
Waterbody ID and Name:	GB105030056640	South Forty Foot Drain
National Grid Reference:	TF 18794 40006	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056620	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R41	**Surveillance site:** No
Waterbody ID and Name:	GB105030056650	Heckington Eau
National Grid Reference:	TF 12585 45073	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056690	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R42	**Surveillance site:** No
Waterbody ID and Name:	GB105030056660	Clay Dike
National Grid Reference:	TF 24077 44730	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056620	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R43	**Surveillance site:** Yes
Waterbody ID and Name:	GB105030056670	Slea New
National Grid Reference:	TF 00793 43085	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030056700	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	
Macrophytes	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	Good	Good	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R44	**Surveillance site:** No
Waterbody ID and Name:	GB105030056680	North Forty Foot Drain
National Grid Reference:	TF 26935 45057	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB205030056820	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R45	**Surveillance site:** No
Waterbody ID and Name:	GB105030056410	Newham Drain
National Grid Reference:	TF 27601 58048	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056340	

Ecological Potential

Current Status (and certainty that status is less than good)	Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R46	**Surveillance site:** No
Waterbody ID and Name:	GB105030062400	Fossdyke Canal
National Grid Reference:	SK 90594 74608	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB104028058480	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Quite Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R47	**Surveillance site:** No
Waterbody ID and Name:	GB105030056130 River Brant	
National Grid Reference:	SK 91753 52922	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056770	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R48	**Surveillance site:** No
Waterbody ID and Name:	GB105030062450 Bain	
National Grid Reference:	TF 23246 74753	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R49	**Surveillance site:** No
Waterbody ID and Name:	GB105030056110 River Brant	
National Grid Reference:	SK 90763 48530	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056130	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R50	**Surveillance site:** No
Waterbody ID and Name:	GB105030056420	Hobhole Drain
National Grid Reference:	TF 39361 60422	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056360	

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R51	**Surveillance site:** No
Waterbody ID and Name:	GB105030062370 Witham	
National Grid Reference:	SK 96650 68354	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1c)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R52	**Surveillance site:** No
Waterbody ID and Name:	GB105030056630	Cliff Beck
National Grid Reference:	TF 07953 43494	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056610	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R53	**Surveillance site:** No
Waterbody ID and Name:	GB105030056690	Skerth Drain
National Grid Reference:	TF 19825 46765	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056620	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R54	**Surveillance site:** No
Waterbody ID and Name:	GB105029061630 Burwell Beck	
National Grid Reference:	TF 38637 77756	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105029061670	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R55	**Surveillance site:** No
Waterbody ID and Name:	GB105029061650	Woldgrift Drain (lower end)
National Grid Reference:	TF 48664 82227	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Technically infeasible (B2a)
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Bad (Very Certain)	Bad	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Moderate (Uncertain)	Moderate	Disproportionately expensive (A1a)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate vegetation control technique	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Selective vegetation control regime	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R56	**Surveillance site:** No
Waterbody ID and Name:	GB105029061670	Long Eau
National Grid Reference:	TF 40395 85872	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Poor (Very Certain)	Moderate	Technically infeasible (B2a)
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R57	**Surveillance site:** No
Waterbody ID and Name:	GB105029061700	Ingoldmells Main Drain
National Grid Reference:	TF 56503 67407	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R58	**Surveillance site:** No
Waterbody ID and Name:	GB105029061710	Willoughby High Drain
National Grid Reference:	TF 53028 72406	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Appropriate water level management strategies, including timing and volume of water moved	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R59	**Surveillance site:** No
Waterbody ID and Name:	GB105029061730	Anderby Main Drain
National Grid Reference:	TF 53649 76285	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R60	**Surveillance site:** No
Waterbody ID and Name:	GB105029061740	Boygrift drain
National Grid Reference:	TF 51709 79202	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R61	**Surveillance site:** No
Waterbody ID and Name:	GB105029061750	Woldgrift Drain
National Grid Reference:	TF 47018 77239	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105029061650	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Quite Certain)	Moderate	Not Required (MS)
Phytobenthos	Poor (Very Certain)	Poor	Technically infeasible (B2a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Quite Certain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R62	**Surveillance site:** No
Waterbody ID and Name:	GB105029061760	Trusthorpe Pump Drain (lower end)
National Grid Reference:	TF 51524 82316	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Bathing Water Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640402490000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R63	**Surveillance site:** No
Waterbody ID and Name:	GB105030062190	Scrivelsby Beck
National Grid Reference:	TF 27812 66384	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062450	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R64	**Surveillance site:** No
Waterbody ID and Name:	GB105031055540	Frampton Town Drain (upper end)
National Grid Reference:	TF 33449 35293	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503100400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R65	**Surveillance site:** No
Waterbody ID and Name:	GB105031055550	Kirton Marsh Drain
National Grid Reference:	TF 35901 36468	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503100400	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R66	**Surveillance site:** No
Waterbody ID and Name:	GB105030062230	Tile House Beck and Old River Witham
National Grid Reference:	TF 11566 71551	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R67	**Surveillance site:** No
Waterbody ID and Name:	GB105030062240	Scothern Beck
National Grid Reference:	TF 03111 77337	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062290	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R68	**Surveillance site:**	No
Waterbody ID and Name:	GB105030062250	Goltho Beck	
National Grid Reference:	TF 09424 74389		
Current Overall Status	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Status by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Not Designated A/HMWB		
Reason for Designation:			
Downstream Waterbody ID:	GB105030062290		

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R69	**Surveillance site:** No
Waterbody ID and Name:	GB105030062260 Goulceby Beck	
National Grid Reference:	TF 26360 79203	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062450	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R70	**Surveillance site:** No
Waterbody ID and Name:	GB105030062270 Stainfield Beck	
National Grid Reference:	TF 18040 79631	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062290	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R71	**Surveillance site:** No
Waterbody ID and Name:	GB105030062280	Tributary of Barlings Eau
National Grid Reference:	TF 02761 81123	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062290	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R72	**Surveillance site:** No
Waterbody ID and Name:	GB105030062290	Barlings Eau
National Grid Reference:	TF 05660 77667	
Current Overall Potential	Poor	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good) Poor (Quite Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	
Phytobenthos	Poor (Very Certain)	Poor	Disproportionately expensive (P1b)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1b)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R73	**Surveillance site:** No
Waterbody ID and Name:	GB105030062310 Stainfield Beck	
National Grid Reference:	TF 16357 79376	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062290	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R74	**Surveillance site:** No
Waterbody ID and Name:	GB105030062320	Faldingworth Beck
National Grid Reference:	TF 04204 84916	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062290	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R75	**Surveillance site:** No
Waterbody ID and Name:	GB105030062340	Faldingworth Beck
National Grid Reference:	TF 09218 81621	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062290	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R76	**Surveillance site:** No
Waterbody ID and Name:	GB105030077820	Wyberton Marsh Drain
National Grid Reference:	TF 34507 39725	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503000100	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R77	**Surveillance site:** No
Waterbody ID and Name:	GB105030056720	Grantham Canal
National Grid Reference:	SK 90991 35828	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030056780	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R78	**Surveillance site:** No
Waterbody ID and Name:	GB105030056730	Upper Witham
National Grid Reference:	SK 85014 44028	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030056780	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R79	**Surveillance site:** No
Waterbody ID and Name:	GB105030056760	Upper Witham
National Grid Reference:	SK 84533 50650	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030056780	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R80	**Surveillance site:** No
Waterbody ID and Name:	GB105030056780 Upper Witham	
National Grid Reference:	SK 87959 55231	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062370	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	High	High	
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1c)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R81	**Surveillance site:** No
Waterbody ID and Name:	GB105030056800	Cow Croft Drain
National Grid Reference:	TF 49494 65784	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056440	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R82	**Surveillance site:** No
Waterbody ID and Name:	GB105030051530	Tributary of Risegate Eau
National Grid Reference:	TF 18874 29638	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R83	**Surveillance site:** No
Waterbody ID and Name:	GB105030051550	Tributary of South Forty Foot
National Grid Reference:	TF 14483 28151	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R84	**Surveillance site:** Yes
Waterbody ID and Name:	GB105030051590	Cringle Brook
National Grid Reference:	SK 92367 29342	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Drinking Water Protected Area, Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056780	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	
Macrophytes	Good	Good	
Phytobenthos	Moderate (Very Certain)	Moderate	Technically infeasible (B2r)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Copper	High	High	
Diazinon	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	River - R85	**Surveillance site:** No
Waterbody ID and Name:	GB105030062360	Bain (Grimblethorpe arm)
National Grid Reference:	TF 23966 86926	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062300	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R86	**Surveillance site:** No
Waterbody ID and Name:	GB105030062390	Skellingthorpe Drain
National Grid Reference:	SK 91130 73978	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062410	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Educate landowners on sensitive management practices (urbanisation)	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R87	**Surveillance site:** No
Waterbody ID and Name:	GB105030062410 Lower Till	
National Grid Reference:	SK 90448 78842	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Uncertain)	Poor	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R88	**Surveillance site:** Yes
Waterbody ID and Name:	GB105030062420	Lower Witham
National Grid Reference:	TF 20311 55813	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage, Navigation	
Downstream Waterbody ID:	GB530503000100	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Good	
Invertebrates	Good	Good	
Macrophytes	Moderate (Very Certain)	Moderate	Not Required (MS)
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1d)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1d)
Temperature	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c, M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Bank rehabilitation / reprofiling	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Phased de-watering and other techniques	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Vessel Management	**In Place**
Modify vessel design	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Sediment management	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Benzo (a) and (k) fluoranthene	High	High	
Benzo (ghi) perelyene and indeno (123-cd) pyrene	High	High	
Benzo(a)pyrene	High	High	
Cadmium And Its Compounds	High	High	
Fluoranthene	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Tributyltin Compounds	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	River - R89	**Surveillance site:** No
Waterbody ID and Name:	GB105030062430	River Lymn / Steeping
National Grid Reference:	TF 39215 67950	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503016300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2a)
pH	High	High	
Phosphate	Good	Good	
Temperature	Good	Good	
Copper	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Trichlorobenzenes	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
para - para DDT	High	High	

Waterbody Category and Map Code.:	River - R90	**Surveillance site:** No
Waterbody ID and Name:	GB105030062440	Bucknall Catchwater
National Grid Reference:	TF 17073 66451	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R91	**Surveillance site:** No
Waterbody ID and Name:	GB105030062460	South Hykeham Catchwater
National Grid Reference:	SK 94227 64769	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062370	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R92	**Surveillance site:** No
Waterbody ID and Name:	GB105030062480	Tributary of Till
National Grid Reference:	SK 86809 84393	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062470	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R93	**Surveillance site:** No
Waterbody ID and Name:	GB105030062490	Fillingham Beck
National Grid Reference:	SK 90100 83870	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Educate landowners on sensitive management practices (urbanisation)	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R94	**Surveillance site:** No
Waterbody ID and Name:	GB105030056120 Fulbeck Beck	
National Grid Reference:	SK 93035 51823	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056130	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R95	**Surveillance site:** No
Waterbody ID and Name:	GB105030056140	Anwick Catchwater
National Grid Reference:	TF 13158 52091	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056180	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain - WoE)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytobenthos	Moderate (Quite Certain)	Moderate	Disproportionately expensive (P1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Bad (Quite Certain)	Bad	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Iron	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R96	**Surveillance site:** No
Waterbody ID and Name:	GB105030056190	Tributary of Dorrington Dike
National Grid Reference:	TF 13490 54120	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056150	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R97	**Surveillance site:** No
Waterbody ID and Name:	GB105030056200	Walcott Bank Delph
National Grid Reference:	TF 16169 59033	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R98	**Surveillance site:** No
Waterbody ID and Name:	GB105030056220 Car Dyke	
National Grid Reference:	TF 12895 60006	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R99	**Surveillance site:** No
Waterbody ID and Name:	GB105030056230 Dunston Beck	
National Grid Reference:	TF 06336 62536	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030056220	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Quite Certain)	Does not Support Good	Disproportionately expensive (HR4a)
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R100	**Surveillance site:** No
Waterbody ID and Name:	GB105030056250 Car Dyke	
National Grid Reference:	TF 08014 64789	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062420	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR4a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R101	**Surveillance site:** No
Waterbody ID and Name:	GB105030056270	Tributary of Hobhole Drain
National Grid Reference:	TF 40998 44364	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640523160000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R102	**Surveillance site:** No
Waterbody ID and Name:	GB105030056280	Tributary of Hobhole Drain
National Grid Reference:	TF 39203 45330	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056320	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R103	**Surveillance site:**	No
Waterbody ID and Name:	GB105030056290	Leake Gride	
National Grid Reference:	TF 37850 50258		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Artificial		
Reason for Designation:	Land Drainage		
Downstream Waterbody ID:	GB105030056320		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R104	**Surveillance site:** No
Waterbody ID and Name:	GB105030056310	Tributary of Lade Bank Drain
National Grid Reference:	TF 41142 53142	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056330	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R105	**Surveillance site:** No
Waterbody ID and Name:	GB105030056320	Tributary of Hobhole Drain
National Grid Reference:	TF 35135 43389	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503000100	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Zinc	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R106	**Surveillance site:** No
Waterbody ID and Name:	GB105030056330	Lade Bank (lower end)
National Grid Reference:	TF 39090 54614	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056320	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Quite Certain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R107	**Surveillance site:** No
Waterbody ID and Name:	GB105030056350	Lade Bank Drain
National Grid Reference:	TF 43389 55553	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056330	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Bad (Very Certain)	Bad	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Good	Good	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Good	Good	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R108	**Surveillance site:** No
Waterbody ID and Name:	GB105030056370	Tributary of Steeping River
National Grid Reference:	TF 47780 52346	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB640523160000	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	Poor (Very Certain)	Poor	Technically infeasible (A2b)
Dissolved Oxygen	Poor (Very Certain)	Poor	Technically infeasible (DO2b)
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	Poor (Very Certain)	Poor	Technically infeasible (A2b)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R109	**Surveillance site:** No
Waterbody ID and Name:	GB105030056390	Tributary of Steeping River
National Grid Reference:	TF 54613 58383	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB530503016300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R110	**Surveillance site:** No
Waterbody ID and Name:	GB105030056450	Little River Lymm
National Grid Reference:	TF 50931 61103	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056440	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R111	**Surveillance site:** No
Waterbody ID and Name:	GB105030056460	West fen Catchwater Drain
National Grid Reference:	TF 33596 56675	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056790	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Moderate (Uncertain)	Moderate	Disproportionately expensive (DO1a)
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate water level management strategies, including timing and volume of water moved	**In Place**
Selective vegetation control regime	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R112	**Surveillance site:** No
Waterbody ID and Name:	GB105030056490	Ousemere Lode
National Grid Reference:	TF 11677 34525	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R113	**Surveillance site:** No
Waterbody ID and Name:	GB105030056540	Tributary of Hammond Beck
National Grid Reference:	TF 26769 40334	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056590	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R114	**Surveillance site:** No
Waterbody ID and Name:	GB105030056550	Tributary of Hammond Beck
National Grid Reference:	TF 24944 40473	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105031055530	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R115	**Surveillance site:** No
Waterbody ID and Name:	GB105030056590	Old Hammond Beck
National Grid Reference:	TF 25538 42227	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056600	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R116	**Surveillance site:** No
Waterbody ID and Name:	GB105030056210	Metheringham Beck
National Grid Reference:	TF 08528 61493	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056220	

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R117	**Surveillance site:** No
Waterbody ID and Name:	GB105030056610	Helpringham Eau
National Grid Reference:	TF 13925 41003	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Good	
Invertebrates	Moderate (Quite Certain)	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R118	**Surveillance site:** No
Waterbody ID and Name:	GB105030051580 Wyville Brook	
National Grid Reference:	SK 90173 28541	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030051590	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R119	**Surveillance site:** No
Waterbody ID and Name:	GB105030062330	Legsby Beck
National Grid Reference:	TF 06549 83218	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030062290	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R120	**Surveillance site:** No
Waterbody ID and Name:	GB105030051520	Rippingale Running Dyke
National Grid Reference:	TF 14509 27449	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030051510	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R121	**Surveillance site:** No
Waterbody ID and Name:	GB105030051560	Cringle Brook
National Grid Reference:	SK 90081 25546	
Current Overall Status	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Freshwater Fish Directive, Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB105030051590	

Ecological Status (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R122	**Surveillance site:** No
Waterbody ID and Name:	GB105029061720	Boygrift Drain (upper end)
National Grid Reference:	TF 49427 75133	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105029061740	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R123	**Surveillance site:** No
Waterbody ID and Name:	GB105030056480	Billingborough Lode
National Grid Reference:	TF 14740 32536	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105030056640	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	Good	Good	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3c)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	River - R124	**Surveillance site:** No
Waterbody ID and Name:	GB105029061640	Trusthorpe Pump Drain (upper end)
National Grid Reference:	TF 48241 82974	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:	GB105029061660	

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	River - R125	**Surveillance site:** No
Waterbody ID and Name:	GB105030062220	Stainfield Beck
National Grid Reference:	TF 12991 74181	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB105030062290	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
Dissolved Oxygen	Good	Good	
pH	High	High	
Phosphate	Poor (Uncertain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Does not Support Good (Uncertain)	Does not Support Good	Disproportionately expensive (HR2a)

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	**In Place**
Appropriate channel maintenance strategies and techniques - woody debris	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**In Place**
Sediment management strategies (develop and revise)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Flood bunds (earth banks, in place of floodwalls)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Improve floodplain connectivity	**Not In Place**
Set-back embankments	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L1	**Surveillance site:** No
Waterbody ID and Name:	GB30533426	Swanholme Lakes
National Grid Reference:	SK 94583 68560	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Lake - L2	**Surveillance site:** No
Waterbody ID and Name:	GB30533852	Tattershall Gravel Pits, Mr Windleys Pit 3
National Grid Reference:	TF 19620 59482	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Lake - L3	**Surveillance site:** No
Waterbody ID and Name:	GB30533132	Chapel Pit NR
National Grid Reference:	TF 55827 73909	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Recreation, Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Quantity and Dynamics of Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

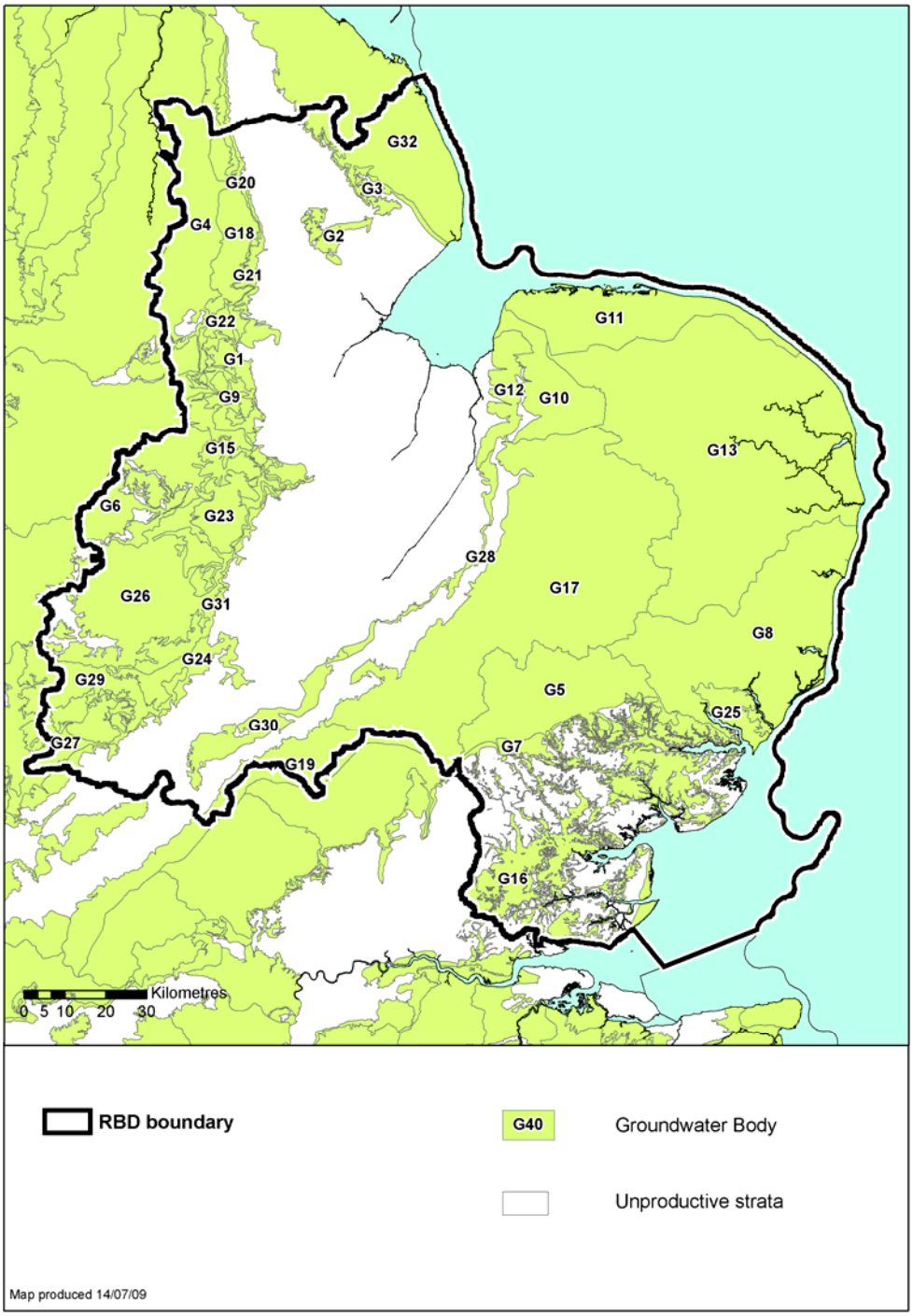
Current Status (and certainty that status is less than good)	Does not require assessment

B.16 Groundwaters

Groundwater bodies in the Anglian river basin district

There are 31 groundwater bodies in the Anglian river basin district.

Figure B.16.1 **Groundwater bodies in the Anglian river basin district**



Water body tables for groundwater in the Anglian river basin district

This section contains detailed information on the current status and objectives for groundwater bodies in the river basin district. The tables are arranged by map code number.

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	Groundwater - G1
Waterbody ID and Name:	GB40502G446000 Welland Limestone Unit
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G2
Waterbody ID and Name:	GB40503G000100 Witham Bain and Gravels
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.248	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.018	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G3
Waterbody ID and Name:	GB40501G401700 Steeping Great Eau Long Eau /Witham Spilsby Sandstone Unit
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.000	0	No	75% of relevant TV
Phosphate	62.901	ug/l	No	No			No	75% of relevant TV
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G4
Waterbody ID and Name:	GB40502G401400 Witham Lias U
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G5
Waterbody ID and Name:	GB40501G400700 North Essex Chalk
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (High)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Poor (High)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Poor (High)	Poor	Disproportionately expensive (GC4a)
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.300	0.300	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.185	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.015	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			Yes	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G6
Waterbody ID and Name:	GB40502G304000 Welland Lower Jurassic Unit
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed

Waterbody Category and Map Code.:	Groundwater - G7
Waterbody ID and Name:	GB40502G400900 North Essex Lower London Tertiaries
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (Low)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	No	No	0.300	0.300	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.213	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.021	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G8
Waterbody ID and Name:	GB40501G400600 Waveney and East Suffolk Chalk & Crag
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Poor (Low)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	Yes	No	0.000	0.300	No	75% of relevant TV
Phosphate	44.793	ug/l	No	No	0.000	667.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.112	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.011	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	Yes	No			No	75% of relevant TV
Glyphosate	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G9
Waterbody ID and Name:	GB40501G445300 Welland Mid Jurassic Unit
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G10
Waterbody ID and Name:	GB40501G400200 North West Norfolk Chalk
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (High)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Poor (High)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Poor (High)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	No	No	0.300	0.300	No	75% of relevant TV
Phosphate	125.612	ug/l	No	No			No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.105	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.011	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G11
Waterbody ID and Name:	GB40501G400100 North Norfolk Chalk
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (High)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Poor (High)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Technically infeasible (GC1a)
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	No	No	0.300	0.300	No	75% of relevant TV
Phosphate	41.365	ug/l	Yes	No	0.000	0	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.103	ug/l	Yes	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.010	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	No	No			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			Yes	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G12
Waterbody ID and Name:	GB40501G400400 North west Norfolk Sandringham Sands
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.300	0.300	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.104	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.010	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G13
Waterbody ID and Name:	GB40501G400300 Broadland Rivers Chalk & Crag
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Poor (Low)	Poor	Disproportionately expensive (GQ1d)
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (High)	Good	
General Chemical Test	Poor (Low)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Mecoprop	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	Yes	No	0.300	0.300	Yes	75% of relevant TV
Phosphate	46.164	ug/l	Yes	No	0.000	667.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.117	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.011	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Carbetamide	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	Yes	No			No	75% of relevant TV
Glyphosate	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Sodium	112.500	mg/l	Yes	No			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	Yes	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G15
Waterbody ID and Name:	GB40501G445900 Welland Limestone Unit
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Nutrients,Hazardous Substances and other pollutants	GWDTE (chemical)	GWDTE Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.300	1.130	No	75% of relevant TV
Phosphate	89.000	ug/l	No	No	89.000	93.500	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.123	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.012	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
MCPA	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	Yes	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G16
Waterbody ID and Name:	GB40503G000400 Essex Gravels
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (High)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Poor (High)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Technically infeasible (GC1a)
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.000	0.300	Yes	75% of relevant TV
Phosphate	56.495	ug/l	Yes	No	0.000	292.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.141	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.014	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G17
Waterbody ID and Name:	GB40501G400500 Cam and Ely Ouse Chalk
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Poor (Low)	Poor	Disproportionately expensive (GQ1d)
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (High)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Poor (High)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Poor (High)	Poor	Disproportionately expensive (GC4a)
General Chemical Test	Poor (Low)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants	Chlorinated Solvents	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.070	0.300	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.104	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Nickel (Total)	15.000	ug/l	Yes	Yes	7.500	10.700	No	75% of relevant TV
1,1,2-Trichloroethane	7.500	ug/l	No	Yes			No	75% of relevant TV
Carbon tetrachloride	2.250	ug/l	Yes	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
1,1,1-Trichloroethane	7.500	ug/l	No	Yes			No	75% of relevant TV
Dichloromethane	7.500	ug/l	Yes	Yes			No	75% of relevant TV
PCE	7.500	ug/l	Yes	Yes			No	75% of relevant TV
TCE	7.500	ug/l	Yes	Yes			Yes	75% of relevant TV
Chloroform	2.610	ug/l	Yes	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.010	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No	7.500	7.500	Yes	75% of relevant TV
1,2-dichloroethane	2.250	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G18
Waterbody ID and Name:	GB40501G444800 Witham Limestone Unit
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.300	1.130	No	75% of relevant TV
Phosphate	127.280	ug/l	No	No	89.000	93.500	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.106	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.011	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	Yes	No			No	75% of relevant TV
Glyphosate	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G19
Waterbody ID and Name:	GB40601G603000 Upper Bedford Ouse Chalk
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (High)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	No	No	0.070	0.750	No	75% of relevant TV
Phosphate	123.938	ug/l	No	No	6.500	192.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.108	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Permethrin-cis+trans	0.011	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.010	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No	7.500	7.500	Yes	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G20
Waterbody ID and Name:	GB40501G444900 Blisworth Limestone Rutland formation
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G21
Waterbody ID and Name:	GB40502G445000 Cornbrash
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G22
Waterbody ID and Name:	GB40501G445100 Witham Limestone Unit
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (Low)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G23
Waterbody ID and Name:	GB40501G445400 Nene Northampton Sands
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients,Hazardous Substances and other pollutants	GWDTE (chemical)	GWDTE Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	No	No	0.000	0	No	75% of relevant TV
Phosphate	358.532	ug/l	No	No			No	75% of relevant TV
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G24
Waterbody ID and Name:	GB40501G445600 Upper Bedford Ouse Principal Oolite 2
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Poor (Low)	Poor	Disproportionately expensive (GC4a)
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	Yes	No	0.300	0.300	No	75% of relevant TV
Phosphate	258.633	ug/l	No	No	50.000	50.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.216	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.022	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			Yes	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	No	No			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G25
Waterbody ID and Name:	GB40501G401800 Felixstowe Peninsula Crag & Chalk
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (Low)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (High)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Poor (High)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Hazardous Substances and other pollutants	Point Sources	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants	Urbanisation	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Xylene -p+m	33.333	ug/l	No	Yes			No	75% of relevant TV
Anthracene	0.120	ug/l	No	Yes			No	75% of relevant TV
Benzene	0.750	ug/l	No	Yes			No	75% of relevant TV
Toluene	55.556	ug/l	No	No			No	75% of relevant TV
Arsenic (Total)	7.500	ug/l	No	Yes	5.500	17.150	No	75% of relevant TV
Copper (Dissolved)	11.111	ug/l	Yes	No	4.000	28.950	No	75% of relevant TV
Copper (Total)	11.111	ug/l	Yes	No	4.000	28.950	No	75% of relevant TV
Zinc (Total)	83.333	ug/l	No	No	7.800	220.000	No	75% of relevant TV
Nickel (Total)	15.000	ug/l	No	Yes	10.000	10.000	No	75% of relevant TV
Ammonia	0.300	mg/l	No	No	0.300	0.300	No	75% of relevant TV
Phosphate	44.444	ug/l	Yes	No	0.000	667.000	No	75% of relevant TV
Carbon tetrachloride	2.250	ug/l	No	Yes			No	75% of relevant TV
Pentachlorophenol	0.444	ug/l	No	Yes			No	75% of relevant TV
Chromium (Total)	5.556	ug/l	No	Yes	1.000	1.450	No	75% of relevant TV
1,1,1-Trichloroethane	7.500	ug/l	No	Yes			No	75% of relevant TV
Dichloromethane	7.500	ug/l	No	Yes			No	75% of relevant TV
PCE	7.500	ug/l	No	Yes			No	75% of relevant TV
TCE	7.500	ug/l	No	Yes			No	75% of relevant TV
Chloroform	2.778	ug/l	No	Yes			No	75% of relevant TV
Zinc (Dissolved)	83.333	ug/l	Yes	No	7.800	220.000	No	75% of relevant TV
Chromium (Dissolved)	5.556	ug/l	Yes	Yes	1.000	1.450	No	75% of relevant TV
Nickel (Dissolved)	15.000	ug/l	No	Yes	10.000	10.000	No	75% of relevant TV
Phenol	7.500	ug/l	No	No			No	75% of relevant TV
Naphthalene	2.709	ug/l	No	Yes			No	75% of relevant TV
1,1,2-Trichloroethane	7.500	ug/l	No	Yes			No	75% of relevant TV
Lead (Total)	8.000	ug/l	No	Yes			No	75% of relevant TV
Lead (Dissolved)	8.000	ug/l	Yes	Yes			No	75% of relevant TV
Cadmium (Dissolved)	0.222	ug/l	Yes	Yes			No	75% of relevant TV
Cadmium (Total)	0.222	ug/l	No	Yes			No	75% of relevant TV
Aluminium	150.000	ug/l	No	Yes			No	75% of relevant TV
Boron	750.000	ug/l	No	No			No	75% of relevant TV
Sodium	112.500	mg/l	No	No			No	75% of relevant TV
Fluoride	1.125	mg/l	No	No			No	75% of relevant TV
Mercury	0.750	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	No	No			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Bromate	0.008	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G26
Waterbody ID and Name:	GB40502G402400 Nene Mid Lower Jurassic Unit
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients,Hazardous Substances and other pollutants	GWDTE (chemical)	GWDTE Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Nitrate	42.000	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G27
Waterbody ID and Name:	GB40501G402300 Upper Bedford Ouse Oolite Principal 1
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	Yes

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (High)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Poor (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Poor (Low)	Poor	Disproportionately expensive (GC4a)
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Trends in Nitrate	GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	No	No	0.300	0.300	No	75% of relevant TV
Phosphate	200.000	ug/l	No	No	50.000	50.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.167	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.017	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			Yes	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G28
Waterbody ID and Name:	GB40501G445700 Cam and Ely Ouse Woburn Sands
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (High)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	Yes	No	0.300	0.300	No	75% of relevant TV
Phosphate	297.000	ug/l	No	No	297.000	297.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.121	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.012	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G29
Waterbody ID and Name:	GB40502G401300 Upper Bedford Ouse Oolite Secondary
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (High)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	Yes	No	0.000	0.300	No	75% of relevant TV
Phosphate	166.309	ug/l	No	No	50.000	50.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.222	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.014	ug/l	No	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G30
Waterbody ID and Name:	GB40501G402200 Upper Bedford Ouse Woburn Sands
Current Overall Status	Poor
Status Objective (Overall):	Good by 2027
Status Objective(s):	Good Quantitative Status by 2027, Good Chemical Status by 2027
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Poor (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Poor (Low)	Poor	Disproportionately expensive (GQ1b)
Saline Intrusion	Good (High)	Good	
Water Balance	Poor (Low)	Poor	Disproportionately expensive (GQ1c)

Chemical Status

Current Status (and confidence in this assessment) Poor (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Poor (Low)	Poor	Disproportionately expensive (GC4a)
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (High)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients	Phosphate	General Chemical Test, GWDTE Test, GW-SW Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Diuron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	Yes	No	0.300	0.300	No	75% of relevant TV
Phosphate	297.000	ug/l	No	No	297.000	297.000	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Fluoranthene	0.236	ug/l	No	Yes			No	75% of relevant TV
Simazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.021	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Glyphosate	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G31
Waterbody ID and Name:	GB40501G445500 Northampton Sands
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Hazardous Substances and other pollutants	Point Sources	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Nutrients,Hazardous Substances and other pollutants	GWDTE (chemical)	GWDTE Test

Threshold value (TV), trends and other relevant information (for groundwater only)

Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Ammonia	0.300	mg/l	No	No	0.000	0	No	75% of relevant TV
Phosphate	236.240	ug/l	No	No			No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No			No	75% of relevant TV
Bromate	0.008	mg/l	No	No			No	75% of relevant TV

Waterbody Category and Map Code.:	Groundwater - G32
Waterbody ID and Name:	GB40501G401600 Steeping Long Eau Little Eau Chalk Unit
Current Overall Status	Good
Status Objective (Overall):	Good by 2015
Status Objective(s):	Good Quantitative Status by 2015, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	
Protected Area Designation:	Drinking Water Protected Area, Nitrates Directive
Groundwater body has an upward trend in pollutant concentrations:	No

Quantitative Status

Current Status (and confidence in this assessment) Good (Low)

Quantitative elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (Low)	Good	
Saline Intrusion	Good (Low)	Good	
Water Balance	Good (High)	Good	

Chemical Status

Current Status (and confidence in this assessment) Good (Low)

Chemical elements

Element	Current status (and confidence)	Predicted Status by 2015	Justification for not achieving good status by 2015
Drinking Water Protected Area	Good (Low)	Good	
General Chemical Test	Good (Low)	Good	
Impact on Wetlands	Good (Low)	Good	
Impact On Surface Waters	Good (High)	Good	
Saline Intrusion	Good (Low)	Good	

Pressures and Risks

Pressures	Risk Category	Element against which assessed
Nutrients	Nitrate	General Chemical Test, GWDTE Test, DrWPA Test
Hazardous Substances and other pollutants	Pesticides	General Chemical Test, GWDTE Test, DrWPA Test, GW-SW Test
Hazardous Substances and other pollutants, Nutrients, Abstraction and other artificial flow pressures	DrWPA	DrWPA Test
Abstraction and other artificial flow pressures	Saline Intrusion	General Chemical Test, Saline Intrusion Test, DrWPA Test

Threshold value (TV), trends and other relevant information (for groundwater only)

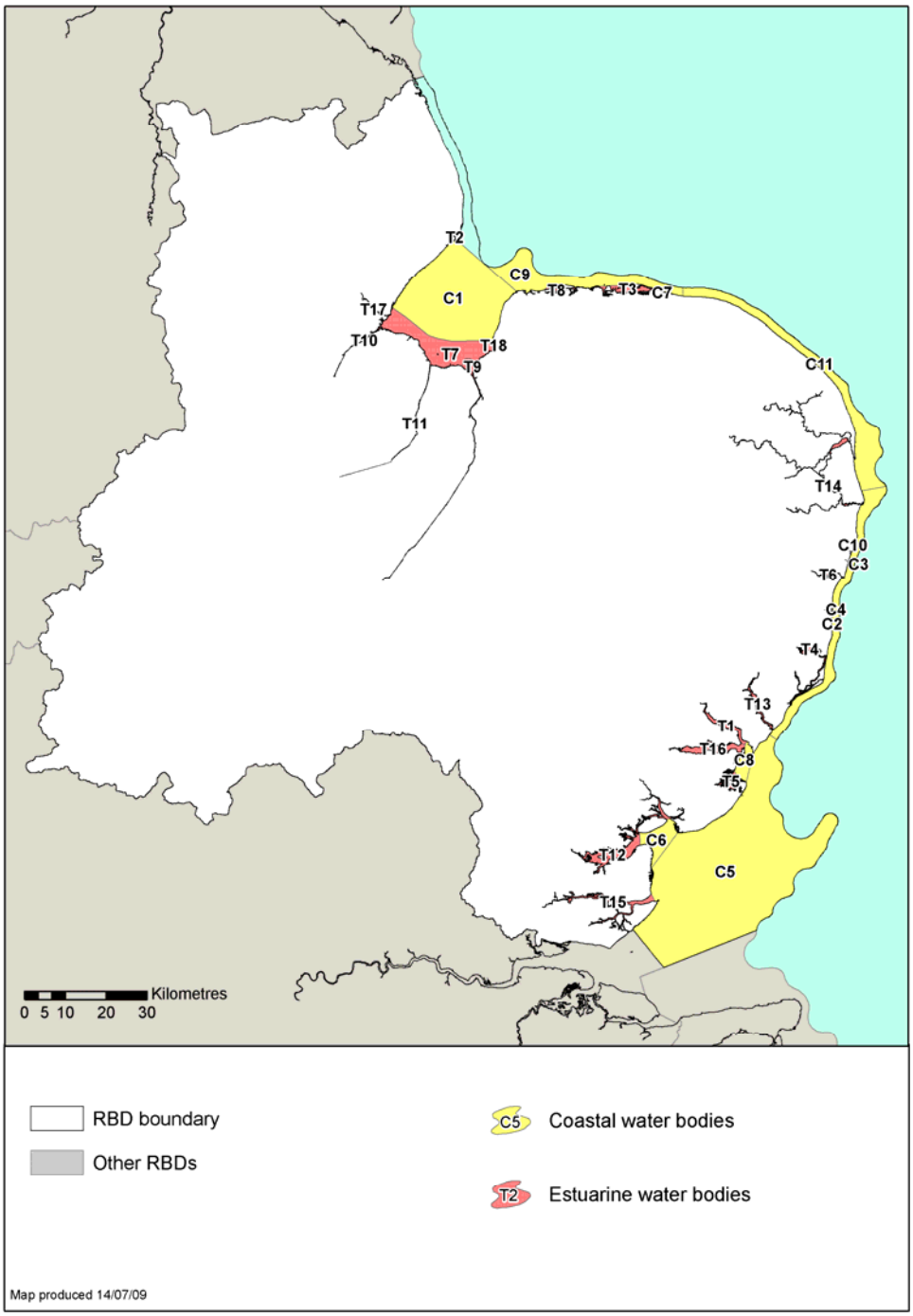
Substance	TV	Units	Exceedance	Hazardous	Min NBL	Max NBL	Upward trend	Starting point for reversing the trend
Simazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Atrazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Isoproturon	0.075	ug/l	No	Yes			No	75% of relevant TV
Ammonia	0.300	mg/l	Yes	No	0.000	0.010	No	75% of relevant TV
Chlorfenvinphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Diuron	0.075	ug/l	No	Yes			No	75% of relevant TV
Bentazone	0.075	ug/l	Yes	Yes			No	75% of relevant TV
Fluoranthene	0.157	ug/l	No	Yes			No	75% of relevant TV
Mecoprop	0.075	ug/l	No	Yes			No	75% of relevant TV
Diazinon	0.012	ug/l	No	Yes			No	75% of relevant TV
Cypermethrin	0.075	ug/l	No	Yes			No	75% of relevant TV
Dalapon	0.075	ug/l	No	Yes			No	75% of relevant TV
Cyanazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Electrical conductivity	1875.000	uS/cm	No	No	888.000	888.000	No	75% of relevant TV
Glyphosate	0.075	ug/l	No	Yes			No	75% of relevant TV
Chlortoluron	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbetamide	0.075	ug/l	No	Yes			No	75% of relevant TV
Carbendazim	0.075	ug/l	No	Yes			No	75% of relevant TV
Clopyralid	0.075	ug/l	No	Yes			No	75% of relevant TV
Metazachlor	0.075	ug/l	No	Yes			No	75% of relevant TV
Trifluralin	0.075	ug/l	No	Yes			No	75% of relevant TV
Trietazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Terbutryn	0.075	ug/l	No	Yes			No	75% of relevant TV
Sodium	112.500	mg/l	No	No	30.000	30.000	No	75% of relevant TV
Propazine	0.075	ug/l	No	Yes			No	75% of relevant TV
Dichlorprop	75.000	ug/l	No	Yes			No	75% of relevant TV
MCPA	0.075	ug/l	No	Yes			No	75% of relevant TV
Propetamphos	0.075	ug/l	No	Yes			No	75% of relevant TV
Chloride	55.500	mg/l	No	No	55.500	55.500	No	75% of relevant TV
Sulphate	130.000	mg/l	No	No	130.000	130.000	No	75% of relevant TV
Nitrate	42.000	mg/l	Yes	No	18.200	18.200	No	75% of relevant TV

B.17 Estuaries and Coastal Waters

Estuarine and Coastal water bodies in the Anglian river basin district

There are 18 estuarine water bodies and 11 coastal water bodies in the Anglian river basin district.

Figure B.17.1 **Estuarine and coastal water bodies in the Anglian river basin district**



Waterbody Category and Map Code.:	Coastal - C1	**Surveillance site:** Yes
Waterbody ID and Name:	GB640523160000	Wash Outer
National Grid Reference:	TF 56448 45123	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Macroalgae	High	High	
Phytoplankton	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C2	**Surveillance site:** No
Waterbody ID and Name:	GB610050076000	Walberswick Marshes
National Grid Reference:	TM 46956 66770	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good) Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Coastal - C3	**Surveillance site:** No
Waterbody ID and Name:	GB610050081000	Covehithe Broad
National Grid Reference:	TM 52054 81351	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C4	**Surveillance site:** No
Waterbody ID and Name:	GB650503520002 Suffolk	
National Grid Reference:	TM 46705 52695	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Coastal Protection, Flood Protection	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1o)
Dissolved Oxygen	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Coastal - C5	**Surveillance site:** No
Waterbody ID and Name:	GB650503520001 Essex	
National Grid Reference:	TM 26122 07726	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Coastal Protection, Flood Protection	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Phytoplankton	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Good	Good	
Dissolved Oxygen	High	High	
Copper	High	High	
Iron	High	High	
Un-ionised ammonia	High	High	
Zinc	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3f)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Managed realignment of flood defence	Not In Place

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Coastal - C6	**Surveillance site:** Yes
Waterbody ID and Name:	GB650503200000	Blackwater Outer
National Grid Reference:	TM 04363 09635	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	
Macroalgae	High	High	
Phytoplankton	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Good	Good	
Dissolved Oxygen	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C7	**Surveillance site:** No
Waterbody ID and Name:	GB610050082000	Blakeney Spit Lagoon
National Grid Reference:	TG 04921 45207	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C8	**Surveillance site:** No
Waterbody ID and Name:	GB650503190000	Harwich Approaches
National Grid Reference:	TM 25950 28331	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Coastal Protection, Dredge Disposal, Navigation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Good

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Good	Good	
Dissolved Oxygen	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C9	**Surveillance site:**	No
Waterbody ID and Name:	GB640503300000	Norfolk North	
National Grid Reference:	TF 70325 49719		
Current Overall Potential	Moderate		
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2027		
Justification if overall objective is not good status by 2015:	Disproportionately expensive		
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Heavily Modified		
Reason for Designation:	Flood Protection		
Downstream Waterbody ID:			

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1o)
Dissolved Oxygen	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Indirect / offsite mitigation (offsetting measures)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Increase in-channel morphological diversity	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C10	**Surveillance site:** No
Waterbody ID and Name:	GB610050071000	Benacre Broad
National Grid Reference:	TM 52843 82935	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Coastal - C11	**Surveillance site:** No
Waterbody ID and Name:	GB650503520003	Norfolk East
National Grid Reference:	TG 36054 34161	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive)	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Coastal Protection, Flood Protection	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Phytoplankton	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1o)
Dissolved Oxygen	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Transitional - T1	**Surveillance site:** Yes
Waterbody ID and Name:	GB520503613601 ORWELL	
National Grid Reference:	TM 20954 38959	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB650503190000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)
Macroalgae	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1o)
Dissolved Oxygen	High	High	
Arsenic	High	High	
Copper	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Prepare a dredging / disposal strategy	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Cadmium And Its Compounds	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	Transitional - T2	**Surveillance site:** No
Waterbody ID and Name:	GB530503016300 STEEPING	
National Grid Reference:	TF 55114 58530	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB640523160000	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3f)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**In Place**
Indirect / offsite mitigation (offsetting measures)	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Transitional - T3	**Surveillance site:** No
Waterbody ID and Name:	GB520503403600	STIFFKEY/ GLAVEN
National Grid Reference:	TF 98844 45147	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Bathing Water Directive, Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB640503300000	

Ecological Status

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good) Does not require assessment

Waterbody Category and Map Code.:	Transitional - T4	**Surveillance site:** Yes
Waterbody ID and Name:	GB520503503800 ALDE & ORE	
National Grid Reference:	TM 41502 57141	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Transitional - T5	**Surveillance site:** No
Waterbody ID and Name:	GB520503713700	HAMFORD WATER
National Grid Reference:	TM 22583 23608	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB650503190000	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Disproportionately expensive (B1a)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Copper	High	High	
Iron	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Transitional - T6	**Surveillance site:** No
Waterbody ID and Name:	GB510503503700 BLYTH (S)	
National Grid Reference:	TM 46818 75782	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Coastal Protection, Flood Protection	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	In Place

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Transitional - T7 **Surveillance site:** Yes
Waterbody ID and Name:	GB530503311300 WASH INNER
National Grid Reference:	TF 50838 30063
Current Overall Potential	Moderate
Status Objective (Overall):	Good by 2027 (For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015
Justification if overall objective is not good status by 2015:	Disproportionately expensive
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive
SSSI (Non-N2K) related:	No
Hydromorphological Designation:	Heavily Modified
Reason for Designation:	Flood Protection, Navigation, ShellFisheries
Downstream Waterbody ID:	GB640523160000

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2b)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Vessel Management	In Place

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Mercury And Its Compounds	High	High	
Trichloromethane	High	High	

Waterbody Category and Map Code.:	Transitional - T8	**Surveillance site:** No
Waterbody ID and Name:	GB510503403500	BURN & MOW & OVERY & NORTON
National Grid Reference:	TF 80133 45290	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	ShellFisheries	
Downstream Waterbody ID:	GB640503300000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Oxygen	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Disproportionately expensive (M2b)

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Transitional - T9	**Surveillance site:** Yes
Waterbody ID and Name:	GB530503300300 GREAT OUSE	
National Grid Reference:	TF 57798 27049	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Vessel Management	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Bank rehabilitation / reprofiling	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Mercury And Its Compounds	Moderate (Uncertain)	Moderate	Technically infeasible (C2a)

Waterbody Category and Map Code.:	Transitional - T10	**Surveillance site:** Yes
Waterbody ID and Name:	GB530503100400 WELLAND	
National Grid Reference:	TF 28999 30317	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Copper	High	High	
Zinc	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3f)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Transitional - T11	**Surveillance site:** No
Waterbody ID and Name:	GB530503200200 NENE	
National Grid Reference:	TF 45707 13005	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Copper	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Transitional - T12	**Surveillance site:** Yes
Waterbody ID and Name:	GB520503713900	BLACKWATER & COLNE
National Grid Reference:	TL 97618 07596	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Bathing Water Directive, Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Coastal Protection, Flood Protection, Navigation	
Downstream Waterbody ID:	GB650503200000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Arsenic	High	High	
Copper	High	High	
Iron	High	High	
Phenol	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3f)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Managed realignment of flood defence	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Atrazine	High	High	
Cadmium And Its Compounds	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Simazine	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	Transitional - T13	**Surveillance site:** No
Waterbody ID and Name:	GB520503503900 DEBEN	
National Grid Reference:	TM 29509 44015	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Copper	Moderate (Very Certain)	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3f)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Managed realignment of flood defence	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Transitional - T14	**Surveillance site:** Yes
Waterbody ID and Name:	GB510503410700	BURE & WAVENEY & YARE & LOTHING
National Grid Reference:	TG 46288 03159	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Urban Waste Water Treatment Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation, Structure	
Downstream Waterbody ID:	GB650503520002	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Moderate (Uncertain)	Moderate	Not Required (MS)
Invertebrates	Good	Good	
Macroalgae	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1o)
Dissolved Oxygen	High	High	
Copper	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Manage disturbance	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Sediment management	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**

Chemical Status

Current Status (and certainty that status is less than good) Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Cadmium And Its Compounds	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
DDT Total	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	Transitional - T15	**Surveillance site:** No
Waterbody ID and Name:	GB520503704100 CROUCH	
National Grid Reference:	TQ 90551 96359	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive, Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB650503520001	

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Invertebrates	Good	Good	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Copper	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Transitional - T16	**Surveillance site:** Yes
Waterbody ID and Name:	GB520503613602	STOUR (ESSEX)
National Grid Reference:	TM 18187 33212	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB650503190000	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Biological elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Fish	Good	Good	
Invertebrates	Moderate (Uncertain)	Moderate	Not Required (MS)
Macroalgae	High	High	

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1o)
Dissolved Oxygen	High	High	
Copper	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management	**In Place**
Alter timing of dredging / disposal	**In Place**
Reduce sediment resuspension	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Cadmium And Its Compounds	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	Transitional - T17	**Surveillance site:** Yes
Waterbody ID and Name:	GB530503000100 WITHAM	
National Grid Reference:	TF 34887 41506	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Freshwater Fish Directive, Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection, Navigation	
Downstream Waterbody ID:	GB530503311300	

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Dissolved Inorganic Nitrogen	Moderate (Uncertain)	Moderate	Disproportionately expensive (N1a)
Dissolved Oxygen	High	High	
Arsenic	High	High	
Copper	High	High	
Permethrin	High	High	

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Alter timing of dredging / disposal	**In Place**
Reduce impact of dredging	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Bank rehabilitation / reprofiling	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Fail (Uncertain)

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
1,2-dichloroethane	High	High	
Cadmium And Its Compounds	High	High	
Hexachlorobenzene	High	High	
Hexachlorobutadiene	High	High	
Hexachlorocyclohexane	High	High	
Lead And Its Compounds	High	High	
Mercury And Its Compounds	High	High	
Nickel And Its Compounds	High	High	
Pentachlorophenol	High	High	
Tributyltin Compounds	Moderate (Uncertain)	Moderate	Technically infeasible (C2a)
Trichlorobenzenes	High	High	
Trichloromethane	High	High	
Trifluralin	High	High	
Aldrin, Dieldrin, Endrin & Isodrin	High	High	
Carbon Tetrachloride	High	High	
para - para DDT	High	High	
Tetrachloroethylene	High	High	
Trichloroethylene	High	High	

Waterbody Category and Map Code.:	Transitional - T18	**Surveillance site:** No
Waterbody ID and Name:	GB560503316700	Wolferston Lagoon Complex
National Grid Reference:	TF 64876 31675	
Current Overall Status	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Status by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Natura 2000 (Habitats and/or Birds Directive), Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Not Designated A/HMWB	
Reason for Designation:		
Downstream Waterbody ID:	GB530503311300	

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Status

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting conditions

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Tidal Regime - Freshwater Flow	Supports Good	Supports Good	
Morphology	Supports Good	Supports Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Water body tables for estuaries and coastal waters in the Anglian river basin district

This section contains detailed information on the current status and objectives for all estuarine and coastal water bodies in the river basin district. The tables are arranged by map code number.

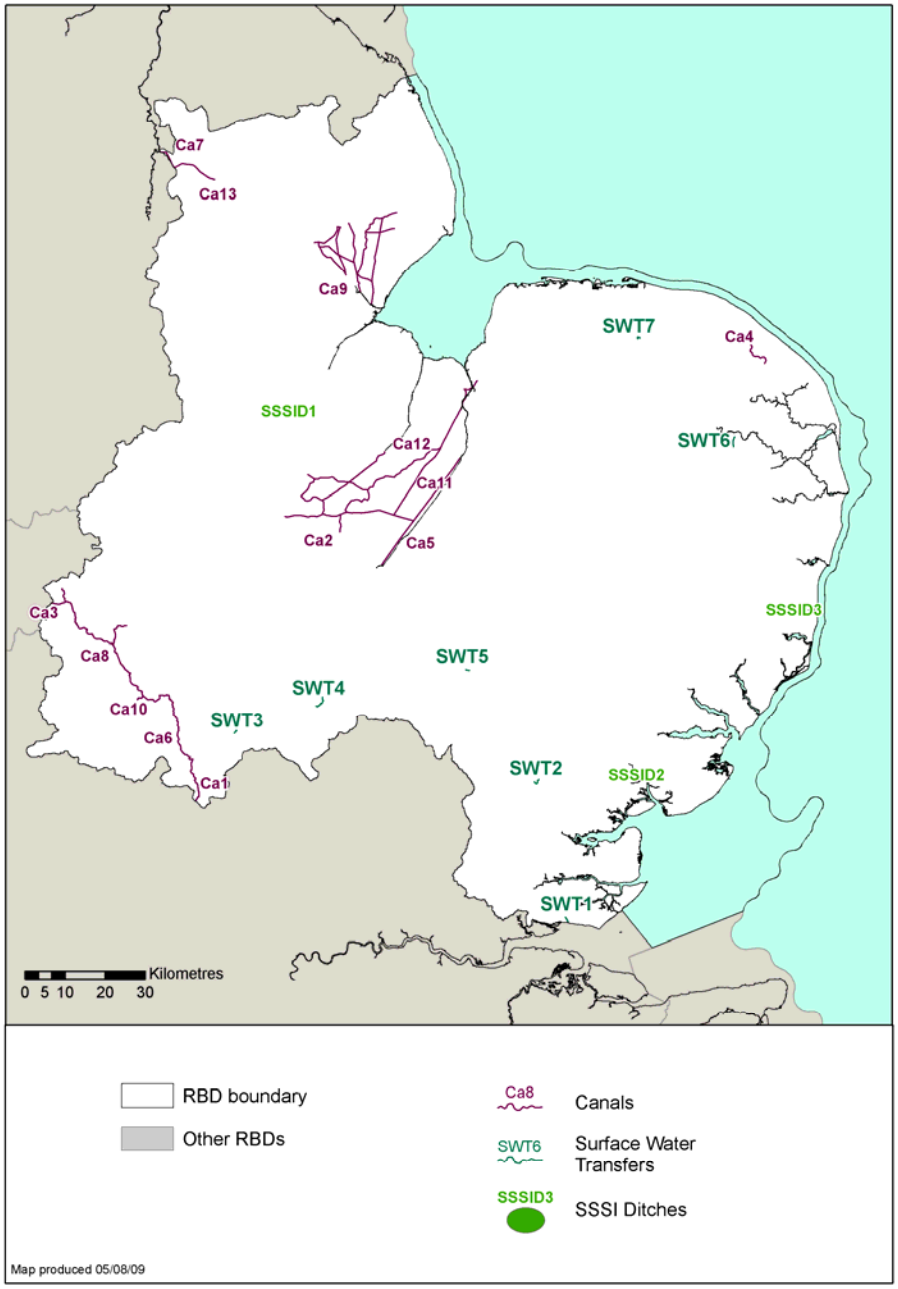
Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

B.18 Canals, surface water transfers and SSSI ditches

Canals, surface water transfer and SSSI ditches in the Anglian river basin district

There are 13 canal water bodies, 7 surface water transfer water bodies and 3 SSSI ditches in the Anglian river basin district.

Figure B.18.1 **Canals, surface water transfers and SSSI ditches in the Anglian river basin district**



Water body tables for canals, surface water transfers and SSSI ditches in the Anglian river basin district

The current status and objectives for canals and surface water transfers in the following tables are largely based on hydromorphological assessments. Where information on any biological, physico-chemical or chemical elements was available these results have also been incorporated. The biological, physico-chemical or chemical elements will be further assessed, where appropriate, and the results will inform future assessments of status and objectives.

The hydromorphological assessments presented here are based on the presence or absence of measures that mitigate the modified or artificial hydromorphological characteristics of the canal or surface water transfer. This approach is explained in more detail in sections B.4.1 and B 4.2 in this annex .

Note: In the following water body tables, only the relevant elements of the status objectives (shown under the orange sub headings) are shown.

Waterbody Category and Map Code.:	Canal - Ca1	**Surveillance site:** No
Waterbody ID and Name:	GB70510191	Grand Union Canal, Tring summit to Milton Keynes
National Grid Reference:	SP 91571 24807	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
pH	High	High	
Phosphate	Good	Good	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Alter timing of dredging / disposal	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Operational and structural changes to locks, sluices, weirs, beach control, etc	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Reduce sediment resuspension	**Not In Place**
Sediment management	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Reduce impact of dredging	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca2	**Surveillance site:** No
Waterbody ID and Name:	GB70510035	Middle level navigations
National Grid Reference:	TL 23914 87435	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Other	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca3	**Surveillance site:**	No
Waterbody ID and Name:	GB70510193	Grand Union Canal, Braunston summit	
National Grid Reference:	SP 57819 65083		
Current Overall Potential	Good		
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2015		
Justification if overall objective is not good status by 2015:			
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Artificial		
Reason for Designation:	Navigation		
Downstream Waterbody ID:			

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Bank rehabilitation / reprofiling	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Phased de-watering and other techniques	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Modify vessel design	**In Place**
Vessel Management	**In Place**
Sediment management	**In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca4	**Surveillance site:** No
Waterbody ID and Name:	GB70510049	North Walsham canal
National Grid Reference:	TG 32599 27078	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Flood Protection	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3a)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Sediment management strategies (develop and revise)	**In Place**
Retain marginal aquatic and riparian habitats (channel alteration)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate vegetation control technique	**In Place**
Selective vegetation control regime	**In Place**
Appropriate channel maintenance strategies and techniques - minimise disturbance to channel bed and margins	**Not In Place**
Management of the risk of fish entrainment in intakes for hydropower turbines or water resource purposes (or pumping stations) where there is downstream fish migration.	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca5	**Surveillance site:** No
Waterbody ID and Name:	GB70510039	New Bedford River
National Grid Reference:	TL 48799 88325	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Other	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca6	**Surveillance site:** No
Waterbody ID and Name:	GB70510192	Grand Union Canal, Milton Keynes trough pound
National Grid Reference:	SP 86125 41752	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
pH	High	High	
Phosphate	High	High	
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Reduce sediment resuspension	**Not In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca7	**Surveillance site:** No
Waterbody ID and Name:	GB70510528	Fossdyke Canal, canal section
National Grid Reference:	SK 86835 74780	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
pH	High	High	
Phosphate	Poor (Very Certain)	Poor	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Bank rehabilitation / reprofiling	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Phased de-watering and other techniques	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Modify vessel design	**In Place**
Vessel Management	**In Place**
Sediment management	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca8	**Surveillance site:** No
Waterbody ID and Name:	GB70510251	Grand Union Canal, Milton Keynes to Braunston summit
National Grid Reference:	SP 64864 59196	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027, Good Chemical Status by 2015	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate (Uncertain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
pH	High	High	
Phosphate	Moderate (Uncertain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Copper	High	High	
Iron	High	High	
Zinc	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Bank rehabilitation / reprofiling	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Phased de-watering and other techniques	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Modify vessel design	**In Place**
Vessel Management	**In Place**
Sediment management	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Good

Chemical elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Lead And Its Compounds	High	High	
Nickel And Its Compounds	High	High	

Waterbody Category and Map Code.:	Canal - Ca9	**Surveillance site:**	No
Waterbody ID and Name:	GB70510289	witham drains	
National Grid Reference:	TF 35120 55645		
Current Overall Potential	Good		
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)	
Status Objective(s):	Good Ecological Potential by 2015		
Justification if overall objective is not good status by 2015:			
Protected Area Designation:	Nitrates Directive		
SSSI (Non-N2K) related:	No		
Hydromorphological Designation:	Artificial		
Reason for Designation:	Land Drainage		
Downstream Waterbody ID:			

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)	
Current Status (and certainty that status is less than good)	Good

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca10	**Surveillance site:** No
Waterbody ID and Name:	GB70510075	Grand Union Canal, Milton Keynes to Braunston summit
National Grid Reference:	SP 78172 41341	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive, Technically infeasible	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential

Current Status (and certainty that status is less than good)	Moderate

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Moderate	Moderate	Technically infeasible (M3g)

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Awareness raising / information boards (invasive species)	**In Place**
Lateral zoning to concentrate boats within a central track	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Sediment management	**Not In Place**
Increase in-channel morphological diversity	**Not In Place**
Bank rehabilitation / reprofiling	**Not In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**Not In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**Not In Place**
Prepare a dredging / disposal strategy	**Not In Place**
Reduce impact of dredging	**Not In Place**
Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution	**Not In Place**
Alter timing of dredging / disposal	**Not In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**Not In Place**
Manage disturbance	**Not In Place**
Modify vessel design	**Not In Place**
Vessel Management	**Not In Place**
Reduce sediment resuspension	**Not In Place**

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca11	**Surveillance site:** No
Waterbody ID and Name:	GB70510038	Sixteen foot
National Grid Reference:	TL 47519 96040	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Other	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca12	**Surveillance site:** No
Waterbody ID and Name:	GB70510037	Old River Nene
National Grid Reference:	TF 54534 05841	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Heavily Modified	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Canal - Ca13	**Surveillance site:** No
Waterbody ID and Name:	GB70510529	Fossdyke Canal, River Till section
National Grid Reference:	SK 94352 72619	
Current Overall Potential	Moderate	
Status Objective (Overall):	Good by 2027	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2027	
Justification if overall objective is not good status by 2015:	Disproportionately expensive	
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Navigation	
Downstream Waterbody ID:		

Ecological Potential

Current Status (and certainty that status is less than good) Moderate (Very Certain)

Supporting elements

Element	Current status (and certainty of less than good)	Predicted Status by 2015	Justification for not achieving good status by 2015
Ammonia (Phys-Chem)	High	High	
pH	High	High	
Phosphate	Moderate (Very Certain)	Moderate	Disproportionately expensive (P1a)
Temperature	High	High	
Ammonia (Annex 8)	High	High	

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Mitigation Measures that have defined Ecological Potential

Mitigation Measure	Status
Manage disturbance	**In Place**
Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	**In Place**
Avoid the need to dredge (e.g. minimise under-keel clearance; use fluid mud navigation; flow manipulation or training works)	**In Place**
Prepare a dredging / disposal strategy	**In Place**
Reduce impact of dredging	**In Place**
Reduce sediment resuspension	**In Place**
Alter timing of dredging / disposal	**In Place**
Bank rehabilitation / reprofiling	**In Place**
Site selection (dredged material disposal) (e.g. avoid sensitive sites)	**In Place**
Awareness raising / information boards (boat wash / sources of fine sediment)	**In Place**
Phased de-watering and other techniques	**In Place**
Selective vegetation control regime	**In Place**
Appropriate vegetation control technique	**In Place**
Appropriate timing (vegetation control)	**In Place**
Appropriate techniques (invasive species)	**In Place**
Modify vessel design	**In Place**
Vessel Management	**In Place**
Sediment management	**In Place**

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT1	**Surveillance site:** No
Waterbody ID and Name:	GB805100062 unknown	
National Grid Reference:	TQ 85400 85877	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Shellfish Water Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Regulation (strategic transfer)	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)	
Current Status (and certainty that status is less than good)	Good

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT2	**Surveillance site:** No
Waterbody ID and Name:	GB805100022 unknown	
National Grid Reference:	TL 77879 20345	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Regulation (strategic transfer)	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)	
Current Status (and certainty that status is less than good)	Good

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT3	**Surveillance site:** No
Waterbody ID and Name:	GB805100024 unknown	
National Grid Reference:	TL 02575 33305	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT4	**Surveillance site:** No
Waterbody ID and Name:	GB805100025 unknown	
National Grid Reference:	TL 23925 40274	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT5	**Surveillance site:** No
Waterbody ID and Name:	GB805100026 unknown	
National Grid Reference:	TL 60446 48703	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT6	**Surveillance site:** No
Waterbody ID and Name:	GB805100031 unknown	
National Grid Reference:	TG 26683 05677	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Regulation (strategic transfer)	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)	
Current Status (and certainty that status is less than good)	Good

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	Surface Water Transfer - SWT7	**Surveillance site:** No
Waterbody ID and Name:	GB805100053 unknown	
National Grid Reference:	TG 02949 31792	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Water Regulation (strategic transfer)	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)	
Current Status (and certainty that status is less than good)	Good

Chemical Status	
Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	SSSI Ditch - SSSID1	**Surveillance site:** No
Waterbody ID and Name:	GB905001002856 CROSS DRAIN	
National Grid Reference:	TF 16019 13721	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage, Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	SSSI Ditch - SSSID2	**Surveillance site:** No
Waterbody ID and Name:	GB905001001667	UPPER COLNE MARSHES
National Grid Reference:	TM 02825 22526	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Not Designated	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage, Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

Waterbody Category and Map Code.:	SSSI Ditch - SSSID3	**Surveillance site:** No
Waterbody ID and Name:	GB905001001830	SIZEWELL MARSHES
National Grid Reference:	TM 45916 63726	
Current Overall Potential	Good	
Status Objective (Overall):	Good by 2015	(For Protected Area Objectives see Annex D)
Status Objective(s):	Good Ecological Potential by 2015	
Justification if overall objective is not good status by 2015:		
Protected Area Designation:	Nitrates Directive	
SSSI (Non-N2K) related:	No	
Hydromorphological Designation:	Artificial	
Reason for Designation:	Land Drainage, Wider Environment	
Downstream Waterbody ID:		

Note: Current Status and Status Objectives for this water body are based on Expert Judgement

Ecological Potential (note: no biology data)

Current Status (and certainty that status is less than good)	Good

Ecological Potential Assessment

Element	Current status	Predicted Status by 2015	Justification for not achieving good status by 2015
Mitigation Measures Assessment	Good	Good	

Chemical Status

Current Status (and certainty that status is less than good)	Does not require assessment

defra
Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex C: Actions to deliver objectives

Contents

C.1 Introduction

This annex sets out tables of the actions (the programmes of measures) that are proposed for each sector. Actions are the on the ground activities that will implemented to manage the pressures on the water environment and achieve the objectives of this plan.

Further information relating to these actions and how they have been developed is given in:

- Annex B Objectives for waters in the Anglian River Basin District
  This gives information on the current status and environmental objectives that have been set and when it is planned to achieve these

- Annex D Protected area objectives (including programmes for Natura 2000)
  This gives details of the location of protected areas, the monitoring networks for these, the environmental objectives and additional information on programmes of work for Natura 2000 sites

- Annex E Actions appraisal
  This gives information about how we have set the water body objectives for this plan and how we have selected the actions

- Annex F Mechanisms for action
  This sets out the mechanisms - that is, the policy, legal, financial and voluntary arrangements - that allow actions to be put in place

The actions are set out in tables for each sector. For the purposes of this plan this is the sector that may be causing the pressure or is being affected by an action. 'Being affected' may mean that the sector is the one taking action or that the sector's activities are affected by an action implemented by others. Some actions will be noted against more than one sector, as one sector may be implementing action that requires another to take action in response.

The sectors are set out in table C1a below.

The tables set out the list of actions established at the outset of this plan period. It is expected that further measures will be identified during the implementation period for this plan. The plan includes many investigations that will help identify future actions, where it has not yet been possible to define these (see annex E). In some cases investigations are needed to confirm the pressure that is causing a problem, even before it will be possible to define an action. We also encourage sectors to put forward other measures so that these can be considered during the period of this plan.

Table C1b sets out an explanation of the headings in the actions tables. The subsequent tables set out specific actions relevant to each sector.

Table C1a: **Sectors**

Standard list of sectors			
Sector	**Activity included**	**Sector**	**Activity included**
Agriculture and rural land management	Dairy / beef, sheep, pig and poultry (including outdoor pigs) Mixed and Arable Horticulture Forestry Land drainage (including Inland Drainage Boards) Other rural land development Private water supplies (potable supplies) protection Private sewage management (incl. septic tanks and private sewage systems)	Local Government	Local and regional government including planning authorities and national parks (including local authority urban drainage not covered by Water Industry) Private water supplies - (potable supplies - water quality and sufficiency contaminated land
Angling & conservation	Fisheries (angling) management Other habitat management (including conservation)	Mining and quarrying	Active mines and quarries Abandoned coal mines Abandoned other mines
Central Government	Defra Natural England Other central government organisations and agencies	Navigation	Ports / marinas Maritime shipping / boating Inland navigation
Environment Agency		Urban and transport	Private water supplies (potable supplies) protection Private sewage management (inc. caravan parks etc) Road, air & rail transport contaminated land Flood risk management Other development activities
Industry, manufacturing & other business	Power generation Chemical industry Oil industry SMEs / Industrial estates Construction Aquaculture Commercial fisheries (fresh, transitional & coastal waters – not angling) Waste management Retail industry Food & drink industry Recreation & tourism (not covered by boating or angling e.g. parkland / amenity)	Water industry	Sewage - treatment Sewage - collection (including intermittent discharges from combined sewage overflows) Sewage - other drainage (inc flooding & leaking sewers) Sewage - trade effluent management Sludge recycling to land Potable supply – treatment Potable supply – storage & transfer (inc. leakage) Potable supply - planning

Table C1b: **Example table of headings and descriptions**

Pressures	Description of the action			Lead organisation and partners
	What will happen	**Where it will happen**	**Date**	
The pressure being managed	*The action that will be taken*	*The location or geographical extent of the action*	*This is the date by which the action will be put in place. ("Implemented" means that the action is already in place and able to have a beneficial effect)*	*The organisation responsible for delivering the action and other organisations that may be involved*
Investigations				
Sets out investigations measures that will be put in place				
Natura 2000 protected areas and SSSIs				
Sets out measures that will be put in place for Natura 2000 protected areas and Sites of Special Scientific Interest				

Strategic environmental assessment and actions

The purpose of the River Basin Management Plan is to improve the ecological status and potential of water bodies and so the environmental effects of the plan are predominantly positive. A Strategic Environmental Assessment was carried out that also considered the wider environment and identified potential adverse effects associated with some of the actions, as well as enhancements to add value to the measures included in the plan. Whilst many of the proposals to mitigate negative impacts are specific to the proposed action, others are applicable across a range of actions and will be considered at a project level. These generic mitigation measures are described in the table below. Further information is included in the statement of particulars – see http://www.environment-agency.gov.uk/research/default.aspx and go to Water Framework Directive.

Table 1c: **Generic mitigation to be applied when implementing actions**

Impact	Mitigation
Population and human health	Avoid adversely affecting existing routes of public access to the countryside and water bodies.
	Identify opportunities to improve public access to the countryside, water bodies or water based recreation
Biodiversity	Target any actions designed to improve biodiversity to those locations where the gains can be maximised.
	Identify opportunities to link with existing ecological networks, sites or features or proposed improvements.
	Identify opportunities where biodiversity improvements can also benefit local populations.
Cultural heritage	Before undertaking an action, determine whether there are any historical features that are likely to be adversely affected and undertake an appropriate level of project level assessment and mitigation.
Sustainability	Adopt a sustainable procurement policy
	Reuse materials or use recycled materials or those from renewable sources where possible
	Implement a waste management plan to minimise waste directed to landfill.
	Take steps to minimise the 'carbon footprint' of the action by reducing energy demand and the 'embedded energy' of any materials used.
Agriculture & biodiversity	Align agri-environment schemes to achieve biodiversity benefits and complement other biodiversity initiatives.

Habitats Regulations Assessment

A Habitats Regulations Assessment of this Plan was carried out by the Environment Agency in 2009. Natural England were consulted on the assessment and we have had regard to their advice.

Many of the measures in the Plan, most specifically those in Annex D, are designed to improve the water environment and help to maintain or restore Natura 2000 habitats and species at favourable conservation status. The overall purpose of the

plan is to ensure no deterioration of the water environment and deliver the objectives of individual water bodies (normally 'good ecological status'). However, the Habitats Regulations Assessment has identified certain types of measure in the plan with potential to negatively effect Natura 2000 sites. Whether a negative effect is likely depends on the exact location, spatial scale, nature and timing of the measure. The details necessary to make reasonable predictions about the effects on Natura 2000 sites will not be developed until the measures are progressed towards implementation.

We have concluded that the plan itself is unlikely to have any significant negative effects on any Natura 2000 sites. The Plan itself does not require further assessment under the Habitats Regulations. This conclusion is reliant on the fact that before any measures in the plan are implemented they must be subject to the requirements of the Habitats Regulations. Any plans, project or permissions required to implement the measures must undergo an appropriate assessment if they are likely to a have a significant effect.

Responsibility for Habitats Regulations Assessment of plans, projects or permissions required to implement the measures in this Plan remains with the relevant competent authority, for example if the measure requires planning permission the local authority will be the relevant competent authority. In most circumstances, a competent authority can only agree to a plan, project or permission when it has ascertained that it will not adversely effect the integrity of a Natura 2000 site. Changes to the measures in this plan may be required to avoid adverse effects on the integrity of any Natura 2000 sites.

C. 2 Actions we can all take

There are actions that we can all take to help protect and improve the water environment.

Table C2: **Actions we can all take**

Pressure	What will happen
Prevent pollution	Check that household appliances are connected to the foul sewer, not the surface water drain.
Prevent pollution	Adopt-a-beach to help keep beaches clean and stop litter at source.
Prevent pollution	Ensure household oil storage is in good condition, with an up-to-date inspection record.
Prevent pollution	Ensure septic tanks or private sewage treatment plants are well maintained and working effectively.
Prevent pollution	Put cotton buds and other litter in the bin, not down the toilet. It may end up in the sea where it can harm wildlife.
Prevent pollution	Take waste oil and chemicals such as white spirit to a municipal recycling facility: don't pour them down the sink or outside drains.
Prevent pollution	Use kitchen, bathroom and car cleaning products that don't harm the environment, such as phosphate-free laundry detergents, and use as little as possible. This helps prevent pollution at source.
Prevent pollution	Report pollution or fly-tipping to the Environment Agency on 0800 807060.
Prevent pollution, protect wildlife,	Adopt-a-river to spot pollution, invasive non-native species, and take part in practical tasks.
Protect wildlife	Eat fish from sustainable sources, caught using fishing methods that don't cause damage to marine wildlife and habitats.
Protect wildlife	Eliminate invasive non-native species from gardens. They can have a negative effect on native species and the water environment. Please dispose of them responsibly.
Save water: in your garden	Choose plants that tolerate dry conditions. To help lawns through dry periods, don't cut them too short.

Save water: in your garden	To save water in gardens, collect rain in a water-butt, water at the beginning or end of the day, mulch plants, and use watering cans where possible instead of sprinklers or hosepipes.
Save water: in your house or office	Purchase low energy and low water use appliances
Save water: in your house or office	Ask water companies to fit a meter. On average, this can reduce household water consumption.
Save water: in your house or office	Fix dripping taps, and lag pipes to avoid them bursting in freezing weather.
Save water: in your house or office	Hand wash cars
Save water: in your house or office	Consider installing a greywater recycling system in homes, blocks or workplaces. This can save one third of domestic mains water usage.
Save water: in your house or office	Install a 'hippo' or 'save-a-flush' in toilet cisterns.
Save water: in your house or office	Install a low-flush toilet, put flow regulators on taps and showers, and install waterless urinals at work. Install aerating shower heads and tap inserts, which save up to 50% of the water used by conventional showers and taps.
Save water: in your house or office	Run dishwashers or washing machines with a full load on economy setting, and boil the minimum amount of water needed in kettles or saucepans.
Save water: in your house or office	Turn off the tap when brushing teeth, and take short showers rather than baths.
Save water: in your house or office	Wash fruit and vegetables in a bowl rather than under the running tap - and use the remainder on plants.
Save water: in your house or office	Ensure extensions or conservatories have their roof water draining into a soakaway or sustainable drainage system and are not connected to the combined sewer.
Save water: in your house or office	Ensure that any off-road parking or patio around the house use permeable materials so rain can soak into the soil.

C.3 All sectors

Many actions will apply to all sectors.

Table C3: **Actions for all sectors**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification	A central spatially-enabled hydromorphological database will be created, this will provide a system that will quickly and reliably, supply data to better understand hydromorphological impacts of modifications to water bodies. it will be used to provide available hydromorphological data as an input into the approval/assessment processes for new physical modifications to ensure compliance with WFD requirements, especially those related to Article 4(7).	Anglian RBD	2010	Environment Agency
Microbiology; Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants ; Radioactivity	Designation of Safeguard Zones - develop pollution action plan to identify specific measures to address known causes of impact on drinking water abstractions leading to failure/risk of failure of WFD Article 7.3 objective. Appropriate measures may include pollution prevention, England Catchment Sensitive Farming Initiative or Water Protection Zones.	Cam And Ely Ouse Chalk; North Norfolk Chalk	2010	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Microbiology; Sediments (as a direct pollutant); Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants; Nutrients	Influence Town and Country Planning Act authorisation process to help minimise risk of diffuse pollution from new developments (e.g. implement Sustainable Urban Drainage Systems and use of Water Resource Act Planning Guidance)	Anglian RBD	Implemented	Local Authorities
Physical modification	Plans, processes and programmes (such as the Environment Agency Navigation and Recreation strategies) will be aligned to the requirements of hydromorphology to achieve WFD objectives (especially ecological potential). This will be two fold i) Mitigation measures required to reach good ecological potential will be delivered through such plans will be identified and ii) the prioritisation of environmental improvements will be influenced by the specific requirements to reach WFD objectives	Anglian RBD	Implemented	Environment Agency
Acidification, Direct biological pressures, Microbiology, Nutrients, Organic Pollutants, Physical Modification, Priority Hazardous Substances, Priority Substances and Specific Pollutants, Sediments.	Where appropriate, subject to the Environment Agency making an appropriate case to the Secretary of State and/or Welsh Minister and carrying out a 12 week public consultation, designate a limited number of Water Protection Zones. Regulatory tool to control diffuse pollution in high risk areas where other mechanisms are not working or are unlikely to work. Initially around 8 candidate locations across England. Potential for further designation of Water Protection Zones by 2012	Anglian RBD	2012	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Investigations				
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants ; Radioactivity; Microbiology	Designation of Safeguard Zones - investigation of source-pathway-target linkages to support development of a pollution action plan to identify specific measures	Cam And Ely Ouse Chalk; North Norfolk Chalk	2010	Environment Agency
Physical modification	Monitoring and investigation into mitigation measures techniques to establish the effectiveness of these measures and improve understanding of hydro-morph-ecological interactions. Outcomes will have a national application.	Anglian RBD	2011	Environment Agency
Abstraction and other artificial flow pressures	Improve flow estimates for surface water bodies	Anglian RBD	2012	Environment Agency
Abstraction and other artificial flow pressures	Investigations at sites identified under the Restoring Sustainable Abstraction Programme (where funded)	Anglian RBD	2012	Environment Agency
Abstraction and other artificial flow pressures	Review and improve Environmental Flow Indicators	Anglian RBD	2012	Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				
None				
Natura 2000 Investigations				
None				

C.4 Agriculture and rural land management

Introduction to the Sector:

The Anglian RBD is a predominantly rural catchment, which encompasses such varied landscapes, as the Fens and the Broads, and with more than three quarters of its land mass (approximately 1.5 million hectares) used for agriculture and horticulture it supports some of the best and largest tracts of agricultural land in the UK. It contains the third largest county on England, Lincolnshire, and is an area both rich in landscape and biodiversity as well as being high grade agricultural land which produces much of the food we eat today.

From the fertile fens - which cover 3,885 square kilometres of Lincolnshire, Cambridge and Norfolk - to the extensively grazed grasslands in the Waveney Valley, Anglian RBD has one of the most productive agricultural landscapes in the world. Best known for its cereal crops, more than a quarter of England's wheat and barley are produced here. But the Anglian River Basin District is also a major horticultural region, cultivating everything from peas and beans to potatoes and carrots, apples, strawberries, salad crops, flowers and shrubs. Farmers in Anglian region also harvest over half of the nation's sugar beet – mainly in Cambridgeshire, Lincolnshire, Norfolk and Suffolk. Britain's intensive pig and poultry farms are mostly located here – not surprising as so much of the grain on which they feed is grown here. The RBD has the second largest pig herd in England. The sheep flocks, beef and dairy herds may be small compared with other regions but they are important to the farming balance of the region and grazing livestock make a major contribution to the prized landscape. These are predominantly located in the west and east of the region – Lincolnshire/ Nottinghamshire border down into Northamptonshire and over in Norfolk and Suffolk.

Anglian region has a rich diversity of soils, with clayey or heavier soils dominating, and has over 50% of the country's grade 1 and 2 soils, hence the ability to sustain acres of high quality crops. Medium textured soils also feature throughout the region but particularly in the counties of Norfolk and Suffolk, with more sandy type soils located closer to the coastline. In Lincolnshire there are also shallow calcareous soils present. Due to the agricultural nature of the region it is important these soils are managed well to ensure they retain their quality and biodiversity, farm management and cultivation techniques must maintain good soil structure and reduce compaction to ensure good water infiltration and reduced pressures of flooding.

One of the most striking parts of the river basin district are the Lincolnshire and Cambridgeshire Fens. This artificial, man-made landscape has been forged from coastal and estuarine wetlands over many centuries. These marshes, which are at or below sea level, have been artificially drained and continue to be protected from floods by drainage banks and pumps. With the support of this drainage system, the Fens have become a major arable agricultural region in Britain for grains and vegetables.

Table C4: **Actions for the agriculture and rural land management sector**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Nitrate	'Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Salary Brook, Ouse	2010	Natural England
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment	Pitsford Water	2010	Natural England
Nitrate	Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Nene	2010	Environment Agency
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Welland	2010	Natural England
Bentazone	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Willow Brook	2010	Natural England
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	River Waveney; River Chelmer; River Blackwater; Stour (DS) Lamarsh	2010	Environment Agency
Physical modification	Contribute to achievement of favourable condition on River Nar Site of Special Scientific Interest by implementing water level management plans	North West Norfolk Catchment	2010	Natural England
Nitrate	Nitrates Action Programme in Nitrate Vulnerable Zones will help address high nitrate concentrations in drinking water abstractions	Nene	2010	Environment Agency
Hazardous substances	Agri-environment schemes/ Environmental Stewardship -	Anglian RBD	Implemented	Land

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	payments for best practice to limit nitrate input and control agric-chemicals (England only)			managers and owners
Ammonia; Nitrate; Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants; Phosphate	Catchment Sensitive Farming / Local urban partnerships / Local campaigns – educational	Cam And Ely Ouse Chalk	2010	Environment Agency
Nitrate	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, SSAFO). Make use of site specific notices to remove nitrate pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, SSAFO). Make use of site specific notices to remove agri-chemical risks to groundwater	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with new EC Sustainable Use of Pesticides Directive to control use of Plant Protection Products	Anglian RBD	2012	Land managers and owners
Nitrate	Development planning - planning liaison. Site specific groundwater pollution prevention advice and recommendations	Anglian RBD	Implemented	Local Authorities
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and	Development planning structure plans - influence location of development to protect groundwater	Anglian RBD	Implemented	Water companies; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Specific Pollutants				
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations). Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Enforcement of Groundwater Regulations to control agri-chemicals through Cross Compliance	Anglian RBD	Implemented	Environment Agency
Nitrate	Enforcement of Sludge Regulations through Cross compliance	Anglian RBD	Implemented	Land managers and owners; Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Environmental Permitting – disposal of sheep dip and pesticides	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants s	Environmental Permitting – effluent discharges to ground	Anglian RBD	Implemented	Environment Agency
Nutrients	Establish and enforce Nitrate Vulnerable Zones in catchments at a high risk from nitrate pollution, requiring farmers to follow a programme of measures to reduce nitrate entering the water	Anglian RBD	Implemented	Defra; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	from farmland. (see map D6 in annex D)			
Sediments (as a direct pollutant); Microbiology; Nutrients; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants	Establish and maintain a nationally funded advice-led partnership under the Catchment Sensitive Farming Programme to reduce diffuse water pollution from agriculture in at risk catchments.	Anglian RBD	2010	Environment Agency; Natural England
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	EU review of approvals for Plant Protection Products	Anglian RBD	Implemented	EU
Abstraction	Extension of abstraction control to include previously exempt uses (abstractions by Ports and Harbour authorities from tidal waters under certain conditions likely to remain exempt)	Broadland Rivers Catchment; Cam and Ely Ouse (including South Level) Catchment	2012	Environment Agency
Nitrate	Follow advice on controlling nitrate releases to land and water	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow Pesticides Code of Practice - comply with published advice for operators on control of plant protection products	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow Sheep Dip Statutory Code of Practice - comply with published advice for operators	Anglian RBD	Implemented	Land managers and owners

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Nitrate	Follow The Code of Good Agricultural Practice - comply with published advice for operators on nitrate control	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow The Code of Good Agricultural Practice - comply with published advice for operators on control of agri-chemicals	Anglian RBD	Implemented	Land managers and owners
Priority Hazardous Substances, Priority Substances and Specific Pollutants	General guidance to improve pesticide use through the Voluntary Initiative	Anglian RBD	Implemented	Voluntary Initiative Partnership
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Groundwater protection advice to Chemicals Regulation Directorate (formerly the Pesticides Safety Directorate) approvals process	Anglian RBD	Implemented	Central Government; Environment Agency
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Groundwater protection advice to Veterinary Medicines Directorate products approvals process	Anglian RBD	Implemented	Central Government
Nitrate	Implement DCLG (Department for Communities and Local Government) Planning Policy Guidance Statement 23 (PPS23) on controlling pollution of groundwater that may arise from development of land	Anglian RBD	Implemented	Local Authorities
Priority Substances and Specific Pollutants ; Nitrate; Hazardous	Implement Groundwater Protection: Policy & Practice - External education on GW pollution prevention	Anglian RBD	Implemented	Environment Agency; Land managers and

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
substances and non-hazardous pollutants				owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow Pesticides Code of Practice - comply with published advice for operators on control of plant protection products	Anglian RBD	Implemented	Land managers and owners
Nitrate	Make use of site specific notices to remove nitrate pollution risk to groundwater. (WRA S86 and S161, Groundwater Regulations, contaminated land legislation)	Anglian RBD	Implemented	Local Authorities
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Local agricultural partnerships e.g. Linking Environment and Farming, non government organisations such as Rivers Trusts, Landcare, Farming & Wildlife Advisory Group – advice on use of agri-chemicals	Anglian RBD	Implemented	Land managers and owners
Nitrate	Local agricultural partnerships e.g. Linking Environment and Farming, non government organisations such as Rivers Trusts, Landcare, Farming & Wildlife Advisory Group - Advice to farmers on nitrate control	Anglian RBD	Implemented	Land managers and owners
Ammonia; Faecal indicator organisms; Hazardous substances and non-hazardous pollutants; Nitrate; Phosphate; Priority Substances and Specific Pollutants	Local urban partnerships / Local campaigns - educational	Welland Limestone Unit; Essex Gravels; Waveney And East Suffolk Chalk & Crag; North Norfolk Chalk; North West Norfolk Chalk; Broadland Rivers Chalk & Crag; Upper Bedford Ouse Chalk; Cam And Ely Ouse Chalk; Upper Bedford Ouse Principal Oolite 2; North	2010	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
		Essex Chalk; Felixstowe Peninsula Crag & Chalk; Welland Mid Jurassic Unit; Upper Bedford Ouse Oolite Principal 1; Upper Bedford Ouse Woburn Sands		
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Microbiology; Nutrients; Organic pollutants; Sediments (as a direct pollutant)	Maintain the Higher Level Stewardship Scheme offering farmers an incentive to achieve environmental benefits over and above those required under the Entry Level Stewardship Scheme. Higher Level Stewardship is targeted by Natural England to maximise environmental and other public benefits in targeted areas within the RBD	Anglian RBD	Implemented	Natural England. Defra
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	NetRegs (Environmental Guidance to Business) - External education on GW pollution legislation	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	New EC Sustainable Use of Pesticides Directive to control use of Plant Protection Products	Anglian RBD	2012	Central Government
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Permitting – disposal of sheep dip and pesticides	Anglian RBD	Implemented	Environment Agency
Hazardous substances	Proactive targeted farmer education on control of agri-	Anglian RBD	Implemented	Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	chemicals and nitrate			Agency
Microbiology; Nutrients; Sediments (as a direct pollutant); Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants	Progress delivery of Cross-compliance inspection and enforcement	Anglian RBD	2010	Rural Payments Agency; Environment Agency; Defra
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants; Nutrients; Sediments (as a direct pollutant); Microbiology	Progress the Entry Level Stewardship Scheme offering farmers an incentive to achieve environmental benefits on agricultural land. Entry Level Stewardship is open to all those farming in England and aims to reward good land management and address some of the environmental issues affecting the wider countryside including diffuse pollution, soil erosion and the conservation of farmland birds.	Anglian RBD	Implemented	Natural England; Defra
Nutrients	Promote good land management practice where there are a high number of equine related waste and pollution incidents.	Combined Essex Catchment	Implemented	Environment Agency
Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant); Nutrients	Promote the targeted mapping of land drainage discharges (fields, highways and rural roads) to better assess their impact on water quality and good ecological status.	Combined Essex Catchment	2012	Local Authorities; Land managers and owners; Environmental NGOs; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Provide development planning standing advice	Anglian RBD	Implemented	Environment Agency
Isoproturon	Recently introduced UK-wide restrictions will see decreasing trend in emissions and probable compliance by 2015 with no further action	Combined Essex, East Suffolk	Implemented	Chemicals Regulation Directorate
Bentazone; Clopyralid	Re-direct existing England Catchment Sensitive Farming Initiative resource to address issue.	Combined Essex, East Suffolk	2010	Environment Agency; Natural England
Nitrate; Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Re-engineer existing discharges to avoid direct discharges of pollutants to groundwater	Anglian RBD	Implemented	Water companies; Environment Agency
Nitrate	Registrations (in conjunction with Standard Rules) - Implement new regulatory approach (via Environmental Permitting Regulations) arising from implementation of new Groundwater Directive (2006/116/EC)	Anglian RBD	2012	Environment Agency
Priority Substances and Specific Pollutants ; Nitrate; Hazardous substances and non-hazardous pollutants	Registrations (in conjunction with Standard Rules) - Implement new regulatory approach (via Environmental Permitting Regulations) arising from implementation of new Groundwater Directive (2006/116/EC)	Anglian RBD	2012	Environment Agency; Land managers and owners; Water companies; Industry leads
Physical modification	River restoration to mitigate the impacts of hydromorphological modifications where applicable.	Broadland Rivers Catchment	2010	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Specific, targeted guidance in high risk catchments to improve pesticide use through the Voluntary Initiative	Anglian RBD	Implemented	Voluntary Initiative Partnership
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Support to Chemicals Regulation Directorate (formerly the Pesticides Safety Directorate) research into amenity use of pesticides	Anglian RBD	Implemented	Central Government
Cypermethrin	UK-wide suspension (temporary) on use as sheep-dip	Anglian RBD	Implemented	Veterinary Medicines Directorate
Nitrate	Use of statutory notice powers (WRA S86 and S161, Groundwater Regulations, Silage Slurry and Agricultural Fuel Oils Regulations)	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Voluntary Initiative educational and advice programme to reduce agricultural chemical use	Anglian RBD	Implemented	Land managers and owners
Abstraction	Extension of abstraction control to include previously exempt uses (abstractions by Ports and Harbour authorities from tidal waters under certain conditions likely to remain exempt)	Anglian RBD	2012	Environment Agency
Abstraction and other artificial flow pressures	Registration for previously exempt activity: abstraction of water within water meadow systems	Anglian RBD	2012	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Maintenance manuals have been developed by the Middle level Commissioners. These are linked to local Biodiversity Action Plans.	Old Bedford including the Middle Level Catchment	Implemented	Middle Level Commissioners

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification	LOCALLY DERIVED MEASURE: A 94ha site at Frampton has been changed from intensive arable production to freshwater wetland grazing marsh. The land replaces habitat being affected by coastal change elsewhere in the RBD.	Witham Catchment	Implemented	Royal Society for Protection of Birds; Environment Agency
Organic pollutants	LOCALLY DERIVED MEASURE: Awareness raising of issues with failing shellfish waters on the River Alde and provision of follow up on farm visits to farmers and land managers. Action through: Media and communications, Capital grant scheme, one to one on-farm advice.	Anglian RBD	Implemented	Natural England; England Catchment Sensititve Farming Initiative; Environment Agency; Defra
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Breckland Growers Scheme for winter storage sourced from the River Little Ouse, replaced groundwater abstraction in the vicinity of the Breckland Meres.	Cam and Ely Ouse (including South Level) Catchment	2012	Environment Agency; Farmers groups
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Broads Sediment Management Strategy. This proposes data gathering, source control measures, programme of dredging, beneficial reuse opportunities etc. Actions include: England Catchment Sensitive Farming Initiative to produce best land management practices; Removal of land drainage and increase in buffer strips etc	Broadland Rivers Catchment	2012	Land managers and owners; Broads Authority
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Encourage best practice for Slug pellet (metaldehyde) application, through the use of postcards distributed to users and events such as Cereals 2009.	Anglian RBD	Implemented	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Nutrients; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant); Organic pollutants	LOCALLY DERIVED MEASURE: Encourage farmers and land managers to adopt best soil management practices to reduce soil erosion and runoff, best nutrient and manure management practices with the provision of free manure analysis, adopt best pesticide management practices, Action through: Capital grant scheme, One to one on-farm advice, One to many on-farm advice, Sampling and analysis.	Anglian RBD	2011	England Catchment Sensititve Farming Initiative; Defra; Natural England; Environment Agency
Sediments (as a direct pollutant); Nutrients; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants; Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Essex Local Area Agreement - Living landscapes. Landscape scale projects for conservation enhancement. Including: The Blackwater estuary project which will promote the sustainable use of this inspiring rugged estuary that provides a haven to wildlife and supports the local economy and enjoyment for the public; Abberton Reservoir - The reservoir is of international importance for waterfowl, particularly over winter and during the late summer moulting period; this is reflected in it being a Special Protection Area, RAMSAR site and Site of Special Scientific Interest. The Abberton Reservoir Enhancement Scheme will secure additional water resources and improve the reservoir's value for biodiversity. The Scheme involves increasing the storage capacity by 58%. This together with various habitat creation and management measures in the Scheme has been designed to increase the value of the reservoir for birds and other wildlife, e.g. most of the 8.5 miles of existing concrete edge will be removed and replaced with gently shelving edges, which is attractive to many species of wildfowl; Roman River remains one of the best preserved river valleys and stunning landscape	Combined Essex Catchment	2011	Essex Wildlife Trust; Essex County Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	in Essex that supports a rich variety of rare and unique wildlife. The Living Landscape project will protect and enhance this area to the south of Colchester.			
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Establishment of agricultural water abstractor groups in the Lark Valley, Chatteris, BAWAG (Broadlands Agricultural Water Abstractor Group) and ESWAG (East Suffolk Water Abstractor Group)	Old Bedford including the Middle Level Catchment; Broadland Rivers Catchment; East Suffolk Catchment; Cam and Ely Ouse (including South Level) Catchment	2012	National Farmers' Union; Country Landowners Association; Local farmer action groups; Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Gaywood Flood Alleviation Scheme - Reconnection of the Gaywood River to its former flood plain. Within the project there is the opportunity to create new wildlife habitats in the Gaywood Valley that will enhance the amenity of the area.	North West Norfolk Catchment	2012	Kings Lynn Internal Drainage Board
Organic pollutants; Nutrients; Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Halvergate Marshes Water Strategy. Developed to meet the needs of both grazing and conservation for water quality, quantity and level.	Broadland Rivers Catchment	2012	Broads Authority; Broads Internal Drainage Board; Natural England
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Hickling Broad -Drain diversion at Willow Farm from the Commissioners Drain to Eastfield Pumping Station. This removes ochre from the Site of Special Scientific Interest.	Broadland Rivers Catchment	2012	Broads Internal Drainage Board; Norfolk Wildlife Trust

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: In response to increasing pesticide concentrations in the Rivers Stour, Chelmer and Blackwater Essex & Suffolk Water has appointed two catchment Officers to work with farmers, growers, landowners and agronomists and other pesticide users in the catchments with the aim of reducing pesticides entering watercourses. They will work closely with the Voluntary Initiative and England Catchment Sensitive Farming Initiative.	Combined Essex Catchment	Implemented	Essex & Suffolk Water; Natural England Catchment Sensititve Farming Initiative;; Environment Agency; Pesticides Voluntary Initiative
Sediments (as a direct pollutant); Nutrients; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants	LOCALLY DERIVED MEASURE: Blackwater, Chelmer partnership project. Essex & Suffolk Water, the Environment Agency and the England Catchment Sensitive Farming Initiative will deliver advice and guidance to farmers to reduce the impact of diffuse pollution from agriculture.	Combined Essex Catchment	Implemented	Essex & Suffolk Water; Natural England Catchment Sensititve Farming Initiative; Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Lincolnshire Coastal Grazing Marsh to retain and increase traditional cattle grazing. Aims to provide incentives for farmers to continue or return livestock farming with network of ditches used again as wet fences. Project officer is being employed (2007 -10) to advise farmers. A grant has been received from HLF to develop a £1.7million	Witham Catchment	2012	East Lindsey District Council; Farming and Wildlife Advisory

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Landscape Partnership scheme.			Group; Lincolnshire County Council; Lincolnshire Wildlife Trust; Lindsey Marsh Drainage Board
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Mud On Road Campaign - reports sent to Environment Agency, investigated and passed onto agronomist / catchment sensitive farming officer / highways.	Broadland Rivers Catchment	2012	Broads Authority; Environment Agency; Essex & Suffolk Water
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Ochre and Salinity Management Plan to reduce loads to the Broads. £400,000 funding from the Environment Agency.	Broadland Rivers Catchment	Implemented	Broads Authority; Environment Agency; Water Management Alliance
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Provide guidance and training to farmers, land managers and agronomists on best pesticide management practices and provision of information on local pesticide issues. Action through: One to many off-farm advice, Media and Communications.	Cam and Ely Ouse (including South Level) Catchment; Broadland Rivers Catchment	2011	Environment Agency; England Catchment Sensititve Farming Initiative;; Natural

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				England; Defra; Pesticides Voluntary Initiative
Nutrients	LOCALLY DERIVED MEASURE: River Ouse Strategic Partnership. This will provide the opportunity to: deliver farm advice through on-farm visits and workshops; channel experiences from the England Catchment Sensitive Farming Initiative to more farmers; create a farm-scale appraisal of catchment risk and to target solutions; put farmers on a higher priority basis for their application for ELS/HLS; build 'accession partners'.	Upper and Bedford Ouse Catchment	Implemented	Environment Agency; Natural England
Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Specialist workshops to address pressures in areas identified via Environment Agency's Agricultural Evidence Base	Anglian RBD	2012	Environment Agency
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Specific measures to encourage farmers to build storage reservoirs to support summer irrigation and promote water efficiency on farms.	Anglian RBD	2012	National Farmers' Union; Environment Agency; Natural England
Physical modification	LOCALLY DERIVED MEASURE: Standard Maintenance Operations manual provides guidance on the appropriate	East Suffolk Catchment; North West Norfolk	2012	Water Management

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	standards to be achieved when undertaking maintenance works	Catchment; Broadland Rivers Catchment		Alliance
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Voluntary Initiative for pesticides, including MOTs on sprayers, crop protection management plans, training for sprayer operators.	Anglian RBD	2012	Highways Agency; Local Authorities; National Farmers' Union; Pesticide sprayer operators; Pesticide Manufacturers; Farmers
Investigations				
Nutrients; Microbiology; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	Demonstration Catchment Project to test and demonstrate the effect of agricultural diffuse pollution control measures in a representative range of catchment types (River Wensum and its tributaries)	Broadland rivers catchment	Implemented	Environment Agency; Defra
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants; Nitrate; Phosphate	Investigation of Groundwater Dependent Terrestrial Ecosystems to assess if they have been significantly damaged as a result of groundwater pollution	Anglian RBD	Implemented	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Natura 2000 and Site of Special Scientific Interest actions				
Nutrients;Sediments (as a direct pollutant)	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by developing a pollution action plan for protected areas (See Annex D)	Anglian RBD	2012	Natural England; Environment Agency
Physical modification; Sediments (as a direct pollutant); Abstraction and other artificial flow pressures; Direct biological pressures; Nutrients	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by implementing agri-environment scheme (See Annex D)	Anglian RBD	2012	Natural England
Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by revoking or amending abstraction licences (See Annex D)	Anglian RBD	2012	Environment Agency
Sediments (as a direct pollutant); Nutrients;	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by revoking or amending Discharge/PPC Consents (See Annex D)	Anglian RBD	2012	Environment Agency
Physical modification; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through a special project to address hydrology pressures (See Annex D)	Anglian RBD	2012	Natural England
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Compulsory Management Scheme to address sea fisheries pressures (See Annex D)	Anglian RBD	2011	Natural England
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through	Anglian RBD	2012	Local Authorities;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Flood Management Programme (See Annex D)			Environment Agency
Nutrients; Physical modification; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Specific Management Works to address water quality and morphology pressures (See Annex D)	Anglian RBD	2012	Environmental NGOs; Land managers and owners; Natural England; Water companies
Physical modification; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Water Level Management Plans (See Annex D)	Anglian RBD	2012	Environment Agency; Land managers and owners;
Physical modification	Contribute to achievement of favourable condition on River Nar Site of Special Scientific Interest by implementing water level management plans	North West Norfolk Catchment	2010	Natural England
Physical modification	Contribute to achievement of favourable condition on the River Nar Site of Special Scientific Interest by implementing river restoration project	North West Norfolk Catchment	2010	Internal Drainage Boards
Nutrients	Contribute to achievement of favourable condition on Westwick Lakes Site of Special Scientific Interest and Tattershall Old Gravel Pits Site of Special Scientific Interest by compulsory management scheme/notice	Broadland Rivers Catchment; Witham Catchment	2010	Natural England
Natura 2000 Investigations				
Nutrients; Sediments (as a direct pollutant)	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through investigation and negotiation to address water quality	Anglian RBD	2012	Natural England; Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	pressures (See Annex D)			Agency
Nutrients	LOCALLY DERIVED MEASURE: Ant valley Project. One year trial led by Broads Authority looking at the catchment to Barton Broad	Broadland Rivers Catchment	Implemented	Broads Authority; Environment Agency; Natural England
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Additional investigative monitoring to address Metaldehyde (slug pellets) use on commercial crops.	Anglian RBD	Implemented	Environment Agency

C.5 Angling and conservation

Within the Anglian RBD there are 24 water dependent Special Areas of Conservation and 24 water dependent Special Protection Areas. There are numerous Site of Special Scientific Interests, Biodiversity Action Plan sites, national and local nature reserves, the Broads national park, making the RBD internationally important for its wetland habitat sites.

In addition, there are 21 areas designated to protect economically important shellfish waters, whilst for freshwater fish 17 lakes and 444 rivers are designated for their economic importance. The RBD has some of the finest coarse fishing in the country, as well as some of the most famous river-trout fisheries. Roach, bream and pike are the dominant species in most of our flowing waters, although chub, dace and barble become important in the upper reaches of he major rivers. Many of the chalk-fed rivers support natural brown trout populations.

The Anglian River Basin District is the richest region in the UK for wetland wildlife. The Broads, in particular, is Britain's largest nationally protected wetland and provides a habitat for a myriad of rare plants and animals. Freshwater habitats within the river basin district are very important for wintering wildfowl and our reservoirs and watercourses support some important fisheries. Many invertebrate populations and populations of rare birds depend upon these freshwater wetlands. Approximately 80% of England's resource of lowland fen occurs here, including the largest expanse of lime-rich fens. Other internationally important fens occur in the heads of valleys, fed by groundwater springs. A rich mix of other habitats are found in the region, including swamp, reedbeds and carr woodland.

Much of the extensive and varied coast of the region is internationally designated. This includes 33% of the UK's extensive areas of saltmarsh, which reflects the presence of large estuaries and wide intertidal areas along the coast.

Please note that measures relating to commercial fisheries can be found within the Industry, manufacturing, and other business sector.

Table C5: **Actions for the angling and conservation sector**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Direct biological pressures	Secure resources for management of invasive non-native species and to support the implementation of a non-native species management plan.	Combined Essex Catchment	2012	Defra; Environment Agency; Natural

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				England; Central Government
Physical modification	Work with anglers, fishing clubs, boat users and riparian owners to identify areas of bankside erosion and the associated impacts.	Combined Essex Catchment	2012	Environment Agency; Natural England; Fisheries and Angling Interests; Land managers and owners
Abstraction	Extension of abstraction control to include previously exempt uses (abstractions by Ports and Harbour authorities from tidal waters under certain conditions likely to remain exempt)	Anglian RBD	2012	Environment Agency
Abstraction and other artificial flow pressures	Registration for previously exempt activity: abstraction of water within water meadow systems	Anglian RBD	2012	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Anglian River Sea Trout Project. Identification and prioritisation of barriers to breeding brown trout populations in several Anglian Rivers including North Norfolk chalk rivers: the Glaven, Stiffkey, Burn and Nar.	North Norfolk Catchment	Implemented	Centre for Environment, Fisheries & Aquaculture Science; Environment Agency; Association of Rivers Trusts; Natural England; Wild Trout Trust; Wildlife Trusts
Physical modification	LOCALLY DERIVED MEASURE: Creation of backwaters, bankside scrapes, reed beds and marginal vegetation.	Upper and Bedford Ouse Catchment	Implemented	Ouzel Valley Park partnership

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification	LOCALLY DERIVED MEASURE: Development of Great Ouse Wetland - to restore natural features at Ouse Fen, Fen Drayton and Lakenheath.	Old Bedford including the Middle Level Catchment	2012	Royal Society for Protection of Birds
Physical modification; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Development of tidal river strategy to address evacuation of water from the Ouse Washes in spring.	Old Bedford including the Middle Level Catchment	Implemented	Environment Agency
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Econet - Norfolk Wildlife Trust and the Norfolk Biodiversity Partnership have prepared an ecological network map for Norfolk identifying core areas for biodiversity where protection, enhancement and expansion of the existing resource will be a priority.	North West Norfolk Catchment; Broadland Rivers Catchment; North Norfolk Catchment	2012	Norfolk Biodiversity Partnership; Norfolk Wildlife Trust
Physical modification	LOCALLY DERIVED MEASURE: Establishment of the Broads Authority expert panel to draw upon research and examples of managed re alignment, saline intrusion etc	Broadland Rivers Catchment	2012	Local Authorities; Natural England; Broads Authority
Direct biological pressures	LOCALLY DERIVED MEASURE: Floating pennywort removal projects	Combined Essex Catchment	Implemented	local conservation groups; Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Gaywood Valley Restoration Project (Living Landscape Scheme). A vision to restore Leziate, Sugar and Derby FensSite of Special Scientific Interest. To link sections and secure new wetland habitats. Production of a Vision Statement. As well as working on bankside habitats,	North West Norfolk Catchment	2012	King Lynn and West Norfolk District Councils; Kings Lynn Internal

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	including reedbed, fen, wet grassland and wet woodland, the valley edge habitats of heathland, grassland and woodland will also be restored, enhanced and created.			Drainage Board; Natural England
Direct biological pressures	LOCALLY DERIVED MEASURE: Giant Hogweed control measures on the River NarSite of Special Scientific Interest. Aim is to prevent expansion from lower reaches to the Upper Nar. £6,000 budget obtained from Defra.	North West Norfolk Catchment	Implemented	Natural England; Norfolk River Internal Drainage Board; Environment Agency
Abstraction and other artificial flow pressures; Acidification; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Great Fen Project - to restore over 3,700ha of wildlife habitat in Cambridgeshire, connecting Woodwalton Fen and Holme Fen National Nature Reserves.	Old Bedford including the Middle Level Catchment	2012	Wildlife Trusts; Middle Level Commissioners; Natural England
Physical modification	LOCALLY DERIVED MEASURE: Gt Ouse Wetland Vision - river restoration on a catchment scale. Some projects are small scale (rod licence funded) £10 - 30K, but others are landscape scale: Bedford River Valley Park, Milton Keynes Floodplain Forest.	Upper and Bedford Ouse Catchment; Old Bedford including the Middle Level Catchment	2012	Environment Agency; Natural England; Wildlife Trusts
Direct biological pressures	LOCALLY DERIVED MEASURE: Habitat enhancement work at Great Ponton and Syston. Installation of faggots to reinforce banks and help deflect the flow of water and scour silt from the river bed to benefit white-clawed crayfish as well as brown trout and water vole.	Witham Catchment	Implemented	Natural England; Grantham Angling Club; Environment Agency
Abstraction and other	LOCALLY DERIVED MEASURE: Initiate formation of Rivers	Welland Catchment	Implemented	Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
artificial flow pressures; Sediments (as a direct pollutant); Nutrients; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants	Trust for the River Welland.			Agency; Natural England; Community Groups
Physical modification; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Jurassic Rivers Project, aimed at improving limestone rivers, including: Belton House and Upper Witham Crayfish Improvements; Grantham fly fishery improvements; Willow Brook fly fishery improvements	Witham Catchment	Implemented	Fisheries and Angling Interests; National Trust; Environment Agency
Nutrients; Physical modification; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Lake Restoration Strategy - Adaptive management strategy to review restoration success and prioritise water bodies of greatest value and those at lowest risk from climate change. Production of Management Plans and actions.	Broadland Rivers Catchment	2012	Broads Authority
Sediments (as a direct pollutant); Direct biological pressures; Nutrients; Organic pollutants; Physical modification	LOCALLY DERIVED MEASURE: Lincolnshire Chalk Stream Project works: 1. With the farming community, Natural England and agricultural consultants to improve land management, thereby limiting pollutants contaminating watercourses. 2. With the farming community to enhance and restore chalk stream habitat where it has been degraded by both past and present management techniques. 3. To improve understanding of Lincolnshire's chalk streams by identifying and commissioning surveys and studies. This	Witham Catchment	2011	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	includes catchment characterisations that highlight areas of point and diffuse pollution that can be followed up with specific advice. 4. To raise awareness of Lincolnshire's chalk streams and their threats by undertaking talks, guided walks, workshops and one to one site visits. The project also uses local media to get the message across. 1. With the farming community, Natural England and agricultural consultants to improve land management, thereby limiting pollutants contaminating watercourses. 2. With the farming community			
Physical modification; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Lincolnshire Coastal Grazing Marsh to retain and increase traditional cattle grazing. Aims to provide incentives for farmers to continue or return to livestock farming with networks of ditches used again as wet fences. Project Officer is being employed (2007-10) to advise farmers. A grant has been received from HLF to develop a £1.7m Landscape Partnership scheme 2015 Lincolnshire coast. Restoration of traditional livestock management in areas that are now predominantly arable Grants and funding	Witham Catchment	Implemented	Lindsey Marsh Drainage Board; East Lindsey District Council; Natural England; Lincolnshire Coastal Grazing Marsh Project; Lincolnshire Wildlife Trust; Lincolnshire County Council; Farming and Wildlife Advisory Group; English Heritage; Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				Agency
Nutrients; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Nene Valley Vision – a valley with naturally functioning interlinked wetlands, rich in wildlife for the enjoyment of everybody. In the next 20 years The Wildlife Trust's strategy for the Nene Valley is, initially, to buffer and extend our existing reserves and, eventually, to link them together through habitat restoration and creation. In this process, facilities for visitors will be improved and environmental education and outdoor learning will support the growth of healthy, environmentally aware communities. In addition to acquiring land, we will work with farmers and landowners to support more wildlife friendly land use and with local authorities, development agencies and developers to achieve a valley with naturally functioning interlinked wetlands, rich in wildlife for the enjoyment of everyone.	Nene Catchment	Implemented	Wildlife Trust Beds Cambs Northant's and Peterborough
Direct biological pressures	LOCALLY DERIVED MEASURE: Norfolk Non Native Forum. Appointment of a dedicated co coordinator to raise awareness and a network of surveillance and eradication programme. Work with aquatic centres to raise awareness and encourage not to sell invasive plants. Planning guidance and conditions to eradicate through the consent process. Training for partner organisations / issue guidance notes. Encouraging non - returns of angling catch invasive species. Angling guidance regarding live baiting, crayfish plague. Dredging SoP/guidance to clean down equipment etc. Stocking policies to remove risk.	Broadland Rivers Catchment; North Norfolk Catchment; North West Norfolk Catchment	2012	Norfolk Biodiversity Partnership
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: North Walsham and Dilham Canal Trust. The trust was formed in January 2008 with the aim of working with the canal owners and adjacent landowners to	Broadland Rivers Catchment	2012	North Walsham and Dilham Canal Trust;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	protect, conserve and improve the route of the canal for the benefit of the community and the environment. Improve habitat and recreation of wetlands at Honing.			LEADER+ Programme
Physical modification	LOCALLY DERIVED MEASURE: NT owns several km of River. Over-zealous river management in past has left river with little instream habitat diversity. Over-widening and deepening of river has caused siltation of gravel bed. Soil erosion from arable fields ending up in river. Native brown trout and river lamprey populations should be higher. It is intended to diversify instream habitat for fish and invertebrates through introduction of coarse woody debris. Catchment management programme to reduce soil inputs. At Woodgate Carrs, TG16030, the National Trust has in winter 2008-9, with Environment Agency permission, introduced pieces of large woody debris to 2km of the River Bure, which as already had a beneficial effect on instream habitats.	Broadland Rivers Catchment	Implemented	National Trust; Environment Agency
Physical modification	'LOCALLY DERIVED MEASURE: Partnership working in the Broads to deliver Wetland Opportunities, with wetland sites being enhanced that include South Fen in the Ant, Hickling in the Thurne and Upton in the Bure. The Broads Biodiversity Action Plan is mapping is mapping habitat opportunities as part of its Whole Valley Approach.	Broadland Rivers Catchment	Implemented	Broads Authority
Direct biological pressures	LOCALLY DERIVED MEASURE: Pennywort control on River Waveney and Rockland Board.	Broadland Rivers Catchment	Implemented	Broads Authority
Physical modification	LOCALLY DERIVED MEASURE: Purchase of land by the National Trust near Flatford and the Dedham Vale. This will allow integrated flood plain management, reconnection of the river to the floodplain and habitat enhancement.	Combined Essex Catchment	Implemented	National Trust
Physical modification	LOCALLY DERIVED MEASURE: Removal of litter and solid	Upper and Bedford Ouse	Implemented	Ouzel Valley

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	contamination, industrial waste, plastics etc. through clearance education and enforcement.	Catchment		Park partnership
Physical modification	LOCALLY DERIVED MEASURE: River Mel Restoration Group. Voluntary local action (such as litter picks etc) to improve this chalk stream. Includes Melbourne Riverside Park, where a series of habitat and access improvement works were undertaken in 2007. The works provided informal footpaths and a boardwalk, meadows, new tree and scrub planting, riverside access and new orchards. The site is now managed to provide a quiet amenity area for the local community and a diverse range of wildlife habitats.	Cam and Ely Ouse (including South Level) Catchment	Implemented	South Cambridgeshire District Council Environment Agency; River Mel Restoration Group
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: River Nar restoration - production of management and sediment strategies.	North West Norfolk Catchment	2012	Environment Agency; Natural England
Physical modification	LOCALLY DERIVED MEASURE: River restoration at Andersons Stream in St Ives, funded through Capital Programme for Flood Alleviation Scheme - Environment mitigation to restore / enhance physical modification (rivers)	Old Bedford including the Middle Level Catchment	Implemented	Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant);	LOCALLY DERIVED MEASURE: River Wensum Restoration Strategy Project - large scale habitat improvements to restore favourable conditions for a range of fish species. Proposed actions include reducing impoundments on the river, restoring the gravel beds, narrowing the channel, increasing the amount	Broadland Rivers Catchment	2012	Natural England; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Organic pollutants; Nutrients; Abstraction and other artificial flow pressures	of woody material and modifying the weed cutting regime at critical phases of fish life cycles.			
Physical modification; Sediments (as a direct pollutant); Nutrients	LOCALLY DERIVED MEASURE: Sediment Management Strategy - catchment approach to sediment management to reduce inputs and balance with dredging to achieve waterways specification for users. Production of Management Plans and actions.	Broadland Rivers Catchment	2012	Broads Authority
Physical modification	LOCALLY DERIVED MEASURE: South Lincolnshire Fenland Restoration Project centred on Baston and Thurlby fens (Site of Special Scientific Interest and nature reserve). Expansion of last remnants of fenland in Lincolnshire to landscape scale through land management, including restoration of gravel workings and measures to secure long-term security of water supply.	Welland Catchment	2012	Environment Agency; Lincolnshire Wildlife Trust; Natural England
Direct biological pressures; Physical modification	LOCALLY DERIVED MEASURE: Stanwick Lake HLS to restore wet grassland and reed bed areas in Stanwick Country Park	Nene Catchment	2010	Natural England
Physical modification	LOCALLY DERIVED MEASURE: Stour and Orwell Estuary Management Group - undertaking a review of the management scheme and management plan	Combined Essex Catchment	2012	Stour and Orwell Estuary Management Group
Physical modification	LOCALLY DERIVED MEASURE: Task and Finish group for managed re alignment to create additional freshwater habitat (e.g. managed realignment of North and South Hickling Broad within the land already part of the Norfolk WT reserve).	Broadland Rivers Catchment	2012	Norfolk Wildlife Trust; Environment Agency; Natural England
Physical modification	LOCALLY DERIVED MEASURE: The Blyth-Alde Project Living	East Suffolk Catchment	Implemented	Forestry

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Landscape - Blyth-Alde is a landscape scale partnership project involving Suffolk Wildlife Trust, Natural England, RSPB, National Trust and Forestry Commission. The project partners between them own or manage in excess of 3,400 ha. The Blyth-Alde landscape partnership vision will encourage a re-emergence of the natural landscape between the two estuaries creating a large sustainable area of unique beauty whose evolution whilst founded on the past will be of benefit to both people and wildlife in the future. The objectives are: - To provide a large area where landscape and wildlife can be sustainably managed and be adaptable to changes in the environment and land use - To work in partnership with local communities and agencies - To improve access and develop links to the local economy - To establish a beacon site to inspire others.			Commission; National Trust; Natural England; Royal Society for Protection of Birds; Suffolk Wildlife Trust
Physical modification	LOCALLY DERIVED MEASURE: The National Trust has carried out a Coastal Risk Assessment on its properties to evaluate land and buildings in relation to future flood and erosion risks on the coast. A Coastal Adaptation Strategy has been completed for Brancaster and Orford Ness..	North Norfolk Catchment, East Suffolk Catchment	Implemented	National Trust
Physical modification	LOCALLY DERIVED MEASURE: The National Trust has carried out a Coastal Risk Assessment on its properties to evaluate land and buildings in relation to future flood and erosion risks on the coast. A Coastal Adaptation Strategy is being prepared for Northy Island, Copt Hall Marshes and Ray Island	Combined Essex Catchment	Implemented	National Trust
Physical modification	LOCALLY DERIVED MEASURE: The Ouse Valley Living Landscape project aims to create a network of species-rich flood meadows, floodplain grazing marsh and wet woodland	Old Bedford including the Middle Level Catchment	2012	Wildlife Trusts; Environment Agency;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	along the Ouse Valley from St Neots to the Ouse Washes. The main approaches are through the expansion and management of existing nature reserves, through targeted advice to owners of County Wildlife Sites, through seed harvesting of species rich meadows too aid the restoration of improved meadows and through the creation of wet grassland for breeding and wintering water birds.			Huntingdon District Council; Forestry Commission; Farming and Wildlife Advisory Group
Physical modification	LOCALLY DERIVED MEASURE: The River Glaven Conservation Group has restored sections of the Glaven with riffles, reconnecting the flood plain etc. Also, Environment Agency funding the installation of silt traps in headwaters of the Glaven in 2008. This is to collect and remobilise residual silt from diffuse pollution, catchment sensitive farming to reduce inputs into the river.	North Norfolk Catchment	2012	River Glaven Conservation Group
Physical modification	LOCALLY DERIVED MEASURE: The Suffolk Broads Living Landscape Project is a 30 year landscape scale conservation project. It covers 1,750 ha of the Lower Waveney Valley between Barsham and Somerleyton and includes the full suite of Broadland habitats. Our vision is to create a rich, robust Living Landscape by applying a landscape scale approach to the management of this part of the Waveney Valley through seeking opportunities to re-connect, expand and buffer the areas of highest quality habitat and restoring habitats degraded by either intensive management or neglect. The project also involves recreating wetland habitats lost to arable farming, promoting more sustainable low input farming practices and creating a landscape of high value that is easily accessible and valued by local people and visitors alike.	Broadland Rivers Catchment	Implemented	Wildlife Trusts
Physical modification;	LOCALLY DERIVED MEASURE: Welland Rivers Trust	Welland Catchment	Implemented	Fisheries and

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Sediments (as a direct pollutant)	Scheme. River enhancements through HLS and working with the Mayfly Fishers, Grantham Fly Fishers, and Gwash Fly Fishers			Angling Interests; Welland Rivers Trust
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: WETLAND CREATION SCHEME - Fen Protection Project - pressure to protect peat. Need to continue with Great Fen project (joins up Holme and Woodwalton Fen), Major potential to protect and enhance biodiversity and environmental quality through Wicken fen, Ouse Washes, Needingworth, Lakenheath and Boston sites.	Anglian RBD	2012	National Trust; Natural England; Royal Society for Protection of Birds; Wildlife Trusts
Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Abstraction and other artificial flow pressures; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: WETLAND CREATION SCHEME - This project sets out a 50-year vision for England's freshwater wetlands. It will show where new wetlands could be created and current wetlands restored.	Anglian RBD	2012	Environment Agency; Natural England; Wildlife Trusts
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants;	LOCALLY DERIVED MEASURE: Wicken Fen Vision. The Wicken Fen Vision is an ambitious plan to create a new nature reserve covering around 56 square kilometres between Cambridge and Wicken Fen. This will be the largest project of its kind in lowland England. Today The National Trust owns 930 hectares in the area. The National Trust sees the Wicken Fen as an exciting opportunity to create a mosaic of different	Cam and Ely Ouse (including South Level) Catchment	Implemented	National Trust

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Sediments (as a direct pollutant)	habitats for wildlife and different sorts of open space for people to enjoy. There will be wetland habitat, especially in the lower-lying areas around the existing Wicken Fen. This will include areas of open water and marshy areas with tall vegetation such as reeds and bulrush. The existing Wicken Fen was the first Nature Reserve to be owned by the National Trust and is today one of the few remaining areas of fenland wilderness in East Anglia with over 7800 recorded species.			
Abstraction and other artificial flow pressures; Physical modification	LOCALLY DERIVED MEASURE: East Midlands Strategic River Corridors Project Vision - Holistic approach to management and enhancement of strategic river corridors to benefit people, wildlife and management of flood risk.	Witham Catchment; Nene Catchment; Welland Catchment	2012	East Midlands Regional Assembly
Investigations				
Physical modification	LOCALLY DERIVED MEASURE: Commissioning of research to investigate barriers to eel movements in The Broads to assess the efficacy of elver stocking in certain locations and recommendations on eel passes.	Broadland Rivers Catchment	Implemented	Environment Agency; Broads Authority
Physical modification	LOCALLY DERIVED MEASURE: Conservation and monitoring work carried out the Willow Brook Flyfishers. Work includes: Water quality monitoring. Riverfly Partnership Angler Monitoring Initiative. Collecting adult caddis flies weekly throughout the year under the Adult Caddid Occurrence Scheme. Improving bank side and in stream vegetation by cutting back, planting and installing in-stream structures as appropriate. Cleaning and loosening of spawning gravels is carried out by members of Willow Brook Flyfishers each Autumn. Installation of 10 pairs of upstream facing brushwood groins to expose gravel beds and introduce variation of flow and depth	Nene Catchment	Implemented	Riverfly Partnership; Willow Brook Flyfishers

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	where past engineering has left areas very uniform. An enlightened approach to fishery management with more emphasis on habitat improvement. Stocking of adult trout has been reduced and only brown trout are stocked. A gravel hatchery box was installed so that eyed ova could be hatched and the fry released.			
Sediments (as a direct pollutant); Direct biological pressures; Nutrients; Organic pollutants; Physical modification	LOCALLY DERIVED MEASURE: Lincolnshire Chalk Stream Project works: 1. With the farming community, Natural England and agricultural consultants to improve land management, thereby limiting pollutants contaminating watercourses. 2. With the farming community to enhance and restore chalk stream habitat where it has been degraded by both past and present management techniques. 3. To improve understanding of Lincolnshire's chalk streams by identifying and commissioning surveys and studies. This includes catchment characterisations that highlight areas of point and diffuse pollution that can be followed up with specific advice. 4. To raise awareness of Lincolnshire's chalk streams and their threats by undertaking talks, guided walks, workshops and one to one site visits. The project also uses local media to get the message across. 1. With the farming community, Natural England and agricultural consultants to improve land management, thereby limiting pollutants contaminating watercourses. 2. With the farming community	Witham Catchment	2011	Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
None				
Natura 2000 Investigations				
None				

C.6 Central government

Defra (Department for Environment, Food and Rural Affairs) is a UK Government Department and is responsible for the Water Framework Directive in England. Defra champions sustainable development, and helps Government as a whole to deliver economic, social and environmental sustainability. Defra is also the focal point for our rural policy.

Defra has several delivery partners that have important actions in our Draft River Basin Management Plan, including the following:

- Marine and Fisheries Agency
- Rural Payments Agency
- Environment Agency (see separate section)
- Forestry Commission
- National Park Authorities
- British Waterways

Other Government Departments like the following are also included under the sector heading of Central Government

- Department of Communities and Local Government (CLG)
- Office of Government Commerce (OGC) - an independent office of HM Treasury
- Health and Safety Executive (part of the Department of Work and Pensions), which includes the Pesticides Safety Directorate
- Highways Agency (part of Ministry for Transport)
- Defence Estates (part of Ministry of Defence)

Table C6: **Actions for central government**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Alien species	Contribute to the development of any EU level initiatives to improve legislation and controls relating to invasive non-native species.	Anglian RBD	2012	Central Government
Alien species	Develop a national early warning system with contingencies for rapid response control measures to eradicate new invasions	Anglian RBD	2012	Central Government

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Alien species	Develop and implement codes of practice to reduce the spread of invasive non-native species	Anglian RBD	2012	Central Government; Environment Agency
Alien species	Draw together a database of projects to facilitate better information sharing and increase opportunities for partnership working	Anglian RBD	2012	Central Government
Alien species	Draw up Individual Species Action Plans for species identified as presenting particular risk levels, to minimise the risks associated with them	Anglian RBD	2012	Environment Agency; Central Government
Alien species	Establish a central repository for holding data on invasive non-native species distribution.	Anglian RBD	2012	Central Government
Alien species	Establish National Invasive Non-Native Species Forums to plan, prioritise and coordinate action	Anglian RBD	Implemented	Central Government
Alien species	Increase awareness of the importance of the ‘preventative approach’ in addressing the threats posed by invasive non-native species. This would include 'horizon scanning' for new potentially invasive species.	Anglian RBD	2010	Central Government
Alien species	Integrate invasive non-native species control measures across all policy areas	Anglian RBD	2012	Environment Agency; Central Government
Alien species	Make appropriate use of existing legislative powers e.g. prohibit the sale of high-risk species; Salmon and freshwater fish act (S30); Import of live fish act; Wildlife & Countryside Act 1981; Environment Agency Fisheries byelaws; Convention on biological diversity; Natural Environment and Rural Communities Act; Habitats Directive; International Maritime	Anglian RBD	2012	Environment Agency; Central Government

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Organisation convention on ballast water)			
Alien species	Provide advice and training on identification, control and disposal of invasive non-native species to all relevant groups and encourage monitoring schemes.	Anglian RBD	2012	Central Government; Environment Agency
Direct biological pressures	Secure resources for management of invasive non-native species and to support the implementation of a non-native species management plan.	Combined Essex Catchment	2012	Natural England; Environment Agency; Central Government; Defra
Alien species	Set up and maintain a website that acts as a "one stop shop" for information and advice on invasive non-native species.	Anglian RBD	Implemented	Central Government
Alien species	Support established local fora by providing advice and guidance and support control actions by selected local fora	Anglian RBD	2012	Central Government; Environment Agency
Alien species	Work to raise awareness of the of the risks transferring non-native species to the wild amongst the public and target groups	Anglian RBD	2010	Central Government
Physical modification	Work with anglers, fishing clubs, boat users and riparian owners to identify areas of bankside erosion and the associated impacts.	Combined Essex Catchment	2012	Natural England; Environment Agency; Fisheries and Angling Interests; Land managers

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				and owners
Physical modification	LOCALLY DERIVED MEASURE: All consent processes (whether under FEPA, CPA, EIA, planning or Habitats Directive etc, or a port's own works and dredging consents) need to be "WFD-proof" i.e. ensure that all WFD issues are taken properly into account.	Anglian RBD	2012	Ports and Harbours Authorities; Defra; Local Authorities
Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Awareness raising of issues with failing shellfish waters on the River Alde and provision of follow up on farm visits to farmers and land managers. Action through: Media and communications, Capital grant scheme, one to one on-farm advice.	Cam and Ely Ouse (including South Level) Catchment; Broadland Rivers Catchment; Anglian RBD	2011	Defra; Environment Agency; Natural England
Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Awareness raising of issues with failing shellfish waters on the River Alde and provision of follow up on farm visits to farmers and land managers. Action through: Media and communications, Capital grant scheme, one to one on-farm advice.	Cam and Ely Ouse (including South Level) Catchment; Broadland Rivers Catchment; Anglian RBD	Implemented	Defra; Environment Agency; Natural England
Sediments (as a direct pollutant)	'LOCALLY DERIVED MEASURE: Development of Best Practise Guidelines on the Depositing of Dredgings. These have been drawn up by a group including representatives from British Waterways, Environment Agency, Middle Level Commissioners and DEFRA to reach an acceptable position as to how dredgings arising from watercourses can be properly disposed of.	Anglian RBD	2012	Middle Level Commissioners; Defra; Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Eel Management Plan for the Anglian RBD. Produced to improve migration. Identification of barriers: Implement eel passage solutions at Hemingford Sluice, Houghton Mill on the River Ivel and at Brownshill all in the Great Ouse system.	Upper and Bedford Ouse Catchment	2012	Environment Agency; Defra
Physical modification	LOCALLY DERIVED MEASURE: Eel Management Plan for the	Broadland Rivers Catchment	2012	Defra;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Anglian RBD. Produced to improve migration. Identification of barriers: Installation of a permanent eel pass and trap at Taverham on the River Wensum for recording silver eel migration.			Environment Agency
Sediments (as a direct pollutant); Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Encourage farmers and land managers to adopt best soil management practices to reduce soil erosion and runoff, best nutrient and manure management practices with the provision of free manure analysis, adopt best pesticide management practices, Action through: Capital grant scheme, One to one on-farm advice, One to many on-farm advice, Sampling and analysis.	Anglian RBD	2011	Defra; Environment Agency; England Catchment Sensititve Farming Initiative; Natural England
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment	Pitsford Water	2010	Natural England
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	River Chelmer	2010	Natural England
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	River Blackwater	2010	Natural England
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	Stour DS Lamarsh	2010	Natural England
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Welland	2010	Natural England
Physical modification	Work with anglers, fishing clubs, boat users and riparian owners to identify areas of bankside erosion and the associated impacts.	Combined Essex Catchment	2012	Environment Agency; Natural England;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				Fisheries and Angling Interests; Land managers and owners
Alien species	Work to raise awareness of the of the risks transferring non-native species to the wild amongst the public and target groups	Anglian RBD	2010	Central Government
Alien species	Set up and maintain a website that acts as a "one stop shop" for information and advice on invasive non-native species.	Anglian RBD	Implemented	Central Government
Alien species	Support established local fora by providing advice and guidance and support control actions by selected local fora	Anglian RBD	2012	Central Government; Environment Agency
Investigations				
Alien species	Seek sustainable and cost-effective methods for managing established invasions, such as biological control	Anglian RBD	2012	Central Government; Environment Agency
Alien species	Undertake risk assessments to identify priority invasive species for mitigation and control action at a national level	Anglian RBD	2012	Central Government
Physical modification	LOCALLY DERIVED MEASURE: Eel Management Plan for the Anglian RBD. Produced to improve migration. Monitoring of sites.	Anglian RBD	2012	Defra; Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				
Direct biological pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by developing an Invasive species control programme for	Anglian RBD	2012	Environment Agency; Natural

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	protected areas (See Annex D)			England
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Flood Management Programme (See Annex D)	Anglian RBD	2012	Environment Agency; Local Authorities
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through River Restoration Programme for Protected Areas (See Annex D)	Anglian RBD	2012	Environment Agency; Natural England
Alien species	Eradication and control at selected Sites of Special Scientific Interest and Natura 2000 sites	Anglian RBD	2012	Natural England
Sediments (as a direct pollutant); Nutrients	Contribute to achievement of favourable condition on Old Buckenham Fen, Upware North Pit , River Nar, Sea Bank Clay Pits, Glemsford Pits, Kilby - Foxton Canal, Tattershall Old Gravel Pits and Swanholme Lakes Sites of Special Scientific Interest by developing a pollution action plan.	Combined Essex Catchment; North West Norfolk Catchment; Witham Catchment; Cam and Ely Ouse (including South Level) Catchment	2012	Natural England
Direct biological pressures	Contribute to achievement of favourable condition on the River Ise and Meadows Site of Special Scientific Interest by implementing invasive species control programme .	Anglian RBD	Implemented	Natural England
Natura 2000 Investigations				
None				

C.7 Environment Agency

The Environment Agency was established by the 1995 Environment Act and became fully operational on 1 April 1996. The Agency is a Non-Departmental Public Body of the Department for Environment, Food and Rural Affairs. The Secretary of State for Environment, Food and Rural Affairs has the lead sponsorship responsibility for the Agency as a whole and the Agency is accountable to the Secretary of State for its day to day operations in England.

The Environment Agency's principal aim is to protect and enhance the environment and in doing so to contribute towards achieving sustainable development. In support of this aim, the Agency was identified as the “competent authority” for the implementation of the Water Framework Directive, a role which complements its broad range of functions which include Integrated Pollution Prevention and Control, Integrated Pollution Control, Waste Management, Water Quality, Land Quality, Water Resources, Conservation, Recreation, Fisheries, Flood Risk Management, Navigation and Radioactive Substances Regulation.

The Environment Agency's structure in the South West River Basin District is based on one Regional office in Exeter which operates through two Areas. Regions and Areas ensure national priorities are delivered at a local level while taking account of the needs of local communities and stakeholders. Head Office is responsible for corporate management of the Environment Agency, including policy development, strategic and operational objective setting and performance management.

Table C7: **Actions for the Environment Agency**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Alien species	Develop and implement codes of practice to reduce the spread of invasive non-native species	Anglian RBD	2012	Central Government; Environment Agency
Temperature	Develop guidance on the regulation of thermal discharges to surface waters where there are multiple discharges, to protect ecological status.	Combined Essex Catchment	2012	Environment Agency
Alien species	Draw up Individual Species Action Plans for species identified	Anglian RBD	2012	Central

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	as presenting particular risk levels, to minimise the risks associated with them			Government; Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Enforce REACH Annex 17 restrictions	Anglian RBD	Implemented	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Appropriate channel maintenance strategies and techniques e.g. minimise disturbance to channel bed and margins	Relief Channel	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Appropriate techniques (invasive species)	Bottisham Lode-quy Water	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Appropriate techniques to align and attenuate flow to limit detrimental effects of these features (drainage)	Relief Channel; Counter Drain	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Appropriate water level management strategies, including timing and volume of water moved	Relief Channel; Counter Drain; Bottisham Lode-quy Water; Mortons Leam; Ise	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Flow manipulation (e.g. construct structures to normalise flow; realign frontage)	Relief Channel; Mortons Leam	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Improve floodplain connectivity	Ise	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Managed realignment of flood defence	Norfolk North	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Operational and structural changes to locks, sluices, weirs, beach control, etc	Counter Drain; Relief Channel; Mortons Leam	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Preserve	Witham; Norfolk North; Relief	2011	Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	(e.g. fencing) and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	Channel		Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Preserve (e.g. fencing) and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	Whaddon Brook	2027	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	Essex; Bottisham Lode-quy Water; Norfolk North; Witham	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Preserve and where possible enhance ecological value of marginal aquatic habitat, banks and riparian zone	Whaddon Brook	2027	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Preserve and, where possible, restore historic aquatic habitats	Witham; Norfolk North; Relief Channel; Ise	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Preserve and, where possible, restore historic aquatic habitats	Whaddon Brook	2027	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Re-opening existing culverts	Mortons Leam; Ise; Relief Channel	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Retain marginal aquatic and riparian habitats (channel alteration)	Witham; Norfolk North; Wash Outer ; Counter Drain	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Retain marginal aquatic and riparian habitats (channel alteration)	Whaddon Brook	2027	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Sediment management strategies (develop and revise) which could include a) substrate reinstatement, b) sediment traps, c) allow natural recovery minimising maintenance, d) riffle construction, e) reduce all bar necessary management in flood risk areas	Relief Channel; Norfolk East	2011	Environment Agency
Physical modification	Flood/Coastal Erosion Risk Management Measure - Sediment management strategies (develop and revise) which could include a) substrate reinstatement, b) sediment traps, c) allow	Whaddon Brook	2027	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	natural recovery minimising maintenance, d) riffle construction, e) reduce all bar necessary management in flood risk areas			
Physical modification	Flood/Coastal Erosion Risk Management Measure - Structures or other mechanisms in place and managed to enable fish to access waters upstream and downstream of the impounding works.	Mortons Leam; Relief Channel; Witham	2011	Environment Agency
Alien species	Integrate invasive non-native species control measures across all policy areas	Anglian RBD	2012	Environment Agency; Central Government
Alien species	Make appropriate use of existing legislative powers e.g. prohibit the sale of high-risk species; Salmon and freshwater fish act (S30); Import of live fish act; Wildlife & Countryside Act 1981; Environment Agency Fisheries byelaws; Convention on biological diversity; Natural Environment and Rural Communities Act; Habitats Directive; International Maritime Organisation convention on ballast water)	Anglian RBD	2012	Environment Agency; Central Government
Alien species	Provide advice and training on identification, control and disposal of invasive non-native species to all relevant groups and encourage monitoring schemes.	Anglian RBD	2012	Central Government; Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Provide advice to small and medium sized businesses on obligations in relation to priority substances, priority hazardous substances and specific pollutants through NetRegs website	Anglian RBD	2012	Environment Agency
Alien species	Reduction of extent of invasive non-native species by operations	Anglian RBD	2012	Environment Agency
Alien species	Support established local fora by providing advice and guidance and support control actions by selected local fora	Anglian RBD	2012	Central Government;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				Environment Agency
Physical modification	WFD mitigation measures manual for flood and coastal erosion risk management and land drainage activities. This manual will set out best practice options for measures to mitigate against the impacts of such activities upon ecology. This will be used to ensure that new and existing schemes and management activities will take into consideration WFD requirements and will results in minimal ecological damage.	Anglian RBD	2010	Environment Agency
Alien species	Work to raise awareness of the of the risks transferring non-native species to the wild amongst the public and target groups	Anglian RBD	2010	Central Government
Direct biological pressures	LOCALLY DERIVED MEASURE: Floating Pennywort Control on the River Nene. Rolling programme targeting floating pennywort on the Upper Nene. Designated areas affected include the Upper Nene potential Special Protection Area. The species threatens navigation, flood defence and potable abstraction and the downstream Nene Washes Special Protection Area/Special Area of Conservation	Nene Catchment	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Anglian River Sea Trout Project. Identification and prioritisation of barriers to breeding brown trout populations in several Anglian Rivers including North Norfolk chalk rivers: the Glaven, Stiffkey, Burn and Nar.	North Norfolk Catchment	Implemented	Environment Agency; Wildlife Trusts; Natural England; Centre for Environment, Fisheries & Aquaculture Science;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				Association of Rivers Trusts; Wild Trout Trust
Nutrients; Physical modification	LOCALLY DERIVED MEASURE: Anglian Rivers Sea Trout Project will improve access and habitat for migratory fish in the Nar, Stiffkey, Glaven and Burn catchments.	North Norfolk Catchment	2012	Environment Agency; Wild Trout Trust
Physical modification; Nutrients	LOCALLY DERIVED MEASURE: Anglian Rivers Sea Trout Project will improve access and habitat for migratory fish in the Welland catchment.	Welland Catchment	2012	Environment Agency; Wild Trout Trust
Physical modification	LOCALLY DERIVED MEASURE: Broadland Flood Alleviation Projects seek to replace existing hard defences with realigned banks and softer reed beds or soft erosion protection materials. (see www.bfap.org). Action through: Financial investment through a £100 million project over 20 years.	Broadland Rivers Catchment	2012	Environment Agency; Broads Authority.
Physical modification	LOCALLY DERIVED MEASURE: Bures Mill Project. Will deliver fish pass and habitat improvement in river channel	Stour US Lamarsh; Stour DS Lamarsh	Implemented	Environment Agency
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Cessation conditions on surface water abstraction licenses (summer) to protect low flows and levels in fenland drains. Action through: Habitats Directive and abstraction licensing	Anglian RBD	2010	Environment Agency
Direct biological pressures	LOCALLY DERIVED MEASURE: Distribution of "White clawed Crayfish - Protect Me!" pamphlet. Identification of American Red Signal Crayfish and Narrow Clawed/Turkish Crayfish.	Cam and Ely Ouse (including South Level) Catchment	2012	Environment Agency; The Brecks Partnership
Physical modification	LOCALLY DERIVED MEASURE: Eel brushes for improved elver/eel passage on obstructions.	Combined Essex Catchment	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Eel Management Plan for the Anglian RBD. Produced to improve migration. Identification of	Broadland Rivers Catchment	2012	Environment Agency;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	barriers: Installation of a permanent eel pass and trap at Taverham on the River Wensum for recording silver eel migration.			Defra
Direct biological pressures; Physical modification	LOCALLY DERIVED MEASURE: Eel Management Plan. Enhancing eel stocks in Northern Area Rivers.	Anglian RBD	Implemented	Environment Agency
Organic pollutants; Microbiology; Sediments (as a direct pollutant); Nutrients	LOCALLY DERIVED MEASURE: Environment Agency working closely with the Broads Authority on reporting, attending and resolving pollution incidents. A legal protocol has been agreed between the two organisations. All incidents reported to Environment Agency hotline will be assessed and have annual review of incidents.	Broadland Rivers Catchment	2012	Broads Authority; Environment Agency
Direct biological pressures	LOCALLY DERIVED MEASURE: Fisheries and Nene Valley SPA. To prevent the spread of harmful fish species and ensure sustainable management of fish stocks in Nene Valley	Nene Catchment	Implemented	Environment Agency
Direct biological pressures	LOCALLY DERIVED MEASURE: Floating pennywort removal projects	Cam and Ely Ouse (including South Level) Catchment; Nene Catchment	Implemented	Environment Agency; local conservation groups
Direct biological pressures	LOCALLY DERIVED MEASURE: Giant Hogweed control measures on the Upper Ouse at Brackley.	Upper and Bedford Ouse Catchment	Implemented	Environment Agency
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct	LOCALLY DERIVED MEASURE: Initiate formation of Rivers Trust for the River Welland.	Welland Catchment	Implemented	Community Groups; Environment Agency; Natural England

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pollutant)				
Physical modification	LOCALLY DERIVED MEASURE: Installation of Brush for elver pass to provide habitat improvement in river channel and eel migration. Schemes located at :Kings Mill, Stonham Back Cut, Cuton Back Cut, Barnes Mill, Broomfield Mill, Langleys Weir, Howe ST. Mill, Wickham Place, Blue Mills, Greys Mill, Easterford Mill, Blackwater Mill, Bradwell, Stisted Mill, Convent Lane Wiers, Cooks Mill, Ford ST. Mill, Chappel Mill, Chalkney Mill, Earls Colne Mill, Townsford Mill, Hulls Mill, Alderford Mill	Combined Essex Catchment	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Installation of riffles and flow deflectors to provide habitat improvement in river channel	Northwest Norfolk	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Installation of riffles and flow deflectors to provide habitat improvement in river channel	North Norfolk	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Installation of riffles and flow deflectors to provide habitat improvement in river channel	Welland	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Judas Gap Project. Will deliver fish pass and habitat improvement in river channel	Stour (Essex)	Implemented	Environment Agency
Physical modification; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Jurassic Rivers Project, aimed at improving limestone rivers, including: Belton House and Upper Witham Crayfish Improvements; Grantham fly fishery improvements; Willow Brook fly fishery improvements	Witham Catchment	Implemented	Environment Agency; Fisheries and Angling Interests; National Trust
Microbiology; Nutrients; Organic pollutants	LOCALLY DERIVED MEASURE: Misconnection guidance and awareness programmes for foul and surface water systems. Education /Awareness for existing and new builds, increased inspection and monitoring.	Anglian RBD	2012	Developers; DIY shops; Environment Agency;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	EEDA, Environment Agency undertake detection of mis-connection as part of current business.			Regional Development Agency
Physical modification	LOCALLY DERIVED MEASURE: Nene Park Fisheries Project. Working with Nene Park Trust to improve angling, fisheries and biodiversity	Nene Catchment	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Partnership working in the Broads to deliver Wetland Opportunities, with wetland sites being enhanced that include South Fen in the Ant, Hickling in the Thurne and Upton in the Bure. The Broads Biodiversity Action Plan is mapping habitat opportunities as part of its Whole Valley Approach.	Upper and Bedford Ouse Catchment	2012	Defra; Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Priority Barriers Project to identify barriers in need of removal or fish passes to benefit coarse fish and eels	Anglian RBD	Implemented	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Provision of eel pass on the River Stour to allow natural recolonisation, rather than restocking.	Combined Essex Catchment	2010	Environment Agency; Water for Wildlife; Wildlife Trusts
Physical modification	LOCALLY DERIVED MEASURE: River Great Ouse Waterways Plan 2006-2011	Upper and Bedford Ouse Catchment; Cam and Ely Ouse (including South Level) Catchment; Old Bedford including the Middle Level Catchment	Implemented	Great Ouse Boating Association; Environment Agency
Abstraction and other artificial flow pressures;	LOCALLY DERIVED MEASURE: River Nar restoration - production of management and sediment strategies.	North West Norfolk Catchment	2012	Environment Agency;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)				Natural England
Physical modification	LOCALLY DERIVED MEASURE: River Nene Waterways Plan 2006-2011	Nene Catchment	Implemented	Environment Agency; Great Ouse Boating Association
Physical modification	LOCALLY DERIVED MEASURE: Tidal Flap project. Will deliver fish pass and habitat improvement in river channel	Binham Tributary	Implemented	Environment Agency
Nutrients; Organic pollutants	LOCALLY DERIVED MEASURE: Leaflets sent to each package treatment plants owner on the Broads raising awareness of problem of phosphates being discharged from small private and promoting reduced detergent use.	Broadland Rivers Catchment	2012	Broads Authority; Environment Agency; Water quality partnership
Physical modification	LOCALLY DERIVED MEASURE: Welland Sea Trout Project. To re-establish a viable sea trout population in the Welland by enabling natural re-colonisation	Welland Catchment	2012	Environment Agency
Direct biological pressures	LOCALLY DERVIVED MEASURE: Distribution of Chinese Mitten Crab identification leaflet. Gives species characteristics and current distribution in the Great Ouse catchment.	Cam and Ely Ouse (including South Level) Catchment; North West Norfolk Catchment; Upper and Bedford Ouse Catchment	2012	Environment Agency
Bentazone	Re-direct existing Catchment Sensitive Farming (CSF)	River Waveney	2010	Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	resource to address issue.			Agency
Nitrate	Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Nene	2010	Environment Agency
Investigations				
Physical modification	Investigations into the ecological outcomes of measures to mitigate against effects of FCERM (flood and coastal erosion risk management) activities, improving the understanding of the cost/benefit and technical feasibility of such measures and developing understanding of the underlying processes, ecological responses and applicability. Will use case studies, but outcomes will have a national application.	Anglian RBD	2010	Environment Agency
Alien species	Seek sustainable and cost-effective methods for managing established invasions, such as biological control	Anglian RBD	2012	Central Government; Environment Agency
Acidification; Microbiology; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	Undertake investigations to better understand problems in waterbodies where extended deadlines have been put in place and identify actions to resolve them where possible.	Anglian RBD	Implemented	Environment Agency
Sediment	Investigation into the cause of sediment impact.	Harrowden Brook; Cranbrook Drain	2012	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification	LOCALLY DERIVED MEASURE: Commissioning of research to investigate barriers to eel movements in The Broads to assess the efficacy of elver stocking in certain locations and recommendations on eel passes.	Broadland Rivers Catchment	Implemented	Broads Authority; Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Eel Management Plan for the Anglian RBD. Produced to improve migration. Monitoring of sites.	Anglian RBD	2012	Environment Agency; Defra
Sediments (as a direct pollutant)	Investigate impact of sediments on ecological status	Combined Essex Catchment	2012	Water companies; Natural England; Environment Agency; Local Authorities
Natura 2000 and Site of Special Scientific Interest actions				
Direct biological pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by developing an Invasive species control programme for protected areas (See Annex D)	Anglian RBD	2012	Environment Agency; Natural England
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Flood Management Programme (See Annex D)	Anglian RBD	2012	Local Authorities; Environment Agency
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through River Restoration Programme for Protected Areas (See Annex D)	Anglian RBD	2012	Natural England; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Water Level Management Plans (See Annex D)	Anglian RBD	2012	Environment Agency; Land managers and owners
Sediments (as a direct pollutant); Nutrients	Contribute to achievement of favourable condition on Old Buckenham Fen, Upware North Pit, River Nar, Sea Bank Clay Pits, Glemsford Pits, Kilby - Foxton Canal, Tattershall Old Gravel Pits Sites of Special Scientific Interest and Swanholme Lakes Site of Special Scientific Interest by developing a pollution action plan (Welland)	Witham Catchment; Combined Essex Catchment; Cam and Ely Ouse (including South Level) Catchment; North West Norfolk Catchment	2012	Natural England
Abstraction and other artificial flow pressures	Contribute to achievement of favourable condition on River Nar Site of Special Scientific Interest by revoking or amending abstraction licences	North West Norfolk Catchment	2012	Environment Agency
Physical modification	Contribute to achievement of favourable condition on the River Nar Site of Special Scientific Interest by implementing river restoration project	North West Norfolk Catchment	2012	Environment Agency
Nutrients	Contribute to achievement of favourable condition on the River Nar Site of Special Scientific Interest by revoking or amending discharge consents	North West Norfolk Catchment	2010	Environment Agency
Natura 2000 Investigations				
Physical modification; nutrients	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Investigation into water quality and morphology pressures (See Annex D)	Anglian RBD	2012	Environment Agency
Acidification, Microbiology, Nutrients, Organic Pollutants, Physical Modification,	Undertake investigations to better understand problems in waterbodies where extended deadlines have been put in place and identify actions to resolve them where possible.	Anglian RBD	Implemented	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants, Sediments.				

C.8 Industry, manufacturing and other business

Business services, retailing and health services are three of the most significant employment sectors for the Anglian RBD. Sectors that provide significantly above average levels of employment in the RBD include: wholesale and distribution; transport; food and drink; and agriculture.

Table C8: **Actions for Industry, manufacturing and other business**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Saline intrusion	CAMS – Implement abstraction licensing controls to minimise and manage risks from saline intrusion	Anglian RBD	Implemented	Water companies; Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation) - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners
Nitrate	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation). Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation) - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous	Comply with environmental permit conditions	Anglian RBD	Implemented	Industry leads

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pollutants; Priority Substances and Specific Pollutants				
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Comply with local authority contaminated land remediation notices - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners; Local Authorities
Nitrate	Development planning - planning liaison. Site specific groundwater pollution prevention advice and recommendations	Anglian RBD	Implemented	Local Authorities
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Development planning structure plans - influence location of development to protect groundwater	Anglian RBD	Implemented	Water companies; Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Development planning: land contamination - site specific advice and required action for remediation of contaminated land through planning liaison	Anglian RBD	Implemented	Local Authorities; Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Environment Agency Notice powers (WRA S86 and S161, Groundwater Regulations) Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Environment Agency
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous	Environmental Permitting – effluent discharges to ground	Anglian RBD	Implemented	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pollutants				
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Environmental Permitting - Process Industries Regulation	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Environmental Permitting - waste disposal	Anglian RBD	Implemented	Environment Agency
Indeno (123-cd) pyrene; Fluoranthene; Benzo(a)pyrene; Benzo (ghi) perylene	EU Restriction on use of PAH content in oil used in the manufacture of tyres	Anglian RBD	Implemented	EU
Trichloroethylene	EU-wide ban on use	Anglian RBD	Implemented	EU
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Follow Petrol Retailing Code of Practice (Groundwater Regulations) - comply with published advice for operators	Anglian RBD	Implemented	Industry leads
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow Solvents Code of Practice (Groundwater Regulations) - comply with published advice for operators	Anglian RBD	Implemented	Industry leads
Priority Hazardous Substances, Priority Substances and Specific	General guidance to improve pesticide use through the Amenity Forum	Anglian RBD	Implemented	Amenity Forum

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Pollutants				
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Groundwater protection advice to Veterinary Medicines Directorate products approvals process	Anglian RBD	Implemented	Land managers and owners
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants; Nitrate	Implement DCLG (Department for Communities and Local Government) Planning Policy Guidance Statement 23 (PPS23) on controlling pollution of groundwater	Anglian RBD	Implemented	Local Authorities
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Implement Groundwater Protection: Policy & Practice - External education on GW pollution prevention	Anglian RBD	Implemented	Industry leads
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Implementation of 'oil-filled cables' operating agreement with electricity transmission companies	Anglian RBD	Implemented	Environment Agency; Industry leads
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow the SUDS (sustainable drainage systems) Interim Code of Practice - comply with published advice for operators	Anglian RBD	Implemented	Industry leads
Hazardous substances and non-hazardous pollutants; Priority	local authority contaminated land legislation Notice powers - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Local Authorities

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Substances and Specific Pollutants				
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Local campaigns - industry	Cam And Ely Ouse Chalk	2010	Environment Agency
Priority Substances and Specific Pollutants ; Nitrate; Hazardous substances and non-hazardous pollutants	NetRegs (Environmental Guidance to Business) - External education on GW pollution legislation	Anglian RBD	Implemented	Environment Agency
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Proposed oil pipelines Operating Agreement(s)	Anglian RBD	2012	Industry leads; Environment Agency
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Provide development planning standing advice	Anglian RBD	Implemented	Environment Agency
Mercury and its compounds	Recently introduced restrictions across the UK will see decreasing trend in emissions and probable compliance by 2015 with no further action	Anglian RBD	Implemented	Environment Agency
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and	Re-engineer existing discharges to avoid direct discharges of pollutants to groundwater	Anglian RBD	Implemented	Environment Agency; Water companies

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Specific Pollutants				
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Registrations (in conjunction with Standard Rules) - Implement new regulatory approach (via Environmental Permitting Regulations) arising from implementation of new Groundwater Directive (2006/116/EC)	Anglian RBD	2012	Water companies; Land managers and owners; Industry leads; Environment Agency
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Targeted advice and enforcement in high risk areas, Pollution Prevention visits works notices	Cam And Ely Ouse Chalk	2010	Environment Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Total Oil Operating agreement	Anglian RBD	Implemented	Environment Agency; Industry leads
Nitrate	Waste exemptions - low risk approach to waste regulation activities	Anglian RBD	Implemented	Environment Agency
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: England Catchment Sensitive Farming Initiative to produce best land management practices. Identify risk points of diffuse pollution from agriculture because of siltation caused be livestock. Propose mitigation measures to avoid damage of fish population.	Anglian RBD	Implemented	Environment Agency; Natural England; Ruskin University; Game and

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				Wildlife Conservation Trust
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Guidance for planners to ensure new development is more efficient in its consumption of water (lower per capita consumption)	Anglian RBD	Implemented	Waterwise East
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Sitewise - pilot Environment Agency project in Anglian RBD to promote resource efficiency in the construction industry and to limits its impact on the environment.	Anglian RBD	2012	Construction Industry; Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Implementation of the Remediation Strategy for the Helpston project.	Anglian RBD	Implemented	Environment Agency
Investigations				
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Further investigation - Local urban partnerships / PPC	Cam And Ely Ouse Chalk	2010	Environment Agency
Dredging and trawling (commercial fishing and shellfish)	Investigation into the impact of commercial shell and fin fisheries to improve the risk assessment of the impact of these activities on ecology and to identify appropriate measures. Will use case studies, but outcomes will have a national application.	Anglian RBD	2010	Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				
Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by revoking or amending abstraction licences (See Annex D)	Anglian RBD	2012	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Sediments (as a direct pollutant);Nutrients	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by revoking or amending Discharge/PPC Consents (See Annex D)	Anglian RBD	2012	Environment Agency
Natura 2000 Investigations				
None				

C.9 Local and regional government

The Anglian RBD includes 12 counties. Seven of these cover the majority of the RBD: Bedfordshire, Cambridgeshire, Essex, Lincolnshire, Norfolk, Northamptonshire and Suffolk, with Buckinghamshire, Hertfordshire and Leicestershire having small areas within the RBD. The RBD also touches Nottinghamshire and Oxfordshire. Four unitary authorities lie within the RBD: Milton Keynes, Peterborough, Rutland and Southend. There are also 54 second-tier authorities.

Table C9: **Action for local and regional government**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Fire service Memorandum of Understanding on implementing pollution control measures in emergencies	Anglian RBD	Implemented	Local Authorities; Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants	General guidance to improve pesticide use through the Amenity Forum	Anglian RBD	Implemented	Amenity Forum
Abstraction and other artificial flow pressures	Influence development of the LDF to ensure that policies require water efficiency standards in new development that exceed extant Buildings Regulations. Standards should be linked to the Code for Sustainable Homes level 3 and above, and Building Research Establishment Environmental Assessment Method (Breeam) standards	Combined Essex Catchment	2012	Abstractors; Developers; Environment Agency; Local Authorities; Water companies

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification	WFD mitigation measures manual for flood and coastal erosion risk management and land drainage activities. This manual will set out best practice options for measures to mitigate against the impacts of such activities upon ecology. This will be used to ensure that new and existing schemes and management activities will take into consideration WFD requirements and will results in minimal ecological damage.	Anglian RBD	2010	Environment Agency
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants; Nitrate	Implement DCLG (Department for Communities and Local Government) Planning Policy Guidance Statement 23 (PPS23) on controlling pollution of groundwater	Anglian RBD	Implemented	Local Authorities
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Education and influence of developers in the issues of water efficiency	Anglian RBD	2012	Local Authorities; Environment Agency
Sediments (as a direct pollutant); Abstraction and other artificial flow pressures; Physical modification; Organic pollutants	LOCALLY DERIVED MEASURE: Ensure that the proposed Ecotown at Rackheath (north of Norwich) is implemented in such a manner so as to cause no deterioration in the catchment.	Broadland Rivers Catchment	2012	Local Authorities
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Include water efficiency policies in Spatial Strategies and Local Development Plans/Frameworks.	Anglian RBD	2012	Local Authorities; Regional Assemblies
Abstraction and other artificial flow pressures; Nutrients; Organic	LOCALLY DERIVED MEASURE: Natural England advice to Local Planning Authorities, Government Offices, Regional Spatial Strategy about developments and wetland habitat	Anglian RBD	2012	Local Authorities; Natural

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pollutants	protection.			England; Regional Authorities
Physical modification	LOCALLY DERIVED MEASURE: River Nene Regional Park - part of the growth area agenda. Key aim is to deliver green infrastructure as an integral element of the proposed development of housing in the growth areas. Action through: Government funding - 10% top slice of all development monies of growth areas, developer contributions.	Nene Catchment	2012	River Nene Regional Park
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Waterwise East - has the remit to influence planners and developers to encourage water efficiency. Initially, a " no deterioration" measure - could lead to need for less abstraction in the longer term, less need to import water in the short term.	Anglian RBD	2010	Developers; Local Authorities; Water companies
Investigations				
Physical modification	Investigations into the ecological outcomes of measures to mitigate against effects of FCERM (flood and coastal erosion risk management) activities, improving the understanding of the cost/benefit and technical feasibility of such measures and developing understanding of the underlying processes, ecological responses and applicability. Will use case studies, but outcomes will have a national application.	Anglian RBD	2010	Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				
Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Flood Management Programme (See Annex D)	Anglian RBD	2012	Environment Agency; Local Authorities
Direct biological	Contribute to maintenance of, or restoration to, favourable	Anglian RBD	2010	Local

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pressures; Physical modification	conservation status on Natura 2000 Protected Areas through planning permission enforcement (See Annex D)			Authorities
Direct biological pressures; Physical modification	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through planning permission enforcement (See Annex D)	Anglian RBD	2011	Local Authorities
Direct biological pressures	Contribute to achievement of favourable condition on Swanholme Lakes Site of Special Scientific Interest by undertaking specific management works	Witham Catchment	Implemented	Lincoln City Council; Lincolnshire County Council
Natura 2000 Investigations				
None				

C.10 Mining and quarrying

There are no deep mines within the RBD. Extractive industries however do include brick clay in Peterborough and Bedfordshire, and extensive sand and gravel extraction across the RBD.

Table C10: **Mining and quarrying sector**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation) - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation) - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Industry leads
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with local authority contaminated land remediation notices - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Local Authorities; Industry leads
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Groundwater protection advice to Veterinary Medicines Directorate products approvals process	Anglian RBD	Implemented	Industry leads

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Nitrate; Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Registrations (in conjunction with Standard Rules) - Implement new regulatory approach (via Environmental Permitting Regulations) arising from implementation of new Groundwater Directive (2006/116/EC)	Anglian RBD	2012	Environment Agency; Industry leads; Land managers and owners; Water companies
Abstraction	Extension of abstraction control to include previously exempt uses (abstractions by Ports and Harbour authorities from tidal waters under certain conditions likely to remain exempt)	Anglian RBD	2012	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: A 50 Year Vision for Wetlands Action through: Awareness and education campaign and the delivery of Wetland Habitat Action Plan.	Anglian RBD	Implemented	Natural England; English Heritage; Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Assessment of extractive sites potential benefit to the water environment whilst operating and through restoration provisions i.e. Flood storage, nature reserves (Wetland), recreation etc. and the realisation of these benefits through partnership working with Environment Agency, Natural England and Non Governmental Oragnisations such as, the Royal Society for the Protection of Birds, Local Wildlife Trusts etc.	Anglian RBD	2012	Natural England; environment NGOs Quarry owners; Environment Agency
Abstraction and other artificial flow pressures; Sediments (as a direct	LOCALLY DERIVED MEASURE: East of England Biodiversity Mapping Project - application of research	Witham Catchment; Welland Catchment; Nene Catchment; Cam and Ely Ouse (including	2012	East of England Environmental

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pollutant); Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants; Nutrients		South Level) Catchment		Forum; Anglian Water Services; East of England Biodiversity Forum
Investigations				
None				
Natura 2000 and Site of Special Scientific Interest actions				
None				
Natura 2000 Investigations				
None				

C.11 Navigation

Ports at Felixstowe and Harwich provide nationally significant facilities for container and general cargo handling. Great Yarmouth and Lowestoft ports also provide support for the North Sea offshore oil and gas industries. Great Yarmouth is undergoing major expansion with the construction of an outer harbour. There are also major port developments at Harwich and the redevelopment of Shellhaven (in the adjacent Thames River Basin District) that could have ecological implications e.g. on estuary fisheries.

Smaller ports include Boston, King's Lynn, Sutton Bridge and Wisbech.

The RBD has significant lengths of inland waterways including the navigations of the River Nene, River Great Ouse and the River Cam. Also included are the important navigations of the Norfolk and Suffolk Broads and the Middle Level.

Table C11: **Actions for the Navigation sector**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Develop national guidance framework on dredging to inform Programme of Measures to meet WFD objectives	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven; Stour (Esssex); Suffolk;	2010	Defra

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
		Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex		
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Develop national guidance framework on disposal of dredgings to inform Programme of Measures to meet WFD objectives	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven; Stour (Esssex); Suffolk; Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex	2010	Defra
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Apply national guidance framework on disposal of dredgings to refine local measures as appropriate (where not disproportionately costly or technically infeasible)	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great	2012	Marine and Fisheries Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
		Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven; Stour (Esssex); Suffolk; Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex		
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Apply national guidance framework on dredging to refine local measures as appropriate (where not disproportionately costly or technically infeasible)	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven; Stour (Esssex); Suffolk; Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex	2012	Marine and Fisheries Agency
Dredging (sediment management)	Apply national guidance framework on dredging and dredged material disposal (ports sector) to provide guidance to all those undertaking or permitting navigation dredging and dredged	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney	2012	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	material disposal activities to assist in achieving the statutory objectives of the WFD and related EQS Directive (2008/105/EEC) and refine local measures as appropriate (where not disproportionately costly or technically infeasible)	Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven; Stour (Esssex); Suffolk; Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex		
Tributyltin (TBT) compounds	EU-wide ban on marketing of Tributyltin (TBT) as a biocide in the EU	Anglian RBD	Implemented	EU
Tributyltin (TBT) compounds	EU-wide non-application of Tributyltin (TBT) to boat hulls from July 2003. From January 2008 TBT should not be used on ship hulls or there should be a coating to prevent leaching of underlying TBT anti-foulants	Anglian RBD	Implemented	EU
Tributyltin (TBT) compounds	Help prevent illegal use of old Tributyltin (TBT) containing products	Anglian RBD	Implemented	Royal Yachting Association; British Marine Federation; British Waterways; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Review existing controls for disposal of dredgings inside and outside harbour limits as appropriate .	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven; Stour (Esssex); Suffolk; Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex	2012	Marine and Fisheries Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Review existing controls for dredging inside and outside harbour limits as appropriate.	Alde & Ore; Benacre Broad; Blackwater & Colne; Blackwater Outer; Blakeney Spit Lagoon; Blyth (S); Bure & Waveney & Yare & Lothing; Burn & Mow & Overy & Norton; Covehithe Broad; Crouch; Deben; Essex; Great Ouse; Hamord water; Harwich Approaches; Nene; Norfolk East; Norfolk North; Orwell; Steeping; Stiffkey/Glaven;	2012	Marine and Fisheries Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
		Stour (Esssex); Suffolk; Walberswick Marshes; Wash Inner; Wash Outer ; Welland; Witham; Wolferston Lagoon Complex		
Abstraction	Extension of abstraction control to include previously exempt uses (abstractions by Ports and Harbour authorities from tidal waters under certain conditions likely to remain exempt)	Anglian RBD	2012	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: All consent processes (whether under FEPA, CPA, EIA, planning or Habitats Directive etc, or a port's own works and dredging consents) need to be "WFD-proof" i.e. ensure that all WFD issues are taken properly into account.	Anglian RBD	2012	Defra; Local Authorities; Ports and Harbours Authorities
Direct biological pressures; Physical modification	LOCALLY DERIVED MEASURE: British Canoe Union Code of Conduct. Deals with issues such as washing down boats, working with other river users etc.	Anglian RBD	2012	British Canoe Union
Nutrients; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Catchment dredging to maintain watercourses/drains throughout navigable waterways in accordance with best practice guidance.	Anglian RBD	2012	Environment Agency
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Development of AINA Best Practise Guidelines on the Depositing of Dredgings. Have been drawn up by a group including representatives from British Waterways, Environment Agency, Middle Level Commissioners, DEFRA to reach a multi acceptable position as to how dredgings arising from watercourses can be properly disposed of.	Anglian RBD	2012	Defra
Physical modification; Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Education campaigns to increase awareness of boat wash, and its impacts. Publication of leaflet by Broads Authority and The Environment	Broadland Rivers Catchment	Implemented	Broads Authority

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Agency/British waterways Boaters Handbook.			
Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Education of best practice for anti fouling.	Broadland Rivers Catchment	2012	Environment Agency; Green Blue Initiative; Broads Authority
Physical modification	LOCALLY DERIVED MEASURE: Enforcement of measures, to limit and reduce boat wash. The promotion of speed poles.	Anglian RBD	2012	Environment Agency; Navigation Authorities
Direct biological pressures	LOCALLY DERIVED MEASURE: Enforcement of regulations for sewage disposal from boats.	Cam and Ely Ouse (including South Level) Catchment	2012	Conservators of the River Cam; Environment Agency
Sediments (as a direct pollutant); Nutrients; Physical modification	LOCALLY DERIVED MEASURE: Ormsby Board mud pumping (dredging).	Broadland Rivers Catchment	2011	Broads Authority; Environment Agency
Sediments (as a direct pollutant)	LOCALLY DERIVED MEASURE: Ouse Washes Technical Advisory Group looking into sedimentation from Earith to Ouse outfall into The Wash. Regime of control and maintenance measures to improve control of sedimentation.	Cam and Ely Ouse (including South Level) Catchment	2012	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: River Great Ouse Waterways Plan 2006-2011	Old Bedford including the Middle Level Catchment; Upper and Bedford Ouse Catchment; Cam and Ely Ouse (including South Level)	Implemented	Environment Agency; Great Ouse Boating Association

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
		Catchment		
Physical modification	LOCALLY DERIVED MEASURE: River Nene Waterways Plan 2006-2011	Nene Catchment	Implemented	Environment Agency; Great Ouse Boating Association
Sediments (as a direct pollutant); Direct biological pressures; Organic pollutants; Physical modification	LOCALLY DERIVED MEASURE: Royal Yachting Association and the British Marine Federation joint venture called the "Green Blue" which aims to educate users and the industry in the measures/behaviour/products available to achieve sustainable boating.	Anglian RBD	2012	Royal Yachting Association
Physical modification; Sediments (as a direct pollutant); Nutrients	LOCALLY DERIVED MEASURE: Sediment Management Strategy - catchment approach to sediment management to reduce inputs and balance with dredging to achieve waterways specification for users.	Broadland Rivers Catchment	2012	Broads Authority
Physical modification	LOCALLY DERIVED MEASURE: Standard Operating Procedures to provide guidance and standards to be achieved when undertaking maintenance works on navigable channels.	Broadland Rivers Catchment	Implemented	Broads Authority
Direct biological pressures	LOCALLY DERIVED MEASURE: With the support of the Environment Agency, volunteer working parties have cleared the extensive growth of floating pennywort that formerly affected the navigation, using hand picking, and have subsequently kept the channel clear of this weed. In co-operation with the Environment Agency, we will continue to control growth of this invasive species in the waterway.	Combined Essex Catchment	Implemented	Environment Agency; Essex Waterways Ltd

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Investigations				
Tributyltin (TBT) compounds	Investigate the reason for failure: to assess the contribution from dredging or disposal activities on EQS compliance as appropriate	South Forty Foot Drain; Stour Ds Lamarsh; River Chelmer; River Blackwater; Colne; Witham; Bure; Old West River; River Flit; Mortons Leam; Nene; Welland; Stour Us Lamarsh; North West Norfolk Catchment; Welland; Lower Witham	2012	Environment Agency
Physical modification	LOCALLY DERIVED MEASURE: Trialling of soft bank protection methods along the River Cam between Milton and Waterbeach to prevent bank erosion and protect towpath.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Conservators of the River Cam; Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				
Sediments (as a direct pollutant)	Contribute to achievement of favourable condition on Kilby - Foxton Canal Site of Special Scientific Interest by implementing appropriate dredging programme	Welland Catchment	2012	British Waterways
Natura 2000 Investigations				
None				

C.12 Urban and transport

The Anglian RBD is home to over 5.2 million people. The RBD has several major urban centres including Milton Keynes (207,057), Northampton (194,458) and Peterborough (156,061). A substantial portion of the Anglian RBD is covered by the Sustainable Communities Plan. Two of the four growth areas are included largely within the Anglian RBD – the Milton Keynes-South Midland area and the London-Stansted-Cambridge growth corridor.

The highway and rail network shows a strong radial pattern focused on London. The national north-south movements are catered for by M1, M11/A14/A1(M) and the East Coast Main Rail Line. The A14 also provides the main east-west connection between the East Coast ports and the industrial heartlands of the Midlands, north-west and the north-east. Rail freight is mainly train-load e.g. sand and aggregate, however the largest freight volume is the movement of maritime boxes from Felixstowe and Harwich ports to London, the Midlands and the north.

Many thousands of homes and hundreds of kilometres of road, rail, power distribution and water infrastructure in the river basin district are protected from inundation by flood water by the drainage activities of the Environment Agency and numerous Internal Drainage Boards.

Within the RBD is the international airport at Norwich and the regional airport at Southend.

Table C12: **Actions for the urban and transport sector**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation) - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations) Make use of site specific notices to remove pollution risks to groundwater	Anglian RBD	Implemented	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Substances and Specific Pollutants				
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Comply with new EC Sustainable Use of Pesticides Directive to control use of Plant Protection Products	Anglian RBD	2012	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with WRA consent conditions	Anglian RBD	Implemented	Environment Agency
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Organic pollutants; Sediments (as a direct pollutant); Microbiology; Nutrients	Environment Agency and Highways Agency Memorandum of Understanding and associated initiatives	Anglian RBD	Implemented	Highways Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow Pesticides Code of Practice - comply with published advice for operators on control of plant protection products	Anglian RBD	Implemented	Industry leads
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Follow SUDS (sustainable drainage systems). Code of Practice – comply with published advice for operators on sustainable drainage systems	Anglian RBD	Implemented	Industry leads

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants	General guidance to improve pesticide use through the Amenity Forum	Anglian RBD	Implemented	Amenity Forum
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Groundwater protection advice to Veterinary Medicines Directorate products approvals process	Anglian RBD	Implemented	Industry leads
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Highways Agency Programme to investigate soakaways	Anglian RBD	Implemented	Highways Agency
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Implementation of Network Rail pesticide protocol	Anglian RBD	Implemented	Environment Agency; Industry leads
Microbiology; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Sediments (as a direct pollutant)	National Fire Service Protocol to minimise the risk of pollution during fire emergencies	Anglian RBD	Implemented	National Fire Service
Priority Substances and Specific Pollutants ; Hazardous substances	Registrations (in conjunction with Standard Rules) - Implement new regulatory approach (via Environmental Permitting Regulations) arising from implementation of new	Anglian RBD	2012	Environment Agency; Industry

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
and non-hazardous pollutants; Nitrate	Groundwater Directive (2006/116/EC)			leads; Land managers and owners; Water companies
Physical modification	WFD mitigation measures manual for flood and coastal erosion risk management and land drainage activities. This manual will set out best practice options for measures to mitigate against the impacts of such activities upon ecology. This will be used to ensure that new and existing schemes and management activities will take into consideration WFD requirements and will results in minimal ecological damage.	Anglian RBD	2010	Environment Agency
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Organic pollutants; Nutrients	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Braintree to address the impact of development on infrastructure capacity, water resources and receiving waters.	Combined Essex Catchment	Implemented	Braintree District Council; St Edmundsbury Borough Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Breckland to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Breckland District Council
Abstraction and other	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy	Combined Essex Catchment	Implemented	Chelmsford

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	for Chelmsford to address the impact of development on infrastructure capacity, water resources and receiving waters.			Borough Council
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Nutrients; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Fakenham to address the impact of development on infrastructure capacity, water resources and receiving waters.	Broadland Rivers Catchment	Implemented	North Norfolk District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Fenland and East Cambridgeshire to address the impact of development on infrastructure capacity, water resources and receiving waters.	Nene Catchment; Old Bedford including the Middle Level Catchment; Cam and Ely Ouse (including South Level) Catchment	Implemented	Fenland District Council; East Cambs District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances,	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Forest Heath and St Edmundsbury to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Forest Heath District Council; St Edmundsbury Borough Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Substances and Specific Pollutants				
Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Abstraction and other artificial flow pressures; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Greater Norwich to address the impact of development on infrastructure capacity, water resources and receiving waters.	Broadland Rivers Catchment	Implemented	Breckland District Council; Broadland District Council; Norwich City; South Norfolk District Council
Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Organic pollutants; Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Haven Gateway to address the impact of development on infrastructure capacity, water resources and receiving waters.	East Suffolk Catchment; Combined Essex Catchment	Implemented	Suffolk Coastal District Council; Tendring Hundred District Council; Ipswich Borough Council; Colchester Borough Council
Abstraction and other artificial flow pressures; Nutrients; Organic	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Huntingdon to address the impact of development on infrastructure capacity, water resources and receiving waters.	Upper and Bedford Ouse Catchment	Implemented	Huntingdon District Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification				
Physical modification; Abstraction and other artificial flow pressures; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for King's Lynn and West Norfolk to address the impact of development on infrastructure capacity, water resources and receiving waters.	North West Norfolk Catchment	Implemented	King's Lynn and West Norfolk Borough Council
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Physical modification; Abstraction and other artificial flow pressures; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Luton Borough Council and South Bedfordshire District Council to address the impact of development on infrastructure capacity, water resources and receiving waters.	Upper and Bedford Ouse Catchment	Implemented	Central Bedfordshire District Council; Luton Borough Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Marston Vale Eco-town and Bedford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Upper and Bedford Ouse Catchment	Implemented	Bedford Borough Council Central Bedfordshire District Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Nutrients; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for the City of Cambridge to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Cambridge City; South Cambs District Council
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for the City of Peterborough to address the impact of development on infrastructure capacity, water resources and receiving waters.	Welland Catchment; Nene Catchment	Implemented	City of Peterborough
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Abstraction and other artificial flow pressures; Organic pollutants; Nutrients	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Thetford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Breckland District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Uttlesford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Combined Essex Catchment	Implemented	Uttlesford District Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Hazardous Substances, Priority Substances and Specific Pollutants				
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Nutrients; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Waveney and Great Yarmouth to address the impact of development on infrastructure capacity, water resources and receiving waters.	Broadland Rivers Catchment	Implemented	Great Yarmouth Borough Council; Waveney District Council
Organic pollutants	LOCALLY DERIVED MEASURE: Water Quality partnership for the Broads, providing partnership co-ordination for projects to address diffuse non-agricultural impacts.	Broadland Rivers Catchment	Implemented	Broads Authority; Environment Agency; Essex & Suffolk Water; Natural England
Investigations				
Physical modification	Investigations into the ecological outcomes of measures to mitigate against effects of FCERM (flood and coastal erosion risk management) activities, improving the understanding of the cost/benefit and technical feasibility of such measures and developing understanding of the underlying processes, ecological responses and applicability. Will use case studies, but outcomes will have a national application.	Anglian RBD	2010	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification	Investigations into the ecological outcomes of measures to mitigate against effects of FCERM activities, improving the understanding of the cost/benefit and technical feasibility of such measures and developing understanding of the underlying processes, ecological responses and applicability. Will use case studies, but outcomes will have a national application.	Anglian RBD	2010	Environment Agency
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Organic pollutants; Nutrients	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Braintree to address the impact of development on infrastructure capacity, water resources and receiving waters.	Combined Essex Catchment	Implemented	Braintree District Council; St Edmundsbury Borough Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Breckland to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Breckland District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances,	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Chelmsford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Combined Essex Catchment	Implemented	Chelmsford Borough Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Substances and Specific Pollutants				
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Nutrients; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Fakenham to address the impact of development on infrastructure capacity, water resources and receiving waters.	Broadland Rivers Catchment	Implemented	North Norfolk District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Fenland and East Cambridgeshire to address the impact of development on infrastructure capacity, water resources and receiving waters.	Nene Catchment; Old Bedford including the Middle Level Catchment; Cam and Ely Ouse (including South Level) Catchment	Implemented	Fenland District Council; East Cambs District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Forest Heath and St Edmundsbury to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Forest Heath District Council; St Edmundsbury Borough Council
Physical modification; Priority Hazardous Substances, Priority	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Greater Norwich to address the impact of development on infrastructure capacity, water resources and receiving waters.	Broadland Rivers Catchment	Implemented	Breckland District Council;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Substances and Specific Pollutants; Nutrients; Abstraction and other artificial flow pressures; Organic pollutants				Broadland District Council; Norwich City; South Norfolk District Council
Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Organic pollutants; Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Haven Gateway to address the impact of development on infrastructure capacity, water resources and receiving waters.	East Suffolk Catchment; Combined Essex Catchment	Implemented	Suffolk Coastal District Council; Tendring Hundred District Council; Ipswich Borough Council; Colchester Borough Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Huntingdon to address the impact of development on infrastructure capacity, water resources and receiving waters.	Upper and Bedford Ouse Catchment	Implemented	Huntingdon District Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification; Abstraction and other artificial flow pressures; Organic pollutants; Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for King's Lynn and West Norfolk to address the impact of development on infrastructure capacity, water resources and receiving waters.	North West Norfolk Catchment	Implemented	King's Lynn and West Norfolk Borough Council
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Nutrients; Physical modification; Abstraction and other artificial flow pressures; Organic pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Luton Borough Council and South Bedfordshire District Council to address the impact of development on infrastructure capacity, water resources and receiving waters.	Upper and Bedford Ouse Catchment	Implemented	Central Bedfordshire District Council; Luton Borough Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Marston Vale Eco-town and Bedford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Upper and Bedford Ouse Catchment	Implemented	Bedford Borough Council Central Bedfordshire District Council
Abstraction and other artificial flow pressures; Priority Hazardous Substances, Priority Substances and Specific	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for the City of Cambridge to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Cambridge City; South Cambs District Council

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Pollutants; Physical modification; Nutrients; Organic pollutants				
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for the City of Peterborough to address the impact of development on infrastructure capacity, water resources and receiving waters.	Welland Catchment; Nene Catchment	Implemented	City of Peterborough
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Abstraction and other artificial flow pressures; Organic pollutants; Nutrients	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Thetford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Cam and Ely Ouse (including South Level) Catchment	Implemented	Breckland District Council
Abstraction and other artificial flow pressures; Nutrients; Organic pollutants; Physical modification; Priority Hazardous Substances, Priority Substances and Specific Pollutants	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Uttlesford to address the impact of development on infrastructure capacity, water resources and receiving waters.	Combined Essex Catchment	Implemented	Uttlesford District Council
Abstraction and other artificial flow pressures;	LOCALLY DERIVED MEASURE: Water Cycle Study/Strategy for Waveney and Great Yarmouth to address the impact of	Broadland Rivers Catchment	Implemented	Great Yarmouth

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Priority Hazardous Substances, Priority Substances and Specific Pollutants; Physical modification; Nutrients; Organic pollutants	development on infrastructure capacity, water resources and receiving waters.			Borough Council; Waveney District Council
Organic pollutants	LOCALLY DERIVED MEASURE: Water Quality partnership for the Broads, providing partnership co-ordination for projects to address diffuse non-agricultural impacts.	Broadland Rivers Catchment	Implemented	Broads Authority; Environment Agency; Essex & Suffolk Water; Natural England
Natura 2000 and Site of Special Scientific Interest actions				
None				
Natura 2000 Investigations				
None				

C.13 Water industry

Anglian Water Services Ltd is the principal provider of mains sewerage within the RBD (the other being Thames Water in the extreme south west). It also delivers water supplies to the majority of domestic and industrial consumers. Other water-only providers are: Essex and Suffolk Water, Cambridge Water, Tendring Hundred Water Services and Three Valleys Water

Table C13: **Actions for the water industry**

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Saline intrusion	CAMS – Implement abstraction licensing controls to minimise and manage risks from saline intrusion	Anglian RBD	Implemented	Environment Agency; Water companies
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants; Nitrate	Comply with discharge consent conditions	Anglian RBD	Implemented	Water companies
Priority Substances and Specific Pollutants ; Hazardous substances and non-hazardous pollutants	Comply with Environment Agency Notice (WRA S86 and S161, Groundwater Regulations, contaminated land legislation) - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Land managers and owners
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants	Comply with local authority contaminated land remediation notices - Make use of site specific notices to remove pollution risk to groundwater	Anglian RBD	Implemented	Local Authorities
Priority Hazardous Substances, Priority Substances and Specific Pollutants	General guidance to improve pesticide use through the Amenity Forum	Anglian RBD	Implemented	Amenity Forum

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Implement Groundwater Protection: Policy & Practice - External education on GW pollution prevention	Anglian RBD	Implemented	Environment Agency; Land managers and owners
Nitrate	Make use of site specific notices to remove nitrate pollution risk to groundwater. (WRA S86 and S161, Groundwater Regulations, contaminated land legislation)	Anglian RBD	Implemented	Local Authorities
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Broadland Rivers Catchment under the next round of company investment (PR09), including: Improved treatment at five sewage treatment works to ensure no deterioration in river quality for BOD and Ammonia.	Broadland Rivers	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Cam and Ely Ouse (including South Level) under the next round of company investment (PR09), including: Improved treatment at eight sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	Cam and Ely Ouse (including South Level)	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Combine Essex catchment under the next round of	Combined Essex	2015	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	company investment (PR09), including: Improved treatment at eight sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.			
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the East Suffolk catchment under the next round of company investment (PR09), including: Improved treatment at five sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	East Suffolk	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Nene catchment under the next round of company investment (PR09), including: Improved treatment at 12 sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	Nene	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the North Norfolk catchment under the next round of company investment (PR09), including: Improved treatment at two sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	North Norfolk	2015	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Northwest Norfolk catchment under the next round of company investment (PR09), including: Improved treatment at one sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	Northwest Norfolk	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Old Bedford including the Middle Level catchment under the next round of company investment (PR09), including: Improved treatment at one sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	Old Bedford including the Middle Level	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Upper and Bedford Ouse catchment under the next round of company investment (PR09), including: Improved treatment at three sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	Upper and Bedford Ouse	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Welland catchment under the next round of company	Welland	2015	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	investment (PR09), including: Improved treatment at two sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.			
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets in the Witham catchment under the next round of company investment (PR09), including: Improved treatment at six sewage treatment works to ensure no deterioration in river quality for BOD and/or Ammonia.	Witham	2015	Anglian Water Services
Micro-biology (Faecal Indicator Organisms)	Improvement of water company assets under the next round of company investment (PR09), including: Improvements to reduce bacterial impacts to improve designated shellfish waters at seven sites including river and transitional waterbodies	Combined Essex, North Norfolk, Blackwater & Colne, Crouch	2013	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Improvement of water company assets under the next round of company investment (PR09), including: Improvements to ensure discharges do not impact on groundwater at three sites in the Cam and Ely Ouse Catchment and One site in the Upper Ouse and	Cam and Ely Ouse (including South Level), Upper Ouse and Bedford Ouse	2012	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Bedford Ouse Catchment			
Micro-biology (Faecal Indicator Organisms)	Improvement of water company assets under the next round of company investment (PR09), including: Improvements to two waste water treatment sites to improve designated bathing waters	Combined Essex	2012	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets under the next round of company investment (PR09), including: More stringent Biochemical Oxygen Demand (BOD) and Ammonia limit to achieve compliance with WFD standard at six sites.	Cam and Ely Ouse (including South Level); Combine Essex; Old Bedford including the Middle Level; Welland; Witham	2012	Anglian Water Services
Nutrients (Phosphate)	Improvement of water company assets under the next round of company investment (PR09), including: Phosphate removal to meet the requirements of Urban Wastewater Treatment Directive at one site in the River Nene Catchment	Nene	2015	Anglian Water Services
Nutrients (Phosphate)	Improvement of water company assets under the next round of company investment (PR09), including: Phosphate removal to achieve compliance with WFD	Broadland Rivers; Cam and Ely Ouse (including South Level); Old Bedford including the Middle	2012	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	standard at twelve sites.	Level; Upper and Bedford Ouse		
Nutrients (Phosphate)	Improvement of water company assets under the next round of company investment (PR09), including: Phosphate removal to protect and improve eight designated Natura 2000 sites	Broadland Rivers; Northwest Norfolk	2012	Anglian Water Services
Nutrients (Phosphate)	Improvement of water company assets under the next round of company investment (PR09), including: Phosphate removal to protect and improve five designated Natura 2000 sites	Broadland Rivers; East Suffolk	2015	Anglian Water Services
Organic Pollutants (BOD, Ammonia)	Improvement of water company assets under the next round of company investment (PR09), including: Provision of storm tanks at four sites to meet requirements of Urban Wastewater Treatment Directive	Welland; Witham; Nene	2015	Anglian Water Services
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	PR04 – Water Company spending review	Anglian RBD	Implemented	Central Government
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	PR09 – Water Company spending review. WFD specific obligations	Anglian RBD	2012	Central Government
Nitrate	Provision of first time rural sewerage schemes	Anglian RBD	Implemented	Water companies
Hazardous substances and non-hazardous pollutants; Nitrate; Priority Substances and Specific Pollutants	Re-engineer existing discharges to avoid direct discharges of pollutants	Anglian RBD	Implemented	Environment Agency;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	to groundwater			Water companies
Hazardous substances and non-hazardous pollutants; Priority Substances and Specific Pollutants ; Nitrate	Registrations (in conjunction with Standard Rules) - Implement new regulatory approach (via Environmental Permitting Regulations) arising from implementation of new Groundwater Directive (2006/116/EC)	Anglian RBD	2012	Environment Agency; Industry leads; Water companies; Land managers and owners
Nitrate	Sludge Regulations - advice to operators	Anglian RBD	Implemented	Environment Agency; Water companies
Nitrate	Sludge Regulations – monitoring and enforcement	Anglian RBD	Implemented	Environment Agency; Water companies
Abstraction	Extension of abstraction control to include previously exempt uses (abstractions by Ports and Harbour authorities from tidal waters under certain conditions likely to remain exempt).	Anglian RBD	2012	Environment Agency
Abstraction	Coordinated education and awareness on water efficiency and re-use to promote value of water	Anglian RBD	2012	Environment Agency
Abstraction	Ensure the need for appropriate Water Cycle Studies are included in	Anglian RBD	2012	Developers; Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	regional and local plans, particularly in growth or high risk areas			Agency; Local Authorities; Water companies
Abstraction	Include strong water efficiency policies in Spatial Strategies and Local Development Plans / Frameworks	Anglian RBD	2012	Regional Assemblies; Local Authorities; Central Government
Abstraction	Reduction of water demand through installation of domestic meters on change of occupier	Anglian RBD	Implemented	Water companies
Abstraction	Reduction of water demand through promotion of free domestic meters	Anglian RBD	Implemented	Water companies
Abstraction	Reduction of water demand through use of innovative tariffs for metered properties	Anglian RBD	2012	Water companies
Abstraction	Reduction of leakage through active leakage control and customer supply pipe repair policies	Anglian RBD	Implemented	Water companies
Abstraction	Schools based education and awareness campaigns for sustainable water use	Anglian RBD	2012	Water companies
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment	Pitsford Water	2010	Natural England
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to	River Blackwater	2010	Natural England

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	address issue.			
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	River Chelmer	2010	Natural England
Clopyralid	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	Stour DS Lamarsh	2010	Natural England
Bentazone	Re-direct existing Catchment Sensitive Farming (CSF) resource to address issue.	River Waveney	2010	Environment Agency
Nitrate	Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Nene	2010	Environment Agency
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Welland	2010	Natural England
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Willow Brook	2010	Natural England
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through	Salary Brook	2010	Natural England

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	Nitrates Action Programme in Nitrates Vulnerable Zone			
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Ouse	2010	Natural England
Nitrate	Address issue as priority action within this Catchment Sensitive Farming (CSF) catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	Ouse	2010	Natural England
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Examine the role of effluent re-use, through the Anglian Region Water Efficiency Group and Waterwise East.	Anglian RBD	2012	Waterwise East; Water companies
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Expand metering of domestic water supplies.	Cam and Ely Ouse (including South Level) Catchment	2012	Environment Agency; Water companies
Abstraction and other artificial flow pressures	LOCALLY DERIVED MEASURE: Public education of pressures and wise use of water, through the actions of Waterwise East.	Anglian RBD	2012	Environment Agency; Waterwise East
Physical modification	LOCALLY DERIVED MEASURE: River Care. Adopt-a-river initiative.	Anglian RBD	2012	Environment Agency;

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	This is carried out in consultation with local landowners and all other bodies involved in river management. Advice, co-ordinator assistance, free insurance, starter kits provided.			Anglian Water Services; Environmental Campaigns (ENCAMS)
Organic pollutants; Nutrients; Microbiology	LOCALLY DERIVED MEASURE: Volumetric conditions on discharge consents measure. Bringing in a flow percentile rather than dry weather flows.	Nene Catchment; Witham Catchment	2012	Anglian Water Services; Environment Agency
Investigations				
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Water Company investigations/Catchment management to determine and reduce risks to drinking water quality through catchment management including: Hazard investigations, monitoring, stakeholder engagement, land use surveys, site investigations and education	Anglian RBD	2012	Anglian Water Services
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Broadland Rivers Catchment under the next round of company investment (PR09). Investigation to ensure discharges comply with WFD requirements at nine sites	Broadland Rivers	2012	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Cam and Ely Ouse (including South Level) Catchment under the next round of company investment (PR09). Investigation to ensure discharges comply with WFD requirements at seven sites	Cam and Ely Ouse (including South Level)	2012	Anglian Water Services
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Combined Essex Catchment under the next round of company investment (PR09). Investigation to ensure discharges comply with WFD requirements at two sites	Combined Essex	2012	Anglian Water Services
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Northwest Norfolk Catchment under the next round of company investment (PR09). Investigation to ensure discharges comply with WFD requirements at five sites	Northwest Norfolk	2012	Anglian Water Services
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Upper Ouse and Bedford Ouse catchment under the next round of company investment (PR09). Investigation to ensure discharges comply with WFD requirements at three sites	Upper and Bedford Ouse	2012	Anglian Water Services
Organic Pollutants (Ammonia), Nutrients (Phosphate),	Investigation of water company	Witham	2012	Anglian Water

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	assets in the Witham catchment under the next round of company investment (PR09). Investigation to ensure discharges comply with WFD requirements at two sites			Services
Organic Pollutants (Ammonia), Nutrients (Phosphate), Micro-biology (Faecal Indicator Organisms), Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets under the next round of company investment (PR09). Investigations to determine impact of three water company assets on designated bathing waters	GB65050319000; Combined Essex, Northwest Norfolk	2012	Anglian Water Services
Nutrients (Phosphate)	Investigation of water company assets under the next round of company investment (PR09). Investigations to determine the proportional input of phosphate from sewage treatment works at five sites.	Combined Essex, Cam and Ely Ouse (including South Level), Welland, Witham	2012	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Broadland rivers Catchment under the next round of company investment (PR09). Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at one site	Broadland Rivers	2011	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Cam and Ely Ouse (including South Level) Catchment under the next round of company	Cam and Ely Ouse (including South Level)	2011	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	investment (PR09). including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at eight sites			
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Combined Essex Catchment under the next round of company investment (PR09). Including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at nine sites	Combined Essex	2011	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the East Suffolk catchment under the next round of company investment (PR09). Including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at one site	East Suffolk	2011	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Nene catchment under the next round of company investment (PR09). Including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at two sites	Nene	2011	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Old Bedford including the Middle Level catchment under the next round of company investment (PR09). Including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at three sites	Old Bedford including the Middle Level	2011	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Upper Ouse and Bedford Ouse catchment under the next round of company investment (PR09). Including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at eight sites	Upper and Bedford Ouse	2011	Anglian Water Services
Hazardous Substances, Priority Substances and Specific Pollutants	Investigation of water company assets in the Witham catchment under the next round of company investment (PR09). Including: Investigations to quantify risk of STW breaching EQS for priority substances and assessing treatment options at three sites	Witham	2011	Anglian Water Services
Phosphate	R&D on fate and transport of P in groundwater to determine impact on surface water	Anglian RBD	2012	Water companies; Environment

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
				Agency
Abstraction and other artificial flow pressures	Investigation at Biodiversity Action Plan site perceived to be adversely affected by abstraction : River Stiffkey, North Kilworth and River Stour	North Norfolk Catchment North Norfolk Chalk; Welland catchment; Combined Essex; North Essex Chalk	2012	Environment Agency; Anglian Water Services; Essex & Suffolk Water
Abstraction and other artificial flow pressures	Investigation to determine cost effective action to manage abstraction to support good ecological potential: Broughton Brook	Broughton Brook; Upper Bedford Ouse Woburn Sands	2012	Anglian Water Services; Environment Agency
Abstraction and other artificial flow pressures	Investigation to determine cost effective action to manage abstraction to support good ecological potential: Millbridge-Common Brook	Upper Bedford Ouse Woburn Sands; Millbridge-common Brooks	2012	Anglian Water Services; Environment Agency
Pressures on groundwater dependent ecosystems	Investigation to determine cost effective action to manage abstraction to support good Groundwater quantitative status	North Norfolk Chalk	2012	Environment Agency
Nutrients	Anglian Water catchment investigation at Glandford to establish source of pollutant	North Norfolk Chalk	2012	Anglian Water Services
Nutrients	Anglian Water catchment investigation at North Pickenham to source of pollutant	Cam and Ely Ouse Chalk	2012	Anglian Water Services
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Anglian Water catchment investigation at Riddlesworth to	Cam and Ely Ouse Chalk	2012	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	establish source of pollutant			
Priority Hazardous Substances, Priority Substances and Specific Pollutants	Anglian Water catchment investigation at Great Wratting to establish source of pollutant	Cam and Ely Ouse Chalk	2012	Anglian Water Services
Pressures on groundwater (GW) balance; Pressures on groundwater dependent ecosystems; Abstraction	Investigation to improve confidence in Groundwater quantitative status result	Upper Bedford Ouse Chalk; North West Norfolk Chalk; Welland Limestone Unit - Broadland Rivers Chalk & Crag; North Essex Lower London Tertiaries; Welland Limestone Unit; Welland Mid Jurassic Unit; Witham Limestone Unit - This Body Should Probably Be Combined With The Witham Limestone Unit G44800.; Upper Bedford Ouse Woburn Sands; North Essex Chalk; Cam And Ely Ouse Chalk	2012	Environment Agency
Saline intrusion; Pressures on groundwater dependent ecosystems; Abstraction	Investigation to verify risk of deterioration in Ground Water quantitative status	Cornbrash; Witham Lias U; Welland Lower Jurassic Unit;	2012	Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
		Welland Limestone Unit; Blisworth Limestone Rutland Formation; Witham Limestone Unit; Steeping Great Eau Long Eau / Witham Spilsby Sandstone Unit; Steeping Long Eau Little Eau Chalk Unit; Waveney And East Suffolk Chalk & Crag; North West Norfolk Sandringham Sands; Broadland Rivers Chalk & Crag; North Norfolk Chalk; North West Norfolk Chalk; Felixstowe Peninsula Crag & Chalk		
Abstraction and other artificial flow pressures	Options appraisal for action at BAP site perceived to be adversely affected by abstraction : River Granta & Catchment	River Granta	2012	Cambridge Water; Environment Agency
Abstraction and other artificial flow pressures	Options appraisal for action at local nature conservation site perceived to be adversely affected by abstraction : River Lark & Catchment	River Lark; Cam And Ely Ouse Chalk	2012	Anglian Water Services; Environment Agency

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Abstraction and other artificial flow pressures	Programme of investigation of ecological impacts of managed flows in Heavily Modified Waterbodies with Water supply use	Anglian RBD	2012	Water companies; Environment Agency
Natura 2000 and Site of Special Scientific Interest actions				
Abstraction and other artificial flow pressures; Nutrients	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by revoking or amending abstraction licences (See Annex D)	Anglian RBD	2012	Environment Agency
Nutrients; Sediments (as a direct pollutant)	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas by revoking or amending Discharge/PPC Consents (See Annex D)	Anglian RBD	2012	Environment Agency
Physical modification; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through a special project to address hydrology pressures (See Annex D)	Anglian RBD	2012	Natural England
Nutrients; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Implementing AMP Schemes (See Annex D)	Anglian RBD	2012	Water companies

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Physical modification; Nutrients; Abstraction and other artificial flow pressures	Contribute to maintenance of, or restoration to, favourable conservation status on Natura 2000 Protected Areas through Specific Management Works to address water quality and morphology pressures (See Annex D)	Anglian RBD	2012	Natural England; Environmental NGOs; Land managers and owners; Water companies
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: Blackwater Estuary	Blackwater & Colne	2015	Essex & Suffolk Water; Environment Agency
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: Cavenham and Icklingham Heath	Cam And Ely Ouse Chalk; River Lark Us Mill St Bridge	2015	Anglian Water Services; Environment Agency
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: East Walton and Adcock's Common	Country Drain; North West Norfolk Chalk	2015	Environment Agency; Anglian Water Services
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: Geldeston Meadows Site of Special Scientific Interest.	Broadland Rivers Chalk & Crag; River Waveney	2015	Environment Agency; Essex & Suffolk Water
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: North Norfolk Coast Site of Special Scientific Interest.	North Norfolk Chalk; Heacham River	2015	Environment Agency; Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: River Wensum Site of Special Scientific Interest.	Broadland Rivers Chalk & Crag; Wensum	2015	Anglian Water Services; Environment Agency
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: Sheringham & Beeston Regis Commons Site of Special Scientific Interest.	Mun; North Norfolk Chalk	2015	Environment Agency; Anglian Water Services
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: Thompson Common	Thompson Stream; Cam And Ely Ouse Chalk	2015	Environment Agency; Anglian Water Services
Abstraction and other artificial flow pressures	Modification of Abstraction licence to ensure no adverse effect on integrity of Natura 2000 site: Upper Thurne Broads and Marshes Site of Special Scientific Interest.	Thurne; Broadland Rivers Chalk & Crag	2015	Anglian Water Services; Environment Agency
Nutrients	Contribute to achievement of favourable condition on River Nar Site of Special Scientific Interest by implementing AMP scheme	North West Norfolk Catchment	2010	Anglian Water Services
Natura 2000 Investigations				
Nutrients (Phosphate)	Investigation of water company assets in the Northwest Norfolk Catchment under the next round of company investment (PR09). Investigation to determine impact of STW Phosphate load on designated	Northwest Norfolk	2012	Anglian Water Services

Pressure	What Will Happen?	Where Will It Happen?	Date	Lead Organisation and Partners
	SSSI			
Nutrients (Phosphate)	Investigation of water company assets in the Northwest Norfok Catchment to determine the impact of direct to ground discharges, and fate of phosphate in relation to River Nar SSSI	Northwest Norfolk	2012	Anglian Water Services

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Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan
Anglian River Basin District

Annex D: Protected area objectives

Contents

D.1 Introduction

The Water Framework Directive specifies that areas requiring special protection under other EC Directives and waters used for the abstraction of drinking water are identified as protected areas. These areas have their own objectives and standards.

Article 4 of the Water Framework Directive requires Member States to achieve compliance with the standards and objectives set for each protected area by 22 December 2015, unless otherwise specified in the Community legislation under which the protected area was established. Some areas may require special protection under more than one EC Directive or may have additional (surface water and/or groundwater) objectives. In these cases, all the objectives and standards must be met.

Article 6 requires Member States to establish a register of protected areas. The types of protected areas that must be included in the register are:

- areas designated for the abstraction of water for human consumption (Drinking Water Protected Areas);
- areas designated for the protection of economically significant aquatic species (Freshwater Fish and Shellfish);
- bodies of water designated as recreational waters, including areas designated as Bathing Waters;
- nutrient-sensitive areas, including areas identified as Nitrate Vulnerable Zones under the Nitrates Directive or areas designated as sensitive under Urban Waste Water Treatment Directive (UWWTD);
- areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection including relevant Natura 2000 sites. [1]

[1]The relevant Natura 2000 sites include water dependent Special Areas of Conservation (SACs) and Special Protection Areas for Birds (SPAs) identified in accordance with Article 6 of the Water Framework Directive, using the list of qualifying Natura features in Guidance on the Identification of Natura Protected Areas (UKTAG, 2003). These are referred to in this plan as 'Natura 2000 Protected Areas'.

You can find the register of protected areas at http://www.environment-agency.gov.uk/research/planning/33346.aspx. The register was first published in 2004 and has been updated for this plan. This annex describes the objective for each protected area and assesses compliance with it.

This Annex describes the objectives for each Water Framework Directive protected area and assesses compliance with them. Many Water Framework Directive protected areas are also water bodies; and for these, the protected area objectives apply in addition to the requirement to achieve the water body status objectives, which are set out in Annex B. Where protected areas coincide with water bodies, this is indicated in the water body tables in Annex B. It is important to note that water body status objectives in Annex B will not always be the same as the protected area objectives in this Annex even where the element is the same, for example phosphate. This can be for a number of reasons, for example the size and scale of water bodies under the Water Framework Directive may be larger than waters identified as protected areas; or the use of a particular environmental standard or condition varies under the different parent legislations governing the protected area from that of the Water Framework Directive - and so, the achievement of objectives in one is not always comparable with the other.

Where water body boundaries overlap with protected areas, the most stringent objective applies – that is the requirements of one particular EC Directive should not undermine the requirements of another. Where possible, the predicted outcomes for each water body set out in Annex B have taken into account the actions[2] that will be carried out to achieve protected area objectives.

Annex C describes the actions needed to achieve and maintain compliance with one or more protected area standards or objectives. Actions identified for relevant Surface Water Drinking Water Protected Areas and Natura 2000 Protected Areas are also described in more detail in Annex D.

Annex E describes the actions appraisal and justifications for alternative objectives for water bodies. The appraisal of and justification for alternative objectives set for Surface Water Drinking Water Protected Areas and Natura 2000 Protected Areas are located in Annex D. For Surface Water Drinking Water Protected Areas, Annex D also includes reference to the relevant decision tree in Annex E.

D.2 Types and location of protected areas

In the Anglian River Basin District there are:

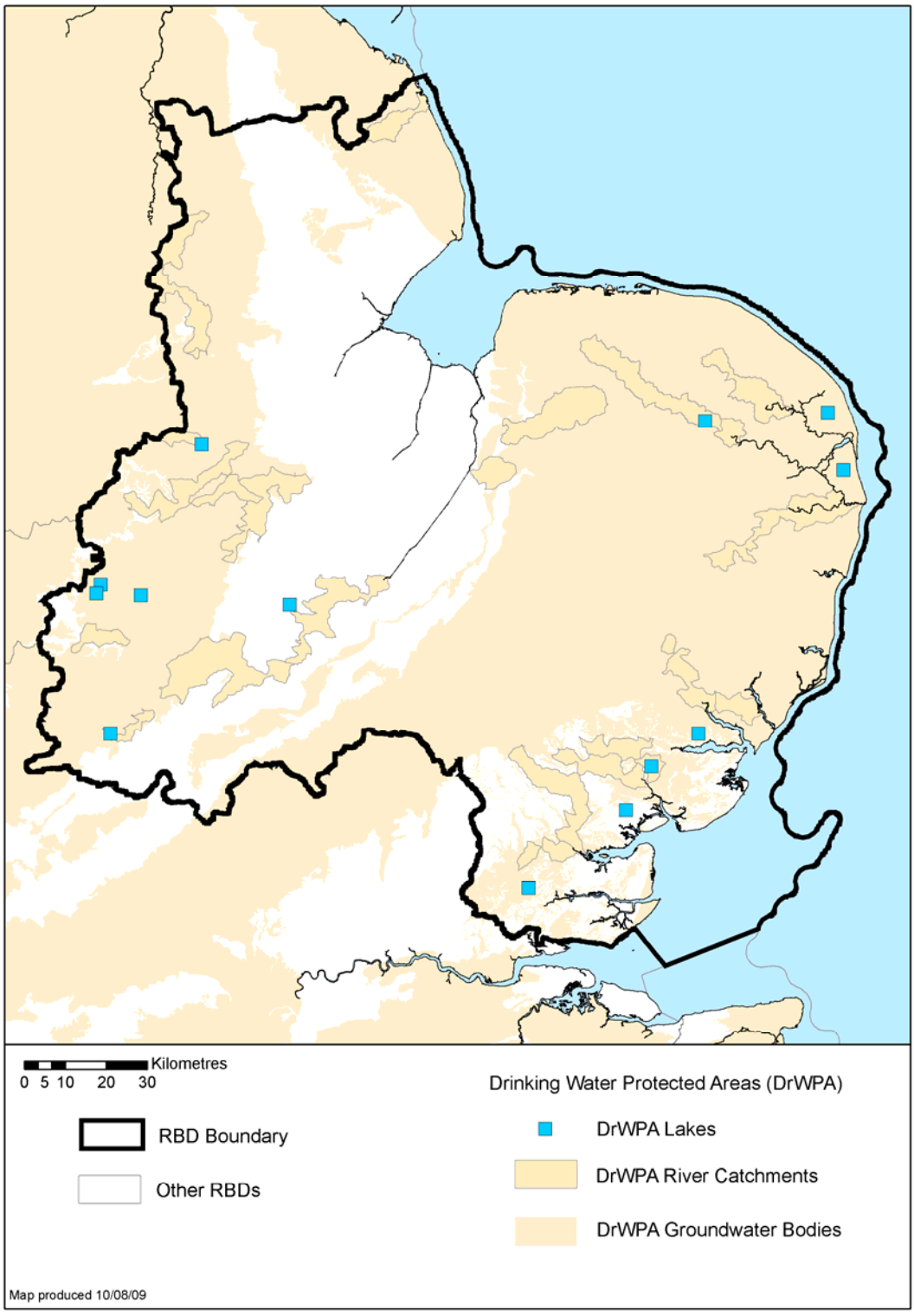
68 Drinking Water Protected Areas (DrWPAs);
447 Freshwater Fish Waters;
22 Shellfish Waters;
37 Bathing Waters;
96% of RBD Nitrate Vulnerable Zones (NVZs) (NVZs subject to appeals);
37 UWWTD: Sensitive Areas (Eutrophic) 33; Sensitive Areas (Nitrate) 6;
23 water dependent Special Areas of Conservation (SAC);
22 water dependent Special Protection Areas (SPAs).

[2] This term is widely used in the River Basin Management Plans and is also known as measures in the Water Framework Directive.

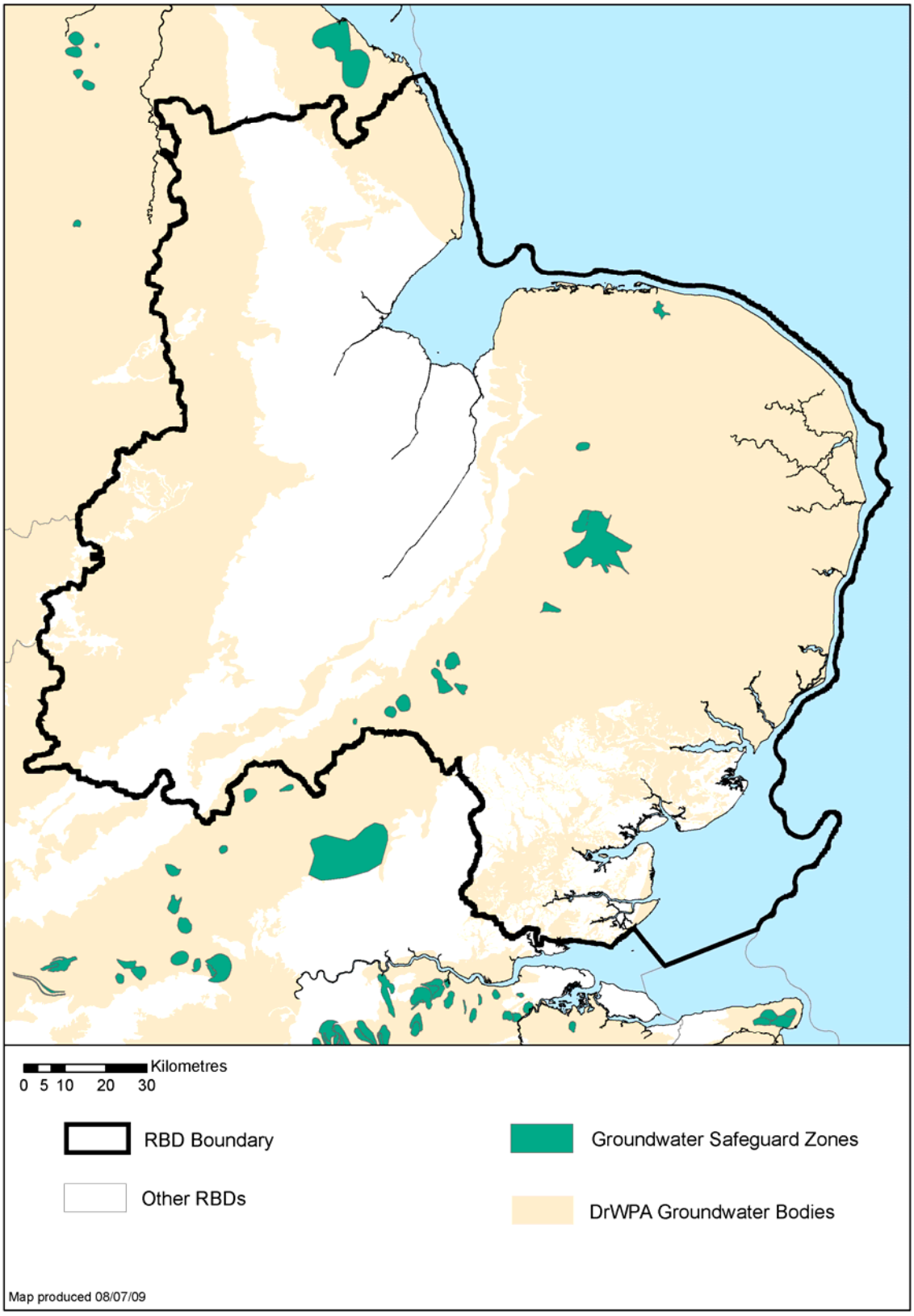
The locations of these protected areas are shown in figures:

D.1-D.3 Drinking Waters – DrWPAs
D.4 Economically significant species – Freshwater Fish & Shellfish Waters
D.5 Recreational waters – Bathing Waters
D.6 Nutrient sensitive areas – Nitrate Vulnerable Zones & UWWTD Sensitive Areas (NVZs subject to appeals)
D.7 Conservation sites – Natura 2000 Protected Areas (water dependent SACs & SPAs)

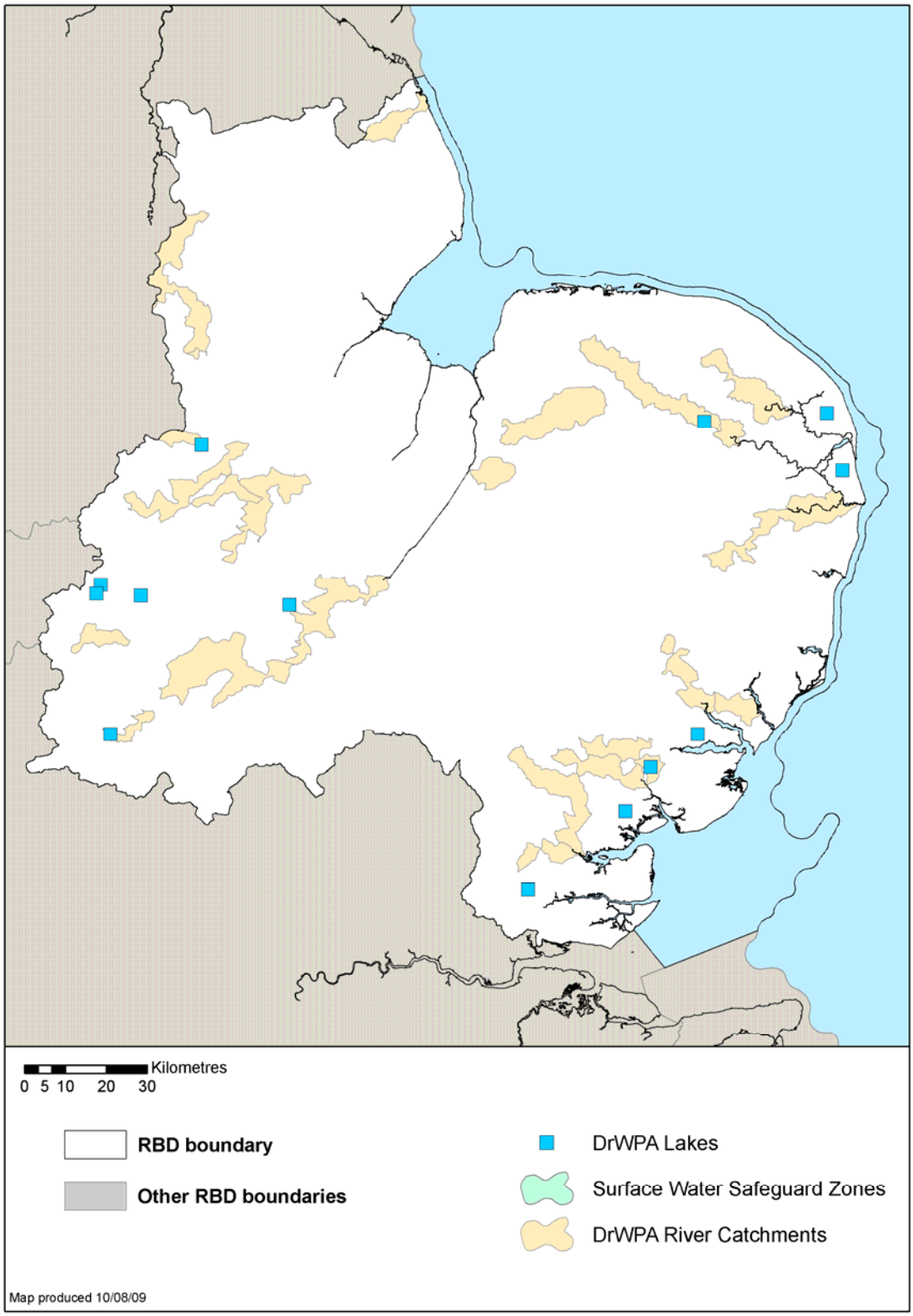
D.1 Location of drinking waters – DrWPA (groundwater and surface water)



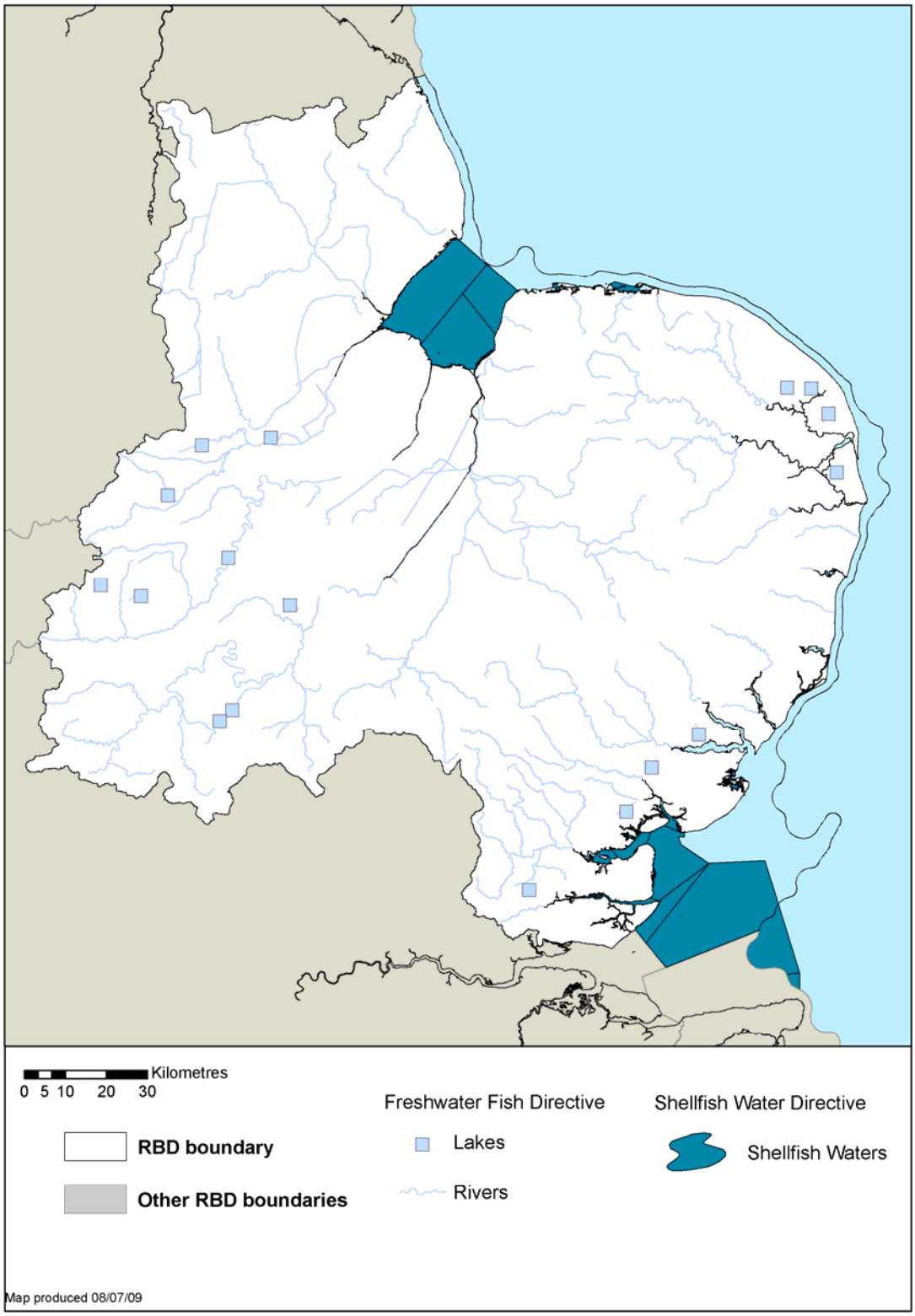
D.2 Location of groundwater DrWPAs including safeguard zones



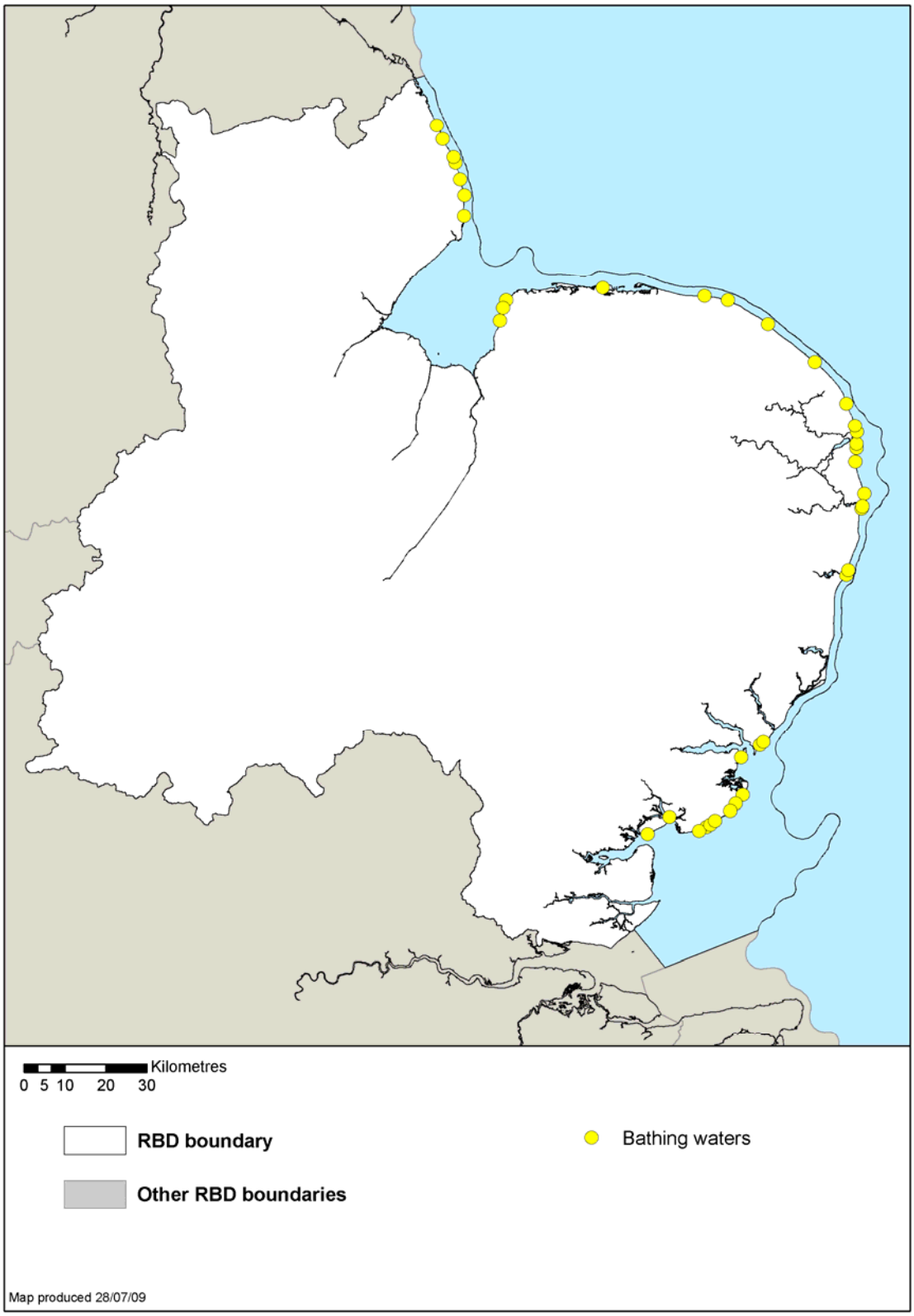
D.3 Location of surface water DrWPAs including safeguard zones



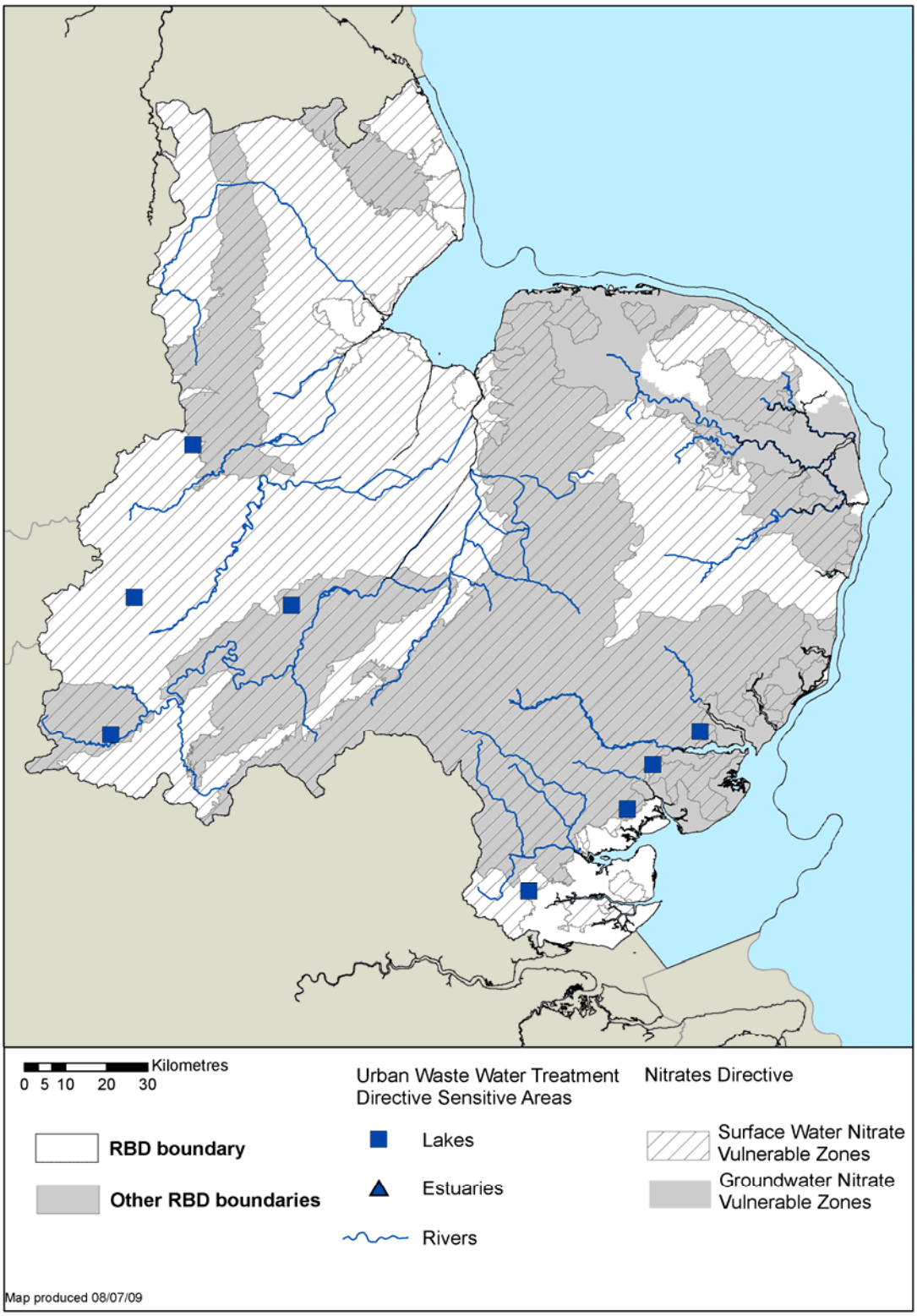
D.4 Location of economically significant species – Freshwater Fish & Shellfish Waters



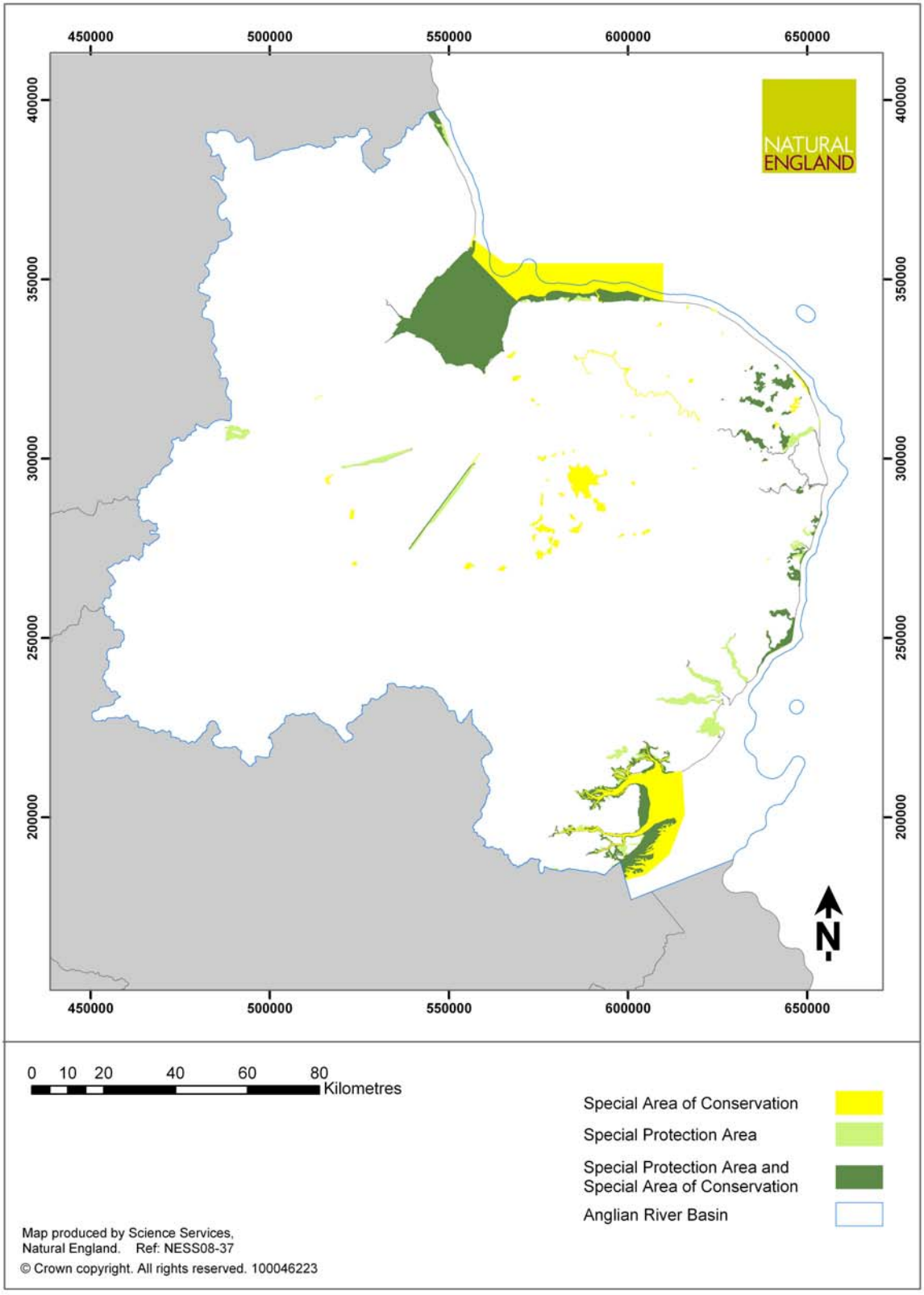
D.5 Location of recreational waters – Bathing Waters



D.6 Location of nutrient sensitive areas – Nitrate Vulnerable Zones & UWWTD Sensitive Areas (NVZs subject to appeals)



D.7 Location of conservation sites – Natura 2000 Protected Areas (water dependent SACs & SPAs)

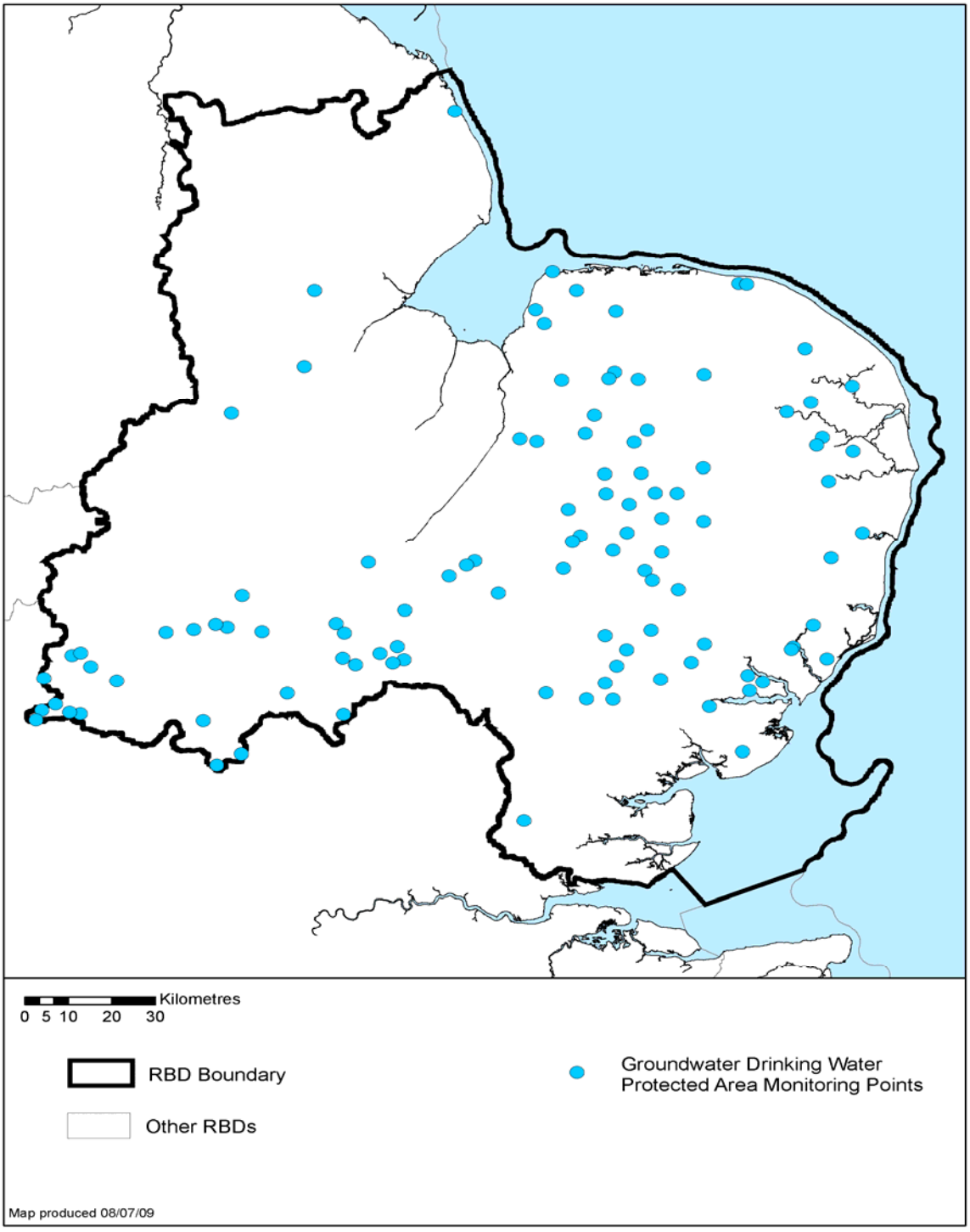


D.3 Monitoring network

Monitoring programmes have been established in the Anglian to assess the status of Protected Areas. The monitoring networks established for Protected Areas are shown in figures:

D.8-D.9 Drinking Waters – DrWPAs
D.10 Economically significant species – Freshwater Fish & Shellfish Waters
D.11 Recreational waters – Bathing Waters
D.12 Nutrient sensitive areas – Nitrate Vulnerable Zones & UWWTD Sensitive Areas (relevant discharges to UWWTD Sensitive Areas only)
D.13 Conservation sites – Natura 2000 Protected Areas (water dependent SACs & SPAs)

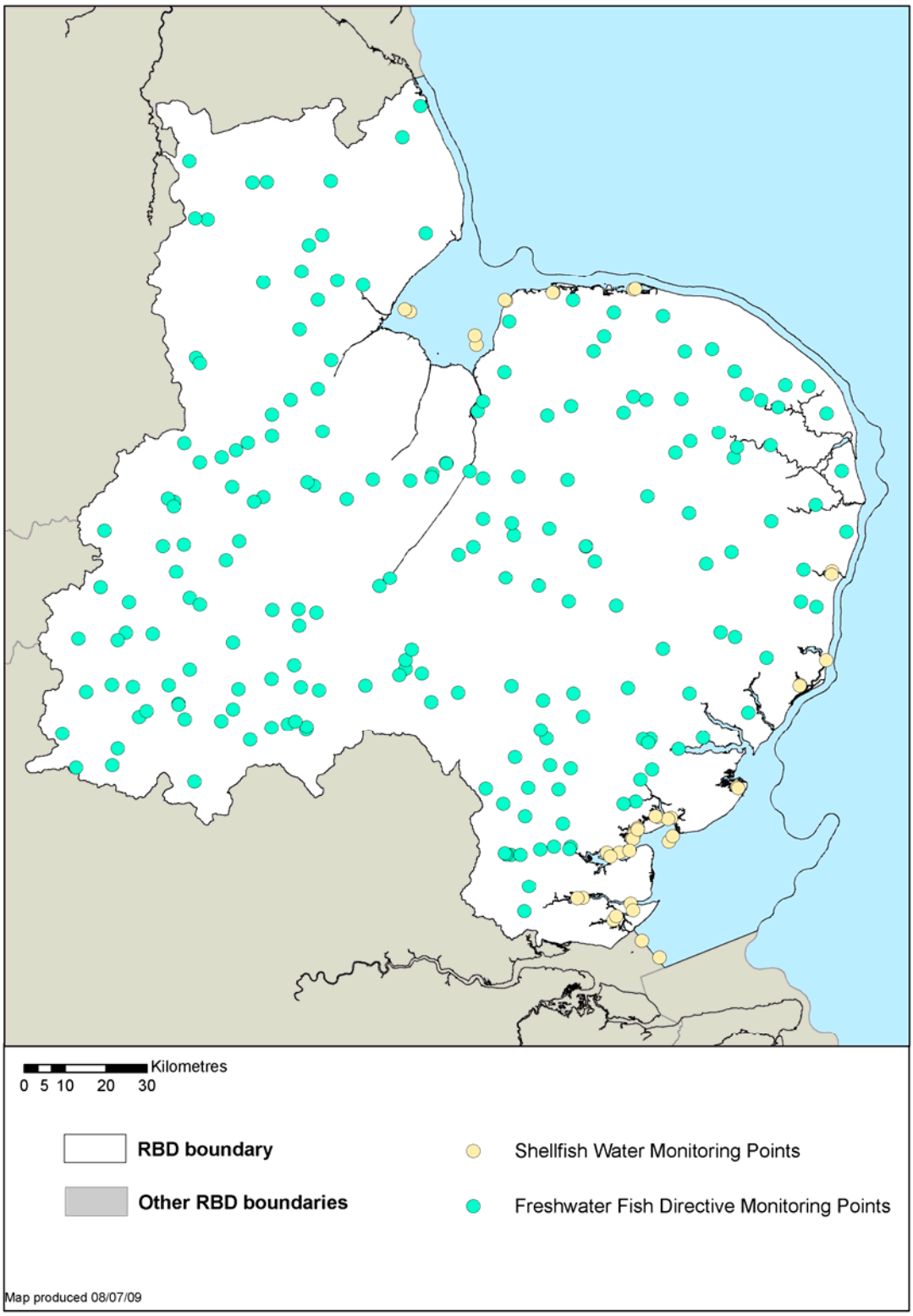
D.8 Monitoring network for drinking waters – DrWPA (groundwater)



D.9 Monitoring network for drinking waters – DrWPA (surface water)

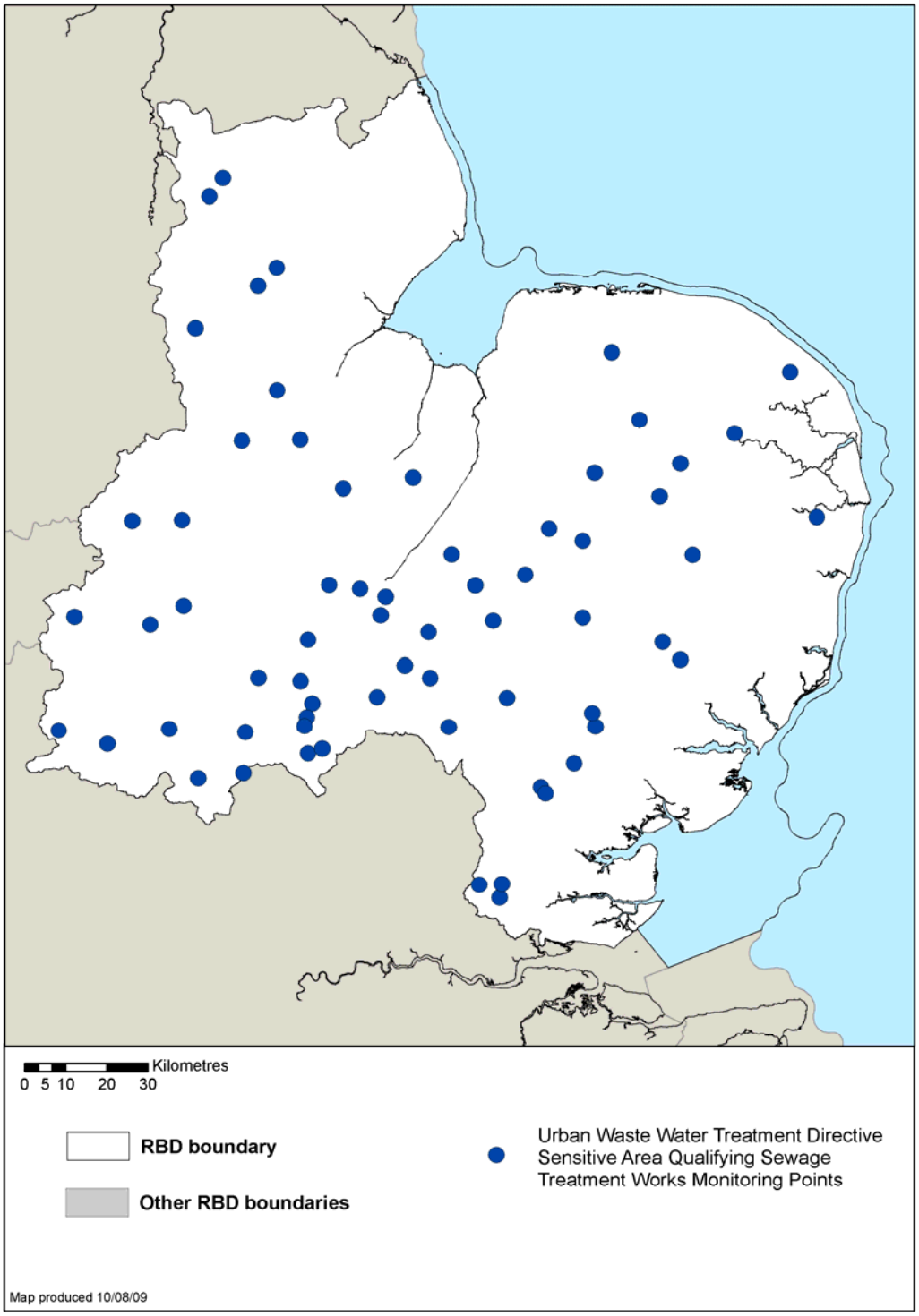
The network is currently under review to confirm the exact location of the monitoring points. This assessment and the monitoring network map will be available in time for the Water Information System for Europe (WISE) reporting in March 2010.

D.10 Monitoring network for economically significant species – Freshwater Fish & Shellfish Waters

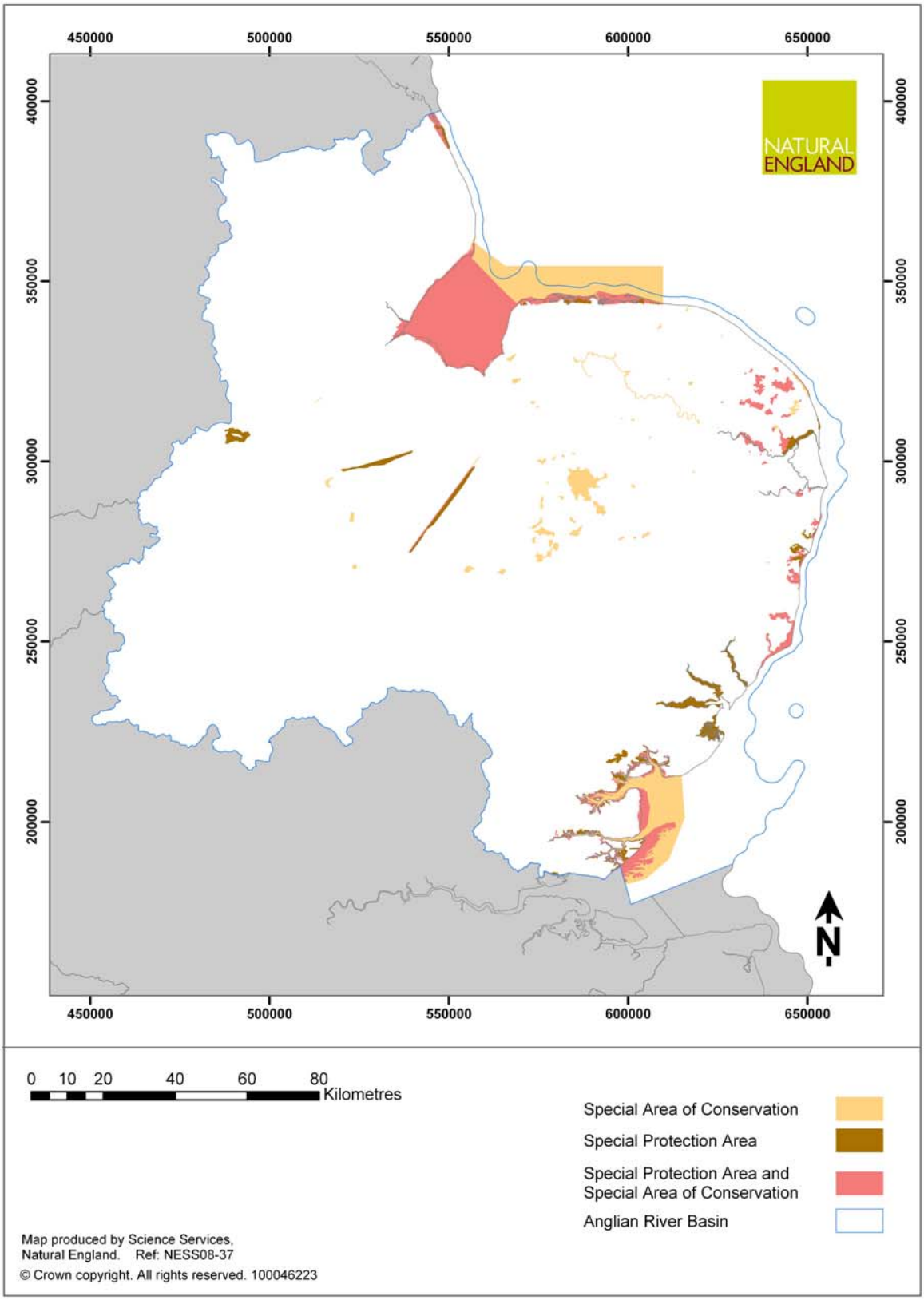


D.11 Monitoring network for recreational waters – Bathing Waters

D.12 Monitoring network for nutrient sensitive areas – Nitrate Vulnerable Zones & UWWTD Sensitive Areas (relevant discharges to UWWTD Sensitive Areas only)



D.13 Monitoring network for conservation sites – Natura 2000 Protected Areas (water dependent SACs & SPAs)



The Habitats Directive requires that member states carry out surveys of the Community interest features For Natura 2000 sites this is undertaken by the UK conservation agencies, under the Joint Nature Conservation Committee (JNCC) Common Standards Monitoring (CSM) framework. Associated guidance sets out a range of attributes, and their targets, for use, where appropriate, in assessing the condition of a feature. Links to this guidance are shown below.

In England, monitoring is undertaken by Natural England of all SACs and SPAs on a six-year cycle. In terrestrial and freshwater protected areas, monitoring is undertaken across whole sites, and an assessment of condition is made for each unit of the underpinning Site of Special Scientific Interest (SSSI). For marine protected areas below low water mark, an overall assessment of condition is made, using available sources of data. The relevant monitoring network is shown in Figure D.13.

Links to Common Standards Monitoring Guidance

Introductory text: http://www.jncc.gov.uk/page-2201
Coastal Habitats: Common Standards Monitoring Guidance for Coastal vegetated shingle Common Standards Monitoring Guidance for Sand dunes Common Standards Monitoring Guidance for Saltmarsh Common Standards Monitoring Guidance for Maritime cliff & Slope
Freshwater Habitats: Common Standards Monitoring Guidance for Canals Common Standards Monitoring Guidance for Ditches Common Standards Monitoring Guidance for Standing water Common Standards Monitoring Guidance for Rivers
Lowland Grassland: Common Standard Monitoring Guidance for Lowland Grassland
Lowland Heath: Common Standards Monitoring Guidance for Lowland heathland
Lowland Wetland: Common Standards Monitoring Guidance for Lowland Wetland
Marine Habitats: Common Standards Monitoring Guidance for Generic Introduction for marine features Common Standards Monitoring Guidance for Littoral rock and inshore sublittoral rock (Reefs) Common Standards Monitoring Guidance for Littoral sediment flats (mud/sand flats) Common Standards Monitoring Guidance for Inshore sublittoral sediments (sandbanks) Common Standards Monitoring Guidance for Estuaries Common Standards Monitoring Guidance for Inlets and Bays Common Standards Monitoring Guidance for Sea Caves Common Standards Monitoring Guidance for Lagoons
Upland Habitats: Common Standards Monitoring Guidance for Upland Habitats
Woodland: Common Standards Monitoring Guidance for Woodland
Reptiles and amphibians: Common Standards Monitoring Guidance for Reptiles and Amphibians
Birds: Common Standards Monitoring Guidance for Birds
Fish and freshwater fauna:

Common Standards Guidance on Freshwater Fauna
Marine mammals: Common Standards Monitoring Guidance for Marine Mammals
Terrestrial mammals (otters and bats etc): Common Standards Monitoring Guidance for Terrestrial Mammals
Vascular plants (including freshwater and wetland plants): Common Standards Monitoring Guidance for Vascular Plants
Bryophytes and Lichens: Common Standards Monitoring Guidance for Bryophytes and Lichens

D.4 Objectives

Drinking Water Protected Areas

The objectives for Drinking Water Protected Areas (DrWPAs) are to:

- Ensure that, under the water treatment regime applied, the drinking water produced meets the requirements of the Drinking Water Directive; and
- Ensure necessary protection in the DrWPA with the aim of avoiding deterioration in water quality in order to reduce the level of purification treatment required in producing drinking water.

The first objective will be achieved by meeting the requirements of the Drinking Water Directive (these include both the standards in the Directive and any UK requirements to ensure drinking water is free from contamination that could constitute a danger to human health).

The second objective will be achieved by putting in place actions that aim to ensure that there is no deterioration in water quality at abstractions used for drinking water supply.

In many cases it may take some time for actions to become effective and either halt or reverse deterioration. Providing sufficient actions are in place, the objective is met.

As with other Water Framework Directive objectives, actions should be in place by December 2012 but extensions of time can be used where the actions needed to meet the objective in the first cycle of river basin management planning are not technically feasible or are disproportionately expensive.

Economically Significant Species (Freshwater Fish Waters)

The objective for freshwater fish waters designated under the Freshwater Fish Directive is:

- To protect or improve the quality of running or standing freshwaters to enable them to support fish belonging to:
    - Indigenous species offering a natural diversity; or
    - Species the presence of which is judged desirable for water management purposes by the competent authorities of the Member States

This objective will be achieved by meeting the imperative standards and endeavouring to respect the guideline standards of the Freshwater Fish Directive.

The Freshwater Fish Directive will be repealed in 2013. When this occurs these protected areas must be afforded at least the same level of protection as given by the Freshwater Fish Directive.

Economically Significant Species (Shellfish Waters)

The objective for shellfish waters designated under the Shellfish Water Directive is:

- To protect and, where needed, improve the quality of shellfish waters in order to support shellfish (bivalve and gastropod molluscs) life and growth, and thus contribute to the high quality of shellfish products directly edible by man.

This objective will be achieved by meeting the imperative standards and endeavouring observe the guideline standards of the Shellfish Water Directive.

The Shellfish Water Directive will be repealed in 2013. When this occurs these protected areas must be afforded at least the same level of protection as given by the Shellfish Water Directive.

Recreational Waters (Bathing Waters)

The objective, until the end of 2014, for bathing waters designated under the current Bathing Waters Directive is:

- to protect the environment and public health whilst bathing.

This objective will be achieved by meeting the imperative standards and endeavouring to meet the guideline standards of the current Bathing Waters Directive.

The objective, from the end of 2014, for bathing waters designated under the revised Bathing Waters Directive is:

- to preserve, protect and improve the quality of the environment and to protect human health by complementing Directive 2000/60/EC.

This objective will be achieved by meeting the ‘sufficient’ quality standards of the revised Bathing Waters Directive; and by taking such realistic and proportionate measures considered appropriate with a view to increasing the number of bathing waters classified as ‘excellent’ or ‘good’.

Nutrient Sensitive Areas (Nitrate Vulnerable Zones)

The general objective of the Nitrates Directive is to:

- reduce water pollution caused or induced by nitrates from agricultural sources and
- prevent further such pollution

This objective will be achieved through designating Nitrate Vulnerable Zones (NVZs) and action programmes being implemented within them. NVZs comprise all land draining to “polluted waters” as defined by the Directive. A Code of Good Agricultural Practice has also been published, which provides advice to all farmers on how to reduce nitrate losses to the environment.

Nutrient Sensitive Areas (Urban Waste Water Treatment Directive)

The general objective of the Urban Waste Water Treatment Directive (UWWTD) is:

- To protect the environment from the adverse effects of urban waste water discharges and waste water discharges from certain industrial sectors.

A sensitive area in the UWWTD is a water body identified as affected by eutrophication or having a surface water abstraction affected by elevated nitrate concentrations. Designating Sensitive Areas is a trigger for action to reduce or prevent further pollution caused by nutrients.

The general objective for Sensitive Areas will be achieved by ensuring discharges from relevant urban waste water treatment plants meet the appropriate emission standards set out in the Directive.

Natura 2000 Protected Areas (water dependent SACs & SPAs)

The objective for Natura 2000 Protected Areas identified in relation to relevant areas designated under the Habitats Directive is to:

- Protect and, where necessary, improve the status of the water environment to the extent necessary to achieve the conservation objectives that have been established for the protection or improvement of the site's natural habitat types and species of Community importance in order to ensure the site contributes the maintenance of, or restoration to favourable conservation status[3].

The objective for Natura 2000 Protected Areas identified in relation to relevant areas designated under the Birds Directive is to:

- Protect and where necessary improve the water environment to the extent necessary to achieve the conservation objectives that have been established for the protection or improvement of the site in order to ensure that the site contributes to the conservation (survival and reproduction in their area of distribution) of birds species listed in Annex I of the Birds Directive.

Where a Natura 2000 Protected Area forms part of a water body or where a water body lies within a Natura 2000 Protected Area, the Water Framework Directive status objectives apply in addition to the requirement to maintain at favourable conservation status or restore it to that status. Some water bodies that coincide with Natura 2000 Protected Areas have been designated as artificial or heavily modified; in these cases the aim to achieve good ecological potential applies in addition to the objective of favourable conservation status.

Annex B sets out the status objectives for each water body and indicates where the water body coincides with a Natura 2000 Protected Area. The protected area objectives are independent of the water body status objectives in Annex B but all objectives have to be met in accordance with each of the EC Directives that underpin them. It is important to note that

[3] "Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or restore to favourable conservation status the water-dependent habitats and species for which the Protected Area is designated". Where this term is used in the River Basin Management Plans, the above definition applies.

water body status objectives in Annex B will not always fully reflect the Natura 2000 Protected Area objectives in this Annex even where the element is the same, for example phosphate. This can be for a number of reasons, for example the size and scale of water bodies under the Water Framework Directive may be larger than waters identified as protected areas; or the use of a particular environmental standard or condition is different under the Water Framework Directive compared with the EC Habitats and Birds Directives. It is possible for a water body to meet the objectives for 'good status' but fail the Natura 2000 Protected Area objective of maintenance of, or restoration to, favourable conservation status. It is also possible to meet favourable conservation status (for example for salmon) but fail to achieve 'good status' in a coincident water body (for example for fish since the Water Framework Directive requires action to protect and restore a wider range of fish species).

Although the objective to restore or maintain favourable conservation status in Natura 2000 sites is mandated by the EC Habitats and Birds Directives, there is no specific date for achieving it. The Water Framework Directive introduces the 2015 deadline, which applies to the Natura 2000 Protected Areas (water dependent SACs and SPAs) listed in this annex. If the protected area is also a 'water body', or forms part of a 'water body', the deadline for the restoration to favourable conservation status may be extended where the conditions in Article 4.4 of the Water Framework Directive are met. If the protected area is not a water body, for example fens and bogs, the deadline for restoration to favourable conservation status cannot be extended.

D.5 Compliance (results of monitoring)[4]

Drinking Water Protected Areas

Groundwater

The Groundwater Directive (2006/118/EC) requires that for good chemical status to be achieved, for groundwater bodies, DrWPA objectives must be met. Therefore one of the five quality elements for groundwater considers drinking water protection (Article 7 compliance is an integral part of groundwater chemical status). The results for all quality elements for groundwater are shown in Annex B tables. The specific results of the DrWPA assessment are shown in Figures D.14, D.15 and D.16. Figure D.14 also identifies the risk of failure of this objective, the pollutant(s) causing the failure (where relevant) and proposed Safeguard Zones. Safeguard Zones are areas in which actions will be targeted to tackle the specific causes of DrWPA objective failure, or risk of failure. Further details on actions can be found in Annex C. Where a water body will not achieve good status by 2015 an alternative objective has been set and justification for this can be found in Annex B and explained in Annex E.

Figure D.14 Results of monitoring for groundwater DrWPAs (including risk of failure and proposed safeguard zones)

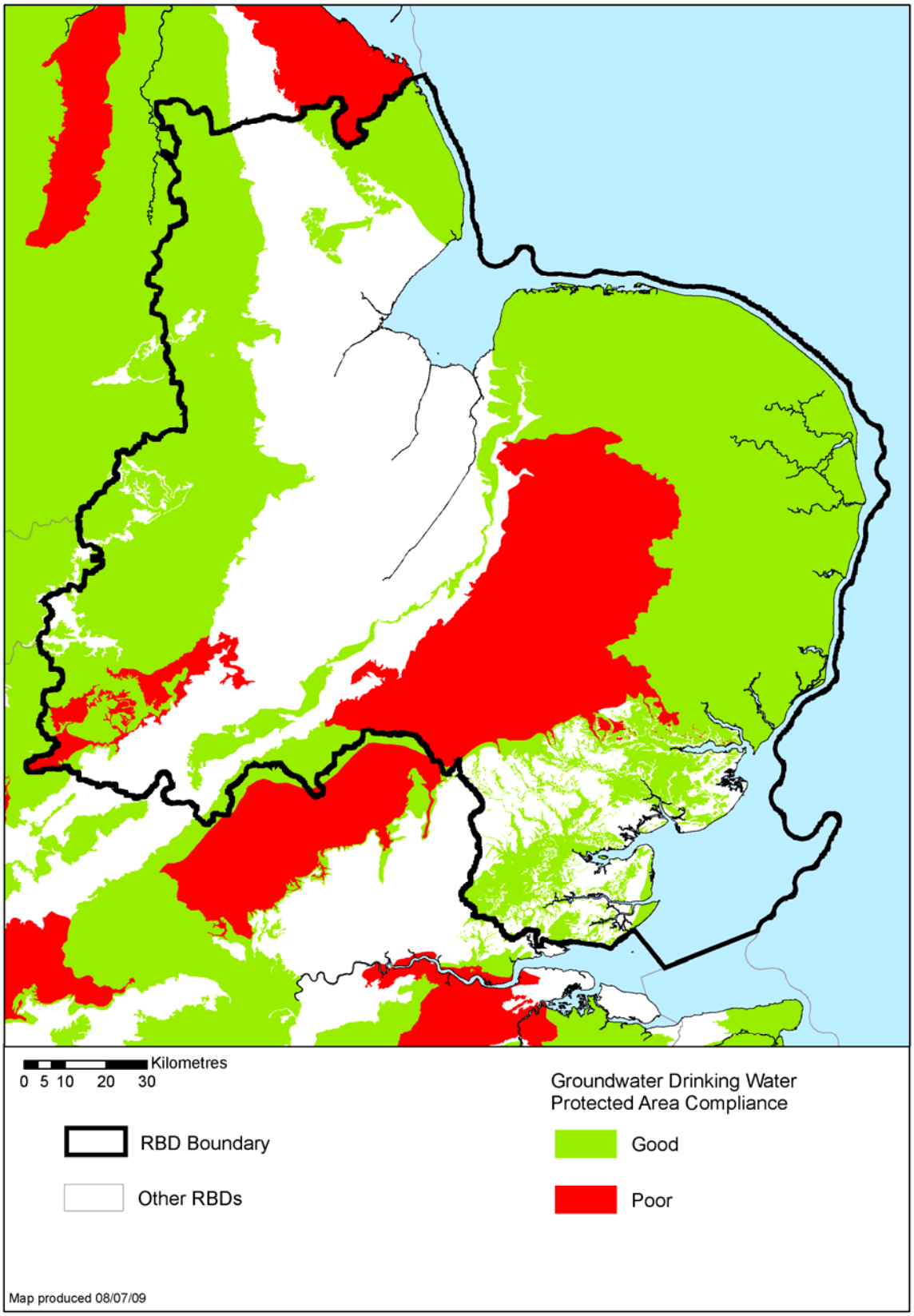
GWB ID	Groundwater DrWPA name	Risk	Compliance status (good, poor)	Chemical causing poor status	Proposed Safeguard Zones
GB40501G400100	North Norfolk Chalk	Probably At Risk	GOOD		GLANDFORD
GB40501G400200	North West Norfolk Chalk	Probably At Risk	GOOD		Not yet defined/not required

[4] EC Guideline standards (rather than UK Guideline) are used for Protected Area reporting purposes in line with directive reporting to the European Commission.

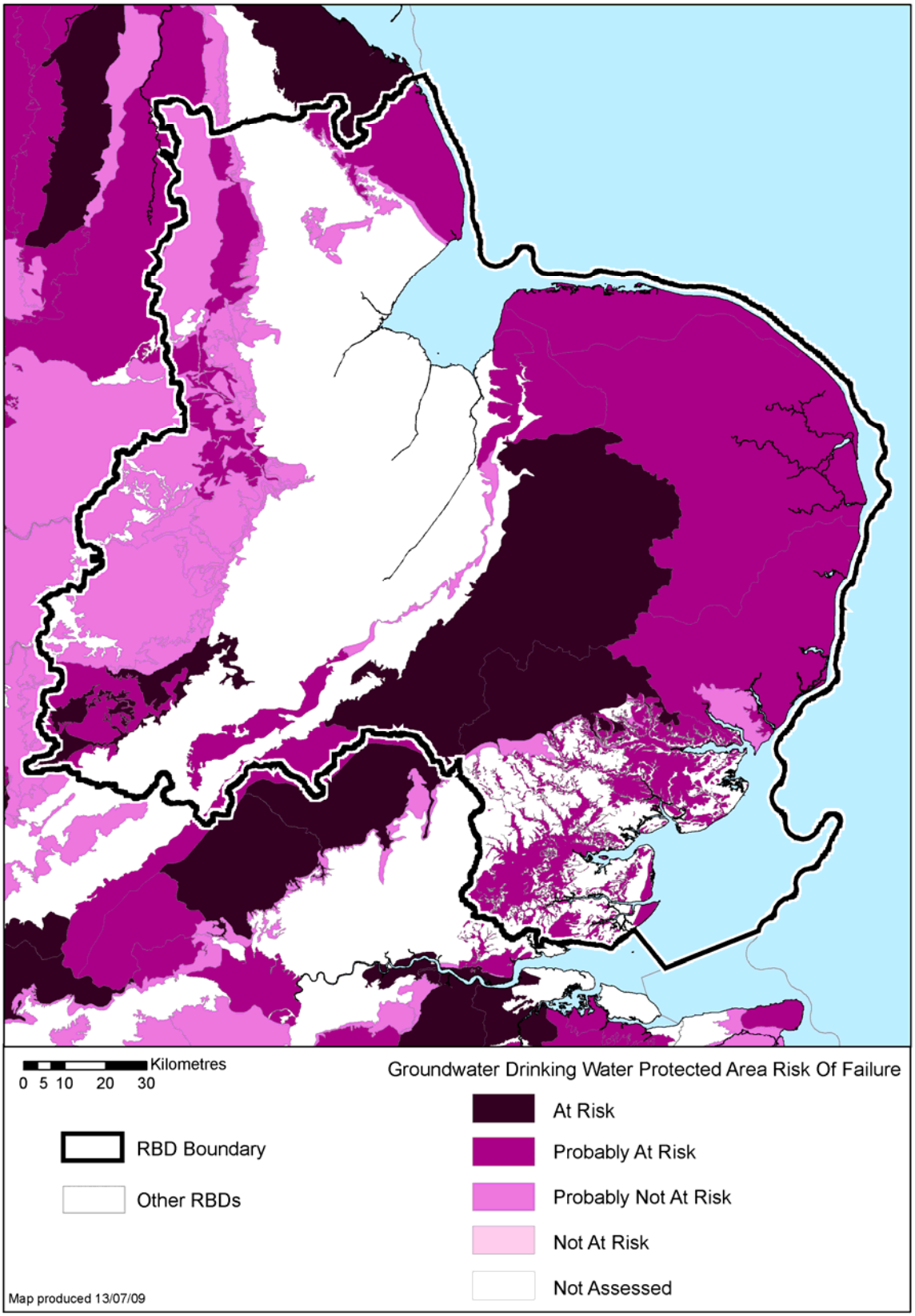
GWB ID	Groundwater DrWPA name	Risk	Compliance status (good, poor)	Chemical causing poor status	Proposed Safeguard Zones
GB40501G400300	Broadland Rivers Chalk & Crag	Probably At Risk	GOOD		Not yet defined/not required
GB40501G400400	North West Norfolk Sandringham Sands	Probably At Risk	GOOD		Not yet defined/not required
GB40501G400500	Cam and Ely Ouse Chalk	At Risk	POOR	NITRATE AS NO3	BABRAHAM, BRETENHAM, EUSTON, FLEAM DYKE 1, FOWLMERE, FULBOURN 2, LINTON, MELBOURN, MORDEN GRANGE, NORTH PICKENHAM, RISBY BORE NO 2
GB40501G400600	Waveney and East Suffolk Chalk & Crag	Probably At Risk	GOOD		Not yet defined/not required
GB40501G400700	North Essex Chalk	At Risk	POOR	NITRATE AS NO3	Not yet defined/not required
GB40501G401600	Steeping Long Eau Little Eau Chalk Unit	Probably At Risk	GOOD		Not yet defined/not required
GB40501G401700	Steeping Gt Eau Long Eau/Witham Spilsby Sandstone	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G401800	Felixstowe Peninsula Crag & Chalk	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G402200	Upper Bedford Ouse Woburn Sands	Probably At Risk	GOOD		Not yet defined/not required
GB40501G402300	Upper Bedford Ouse Oolite Principal 1	At Risk	POOR	NITRATE AS NO3	Not yet defined/not required
GB40501G444800	Witham Limestone Unit A	Probably At Risk	GOOD		Not yet defined/not required
GB40501G444900	Blisworth Limestone Rutland formation (South)	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G445100	Witham Limestone Unit B	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G445300	Welland Mid Jurassic Unit	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G445400	Nene Northampton Sands	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G445500	Northampton Sands	Probably Not At Risk	GOOD		Not yet defined/not required

GWB ID	Groundwater DrWPA name	Risk	Compliance status (good, poor)	Chemical causing poor status	Proposed Safeguard Zones
GB40501G445600	Upper Bedford Ouse Principal Oolite 2	At Risk	POOR	NITRATE AS NO3	Not yet defined/not required
GB40501G445700	Cam and Ely Ouse Woburn Sands	Probably Not At Risk	GOOD		Not yet defined/not required
GB40501G445900	Welland Limestone Unit A	Probably At Risk	GOOD		Not yet defined/not required
GB40502G304000	Welland Lower Jurassic Unit	Probably Not At Risk	GOOD		Not yet defined/not required
GB40502G400900	North Essex Lower London Tertiaries	Probably Not At Risk	GOOD		Not yet defined/not required
GB40502G401300	Upper Bedford Ouse Oolite Secondary	Probably At Risk	GOOD		Not yet defined/not required
GB40502G401400	Witham Lias U	Probably Not At Risk	GOOD		Not yet defined/not required
GB40502G402400	Nene Mid Lower Jurassic Unit	Probably Not At Risk	GOOD		Not yet defined/not required
GB40502G445000	Cornbrash (South)	Probably Not At Risk	GOOD		Not yet defined/not required
GB40502G446000	Welland Limestone Unit B	Probably Not At Risk	GOOD		Not yet defined/not required
GB40503G000100	Witham Bain and Gravels	Probably Not At Risk	GOOD		Not yet defined/not required
GB40503G000400	Essex Gravels	Probably At Risk	GOOD		Not yet defined/not required
GB40601G603000	Upper Bedford Ouse Chalk	Probably At Risk	GOOD		RUNLEY WOOD

D.15 Results of monitoring for groundwater DrWPAs



D.16 Results of monitoring for groundwater DrWPAs (risk of failure)



Surface water

The Drinking Water Inspectorate (DWI) are responsible for monitoring and reporting compliance against the Drinking Water Directive (DWD) to meet the requirements of Article 7.2 and will continue to carry out these procedures.

The surface water compliance test to meet the requirements of Article 7.3 is based on the quality of water in the environment at the point of abstraction. Surface water DrWPAs are divided here into those where high confidence of failure is assured (included in Figure D.18) and those where further monitoring is required to confirm failure (included in Figure D.19). Both high and low confidence results are presented as a map in Figure D.17.

All surface water DrWPAs are water bodies. Their water body current status and objectives under the Water Framework Directive are shown in Annex B. The associated actions are shown in Annex C.

For surface water DrWPAs, actions are included in Figures D.18 and D.19 and are also listed according to contributing sector in Annex C. Where a surface water DrWPA will not achieve its objective by 2015, and the conditions for relying on one of the derogations contained in Article 4 of the Water Framework Directive are satisfied, an alternative objective has been set and justification for this can be found in figure D.18. Details are included in Annex E.

D.17 Risk assessment results for surface water DrWPAs

Figure D.18 Actions for surface water DrWPAs at risk of failure (high confidence)

SW DrWPA ID	SW DrWPA name	Parameter	Action	Affected Sector	Contributing Sector	Lead Organisation	Alternative Objective	Justification	Decision Tree Ref
No Actions have been identified									

Figure D.19 Actions for surface water DrWPAs at risk of failure (low confidence)

SW DrWPA ID	SW DrWPA name	Parameter	Action	Affected Sector	Contributing Sector	Lead Organisation
GB105037041320	Salary Brook	Nitrate	Address issue as priority action within this CSF catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	water companies	Agriculture and rural land management	Natural England
GB105033047923	Ouse	Nitrate	Address issue as priority action within this CSF catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	water companies	Agriculture and rural land management	Natural England
GB105033047921	Ouse	Nitrate	Address issue as priority action within this CSF catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	water companies	Agriculture and rural land management	Natural England
GB30538199	Pitsford Water	Nitrate	Address issue as priority action within this CSF catchment	water companies	Agriculture and rural land management	Natural England
GB105032045320	Nene	Nitrate	Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	water companies	Agriculture and rural land management	Environment Agency
GB105031050580	Welland	Nitrate	Address issue as priority action within this CSF catchment. Address drinking water abstraction through Nitrates Action Programme in Nitrates Vulnerable Zone	water companies	Agriculture and rural land management	Natural England
GB105032050290	Willow Brook	Nitrate	Address issue as priority action within this CSF catchment. Address drinking water abstraction	water companies	Agriculture and rural land management	Natural England

SW DrWPA ID	SW DrWPA name	Parameter	Action	Affected Sector	Contributing Sector	Lead Organisation
			through Nitrates Action Programme in Nitrates Vulnerable Zone			
GB105034045900	River Waveney	Bentazone	Re-direct existing CSF resource to address issue.	water companies	Agriculture and rural land management	Natural England
GB105037033530	River Chelmer	Clopyralid	Re-direct existing CSF resource to address issue.	water companies	Agriculture and rural land management	Natural England
GB105037041160	River Blackwater	Clopyralid	Re-direct existing CSF resource to address issue.	water companies	Agriculture and rural land management	Natural England
GB105036040942	Stour DS Lamarsh	Clopyralid	Re-direct existing CSF resource to address issue.	water companies	Agriculture and rural land management	Natural England

Economically Significant Species (Freshwater Fish Waters)

Compliance against objectives for freshwater fish waters has been assessed using the relevant monitoring data from 2008.The results are shown in Figure D.20. The results are also presented as a map in Figure D.21.

Figure D.20 Results of monitoring for economically significant species (freshwater fish waters)

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Great Eau - Extension to source	Salmonid	Guideline fail / Imperative pass
Lymn/Steeping - Lady Wath's Brook to Steeping Relief downstream of confluence	Salmonid	Guideline fail / Imperative pass
Lymn/Steeping - Spilsby Sewage Treatment Works to Lady Waithe's Beck	Salmonid	Guideline fail / Imperative pass
Lymn/Steeping - Langton Beck to Spilsby Sewage Treatment Works	Salmonid	Guideline fail / Imperative pass
Lymn/Steeping - Winceby Beck to Langton Beck	Salmonid	Guideline fail / Imperative pass
Lymn/Steeping - Extension to source	Salmonid	Guideline fail / Imperative pass
Witham - Dogdyke to Grand Sluice	Cyprinid	Guideline fail / Imperative pass
Witham - Bardney to Dogdyke	Cyprinid	Guideline fail / Imperative pass
Witham - Branston Island Lock to Bardney	Cyprinid	Guideline fail / Imperative pass
Old Witham - Barlings Eau to Branston Island Lake	Cyprinid	Guideline fail / Imperative pass
Witham - Fiskerton Sluice to Branston Island Lake	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Witham - Brayford to Barlings Eau	Cyprinid	Guideline fail / Imperative pass
Witham - North Hykeham Sewage Treatment Works to Brayford	Cyprinid	Guideline fail / Imperative pass
Witham - Extension to source	Salmonid	Guideline fail / Imperative fail
Cringle Bk – Extension to source	Salmonid	Guideline fail / Imperative pass
Brant - Sand Beck to Witham	Cyprinid	Guideline fail / Imperative pass
Brant - Extension to source	Cyprinid	Guideline fail / Imperative pass
Till - Cricket Till to Fossdyke Canal	Cyprinid	Guideline fail / Imperative pass
Till - Kexby Beck to Cricket Till	Cyprinid	Guideline fail / Imperative pass
Till - Heapham Beck to Kexby Beck	Cyprinid	Guideline fail / Imperative pass
Till - Somerby Beck to Heapham Beck	Cyprinid	Guideline fail / Imperative pass
Till - Extension to source	Cyprinid	Guideline fail / Imperative pass
Barlings Eau - Short Ferry Pump to Witham	Cyprinid	Guideline fail / Imperative pass
Barlings Eau - Reepham Beck to Short Ferry Pump	Cyprinid	Guideline fail / Imperative pass
Barlings Eau - Nettleham Beck to Reepham Beck	Cyprinid	Guideline fail / Imperative pass
Barlings Eau - Dunholme Beck to Nettleham Beck	Cyprinid	Guideline fail / Imperative pass
Barlings Eau - Faldingworth Grange to Dunholme Brook	Cyprinid	Guideline fail / Imperative pass
Barlings Eau - Extension to source	Cyprinid	Guideline fail / Imperative pass
Bain - Extension to source	Salmonid	Guideline fail / Imperative pass
Kyme Eau - Priory to Witham	Cyprinid	Guideline fail / Imperative pass
Kyme Eau - Cobblers Lock to Priory	Cyprinid	Guideline fail / Imperative pass
Slea New - Boiling Wells to Ruskington Beck	Salmonid	Guideline fail / Imperative pass
Slea New - Extension to source	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
South Forty Foot Drain - Skerth Drain to Boston Dock	Cyprinid	Guideline fail / Imperative pass
South Forty Foot Drain - Helpringham Eau to Skerth Drain	Cyprinid	Guideline fail / Imperative pass
South Forty Foot Drain - Casswells Bridge to Helpringham Eau	Salmonid	Guideline fail / Imperative pass
South Forty Foot Drain - Extension to source	Salmonid	Guideline fail / Imperative pass
Frampton Town Drain - Frampton to New Hammond Beck	Cyprinid	Guideline fail / Imperative pass
Maud Foster Drain - Cowbridge Lock to Haven	Cyprinid	Guideline fail / Imperative pass
Stone Bridge Drain - Sibsey N/Lands to Cowbridge Lock	Cyprinid	Guideline fail / Imperative pass
Stone Bridge Drain - Extension to source	Cyprinid	Guideline fail / Imperative pass
Welland - Marston Trussel Brook to Jordon	Salmonid	Guideline fail / Imperative pass
Welland - Husbands Bosworth to Marston Trussel Brook	Salmonid	Guideline fail / Imperative pass
Welland - Extension to source	Salmonid	Guideline fail / Imperative pass
Welland - Market Harborough Sewage Treatment Works to Eye Brook (3)	Salmonid	Guideline fail / Imperative pass
Welland - Market Harborough Sewage Treatment Works to Eye Brook (2)	Salmonid	Guideline fail / Imperative pass
Welland - Market Harborough Sewage Treatment Works to Eye Brook (1)	Salmonid	Guideline fail / Imperative pass
Welland - Jordan to Market Harborough Sewage Treatment Works	Salmonid	Guideline fail / Imperative pass
Eye Brook - Headwaters to Flood Storage Reservoir	Cyprinid	Guideline pass / Imperative pass
Eye Brook – Extension to source	Cyprinid	Guideline pass / Imperative pass
Chater - Morcott Brook to Fosters Bridge	Salmonid	Guideline fail / Imperative pass
Chater - Headwaters to Morcott Brook	Salmonid	Guideline fail / Imperative pass
Chater - Extension to source	Salmonid	Guideline fail / Imperative pass
Gwash - North Brook to Welland (2)	Salmonid	Guideline fail / Imperative pass
Gwash - North Brook to Welland (1)	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Gwash - Rutland Water to North Brook	Salmonid	Guideline fail / Imperative pass
stillwater - Rutland Water	Cyprinid	Guideline fail / Imperative pass
South Drove Drain - Deeping St Nicholas to Pode Hole Pumping Station	Cyprinid	Guideline fail / Imperative pass
South Drove Drain - Headwaters to Deeping St Nicholas	Cyprinid	Guideline fail / Imperative pass
Thurlby Main Drain - Headwaters to Tongue End Pump	Cyprinid	Guideline fail / Imperative pass
Glen - Blue Gowt Drain to Surfleet Seas End Sluice	Cyprinid	Guideline fail / Imperative pass
Glen - Surfleet to Blue Gowt Drain	Cyprinid	Guideline fail / Imperative pass
Glen - Bourne Eau to Surfleet	Cyprinid	Guideline fail / Imperative pass
Glen - Kates Bridge to Bourne Eau	Salmonid	Guideline fail / Imperative fail
Glen - East & West Glen to Kates Bridge	Salmonid	Guideline fail / Imperative pass
Glen - Extension to source	Salmonid	Guideline fail / Imperative pass
Whilton Branch - Surney Bridges to Weedon	Salmonid	Guideline fail / Imperative pass
Whilton Branch - Headwaters to Surney Bridges	Salmonid	Guideline fail / Imperative pass
Whilton Branch - Extension to source	Salmonid	Guideline fail / Imperative pass
Nene - Bugbrooke to Wootton Brook	Salmonid	Guideline fail / Imperative pass
Nene - Bugbrooke to Bugbrooke Mill	Salmonid	Guideline fail / Imperative pass
Nene - Weedon Brook to Bugbrooke	Salmonid	Guideline fail / Imperative pass
Nene - Whilton Branch to Weedon Brook	Salmonid	Guideline fail / Imperative pass
Nene - Everdon Brook to Whilton Branch	Salmonid	Guideline fail / Imperative pass
Nene - Headwaters to Everdon Brook	Salmonid	Guideline fail / Imperative pass
Brampton Branch - Kingsthorpe Hollow Northampton	Salmonid	Guideline fail / Imperative pass
Brampton Branch - Church Brampton Arm to Kingsthorpe Holl	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Brampton Branch - Moulton Arm to Church Brampton Arm	Salmonid	Guideline fail / Imperative pass
Brampton Branch - Pitsford Arm to Moulton Arm	Salmonid	Guideline fail / Imperative pass
Brampton Branch - Spratton Brook to Pitsford Arm	Salmonid	Guideline fail / Imperative pass
Brampton Branch - Creaton Brook to Spratton Brook	Salmonid	Guideline fail / Imperative pass
Brampton Branch - Headwaters to Creaton Brook	Salmonid	Guideline fail / Imperative pass
Brampton Brnch - Extension to source	Salmonid	Guideline fail / Imperative pass
Nene - Duston Mill to Northampton	Salmonid	Guideline fail / Imperative pass
Nene - Wootton Brook to Duston Mill	Salmonid	Guideline fail / Imperative pass
Nene - Ecton Bk....gt Doddington (2)	Cyprinid	Guideline fail / Imperative pass
Nene - Ecton Bk....gt Doddington (1)	Cyprinid	Guideline fail / Imperative pass
Nene - Northampton...ecton Bk. (2)	Cyprinid	Guideline fail / Imperative pass
Ise - Swanspool Brook to Nene	Salmonid	Guideline fail / Imperative pass
Ise - Harrowden Brook to Swanspool Brook	Salmonid	Guideline fail / Imperative pass
Ise - Pycthley to Harrowden Brook	Salmonid	Guideline fail / Imperative pass
Ise - Slade Brook to Pycthley Brook	Salmonid	Guideline fail / Imperative pass
Ise - Geddington to Slade Brook	Salmonid	Guideline fail / Imperative pass
Ise - Rushton to Geddington (2)	Salmonid	Guideline fail / Imperative pass
Ise - Rushton to Geddington (1)	Salmonid	Guideline fail / Imperative pass
Ise - Desborough to Rushton	Cyprinid	Guideline fail / Imperative pass
Ise - Headwaters to Desborough	Cyprinid	Guideline fail / Imperative pass
Slade Brook - Loddington Arm to Ise	Cyprinid	Guideline fail / Imperative pass
Slade Brook - Headwaters to Loddington Arm (2)	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Slade Brook - Headwaters to Loddington Arm (1)	Cyprinid	Guideline fail / Imperative pass
Willow Brook - Apethorpe to Nene	Salmonid	Guideline fail / Imperative pass
Willow Brook - Blatherwycke Lake to Apethorpe	Cyprinid	Guideline fail / Imperative pass
Willow Brook - Blatherwyke Lake	Cyprinid	Guideline fail / Imperative pass
Willow Brook - Deene Lake to Blatherwycke Lake (2)	Cyprinid	Guideline fail / Imperative pass
Willow Brook - Deene Lake to Blatherwycke Lake (1)	Cyprinid	Guideline fail / Imperative pass
Willow Brook - Extension to source	Cyprinid	Guideline fail / Imperative pass
Nene - Elton to Wittering Brook (2)	Cyprinid	Guideline fail / Imperative pass
Nene - Elton to Wittering Brook (1)	Cyprinid	Guideline fail / Imperative pass
Nene - Islip...elton (4) - Oundle Road Bridge to Elton (2)	Cyprinid	Guideline fail / Imperative pass
Nene - Islip...elton (3) - Oundle Road Bridge to Elton (1)	Cyprinid	Guideline fail / Imperative pass
Nene - Islip...elton (2) - Islip to Oundle Road Bridge	Cyprinid	Guideline fail / Imperative pass
Nene - Islip...elton (1) - Islip to Lilford	Cyprinid	Guideline fail / Imperative pass
Nene - Ringstead to Islip	Cyprinid	Guideline fail / Imperative pass
Nene - Irthlingborough to Ringstead	Cyprinid	Guideline fail / Imperative pass
Nene - Higham Lock to Irthlingborough	Cyprinid	Guideline fail / Imperative pass
Nene - Broadholme Sewage Treatment Works to Higham Lock	Cyprinid	Guideline fail / Imperative pass
Nene - River Ise to Broadholme Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass
Nene - Great Doddington to River Ise	Cyprinid	Guideline fail / Imperative pass
Nene - Wittering Brook to Dog-In-A-Doublet Lock	Cyprinid	Guideline fail / Imperative pass
Ouse - Earith to Willingham Lode	Cyprinid	Guideline fail / Imperative pass
Ouse - Offord Darcy to Brampton	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Ouse - St Neots to Offord Darcy	Cyprinid	Guideline fail / Imperative pass
Ouse - B1428 Bridge to St Neots	Cyprinid	Guideline fail / Imperative pass
Ouse - Confluence of Ivel to the B1428 Bridge	Cyprinid	Guideline fail / Imperative pass
Ouse - Willington to confluence with Ivel	Cyprinid	Guideline fail / Imperative pass
Ouse - Confluence of Elstow Brook to Willington	Cyprinid	Guideline fail / Imperative pass
Ouse - Confluence of New Cut to confluence of Elstow Brook	Cyprinid	Guideline fail / Imperative pass
Ouse - Turvey to Harrold Mill Road Bridge	Cyprinid	Guideline fail / Imperative pass
Ouse - Olney to Turvey	Cyprinid	Guideline fail / Imperative pass
Ouse - Manor Farm to Olney	Cyprinid	Guideline fail / Imperative pass
Ouse - Tyringham Hall to Manor Farm	Cyprinid	Guideline fail / Imperative pass
Ouse - Sherington to Tyringham Hall	Cyprinid	Guideline fail / Imperative pass
Ouse - Sherington Bridge to Sherington	Cyprinid	Guideline fail / Imperative pass
Ouse - Tickford Abbey to Sherrington Bridge	Cyprinid	Guideline fail / Imperative pass
Ouse - Extension to source	Cyprinid	Guideline fail / Imperative pass
Babingley - Estuary Farm to the River Great Ouse	Salmonid	Guideline fail / Imperative pass
Nar - Extension to source	Salmonid	Guideline fail / Imperative pass
Pophams Eau - Three Holes to Nordelph	Cyprinid	Guideline fail / Imperative fail
Middle Level Main Drain - Three Holes to Wiggenhall St Germans	Cyprinid	Guideline fail / Imperative fail
Sixteen Foot Drain - B1099 Bedlam Farm to Three Holes	Cyprinid	Guideline fail / Imperative pass
Sixteen Foot Drain - Forty Foot Drain to B1099 Bedlam Farm	Cyprinid	Guideline fail / Imperative pass
Twenty Foot River - Franks Farm to River Nene (Old Course)	Cyprinid	Guideline fail / Imperative fail
Twenty Foot River - Angle Corner Bridge to Franks Farm	Cyprinid	Guideline fail / Imperative fail

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Pophams Eau - River Nene (Old Course) to Three Holes	Cyprinid	Guideline fail / Imperative fail
Well Creek - Lower Corner Farm to Nordelph	Cyprinid	Guideline fail / Imperative pass
Well Creek - Nordelph to Salters Lode	Cyprinid	Guideline fail / Imperative pass
Old Couse Nene - Confluence with Kings Dyke to Yaxley Lode	Cyprinid	Guideline fail / Imperative pass
Old Course Nene - Stanground Sluice to confluence with Kings Dike	Cyprinid	Guideline fail / Imperative pass
Old Course Nene - Railway Bridge March to Pophams Eau	Cyprinid	Guideline fail / Imperative pass
Old Course Nene - Floods Ferry to the Railway Bridge at March	Cyprinid	Guideline fail / Imperative pass
Old Course Nene - Wells Bridge Forty Foot to Floods Ferry	Cyprinid	Guideline fail / Imperative pass
Bevills Leam - Nightingales Corner to Whittlesey Dyke	Cyprinid	Guideline fail / Imperative fail
Bevills Leam - Extension to source	Cyprinid	Guideline fail / Imperative fail
Ten Mile River - Confluence of the Rivers Lark and Ouse to Ferry Farm	Cyprinid	Guideline fail / Imperative pass
Ouse - Downstream of Ely Sewage Treatment Works to the River Lark	Cyprinid	Guideline fail / Imperative pass
Ouse - Soham Lode to downstream of Ely Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass
Wissey - Dugmore Farm to the Mill Hilborough	Salmonid	Guideline fail / Imperative pass
Wissey - Lower Farm South Pickenham to Dugmore Farm	Salmonid	Guideline fail / Imperative pass
Wissey - Necton to Lower Farm South Pickenham	Salmonid	Guideline fail / Imperative pass
Wissey - Manor Farm Bradenham to Necton	Salmonid	Guideline fail / Imperative pass
Wissey - Extension to source	Salmonid	Guideline fail / Imperative pass
Little Ouse - Extension to source	Cyprinid	Guideline fail / Imperative pass
Twelve Foot Drain - Extension to source	Cyprinid	Guideline fail / Imperative pass
Thet - Extension to source	Cyprinid	Guideline fail / Imperative pass
Sapiston - Upstream of Mill Farm Track to confluence at Little Ouse	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Black Bourn - Pakenham Stream to Mill Farm Bardwell	Cyprinid	Guideline fail / Imperative pass
Black Bourn - The A1088 road bridge to Pakenham Stream	Cyprinid	Guideline fail / Imperative pass
Black Bourn - Extension to source	Cyprinid	Guideline fail / Imperative pass
Lark - Cavenham Stream to Tuddenham Stream	Salmonid	Guideline fail / Imperative pass
Lark - West Stow to Cavenham Stream	Salmonid	Guideline fail / Imperative pass
Lark - Fornham St Genevieve to West Stow	Cyprinid	Guideline fail / Imperative pass
Lark - The A134 road bridge at Bury St Edmunds to Fornham St Genevieve	Cyprinid	Guideline fail / Imperative pass
Lark - River Linnet to the A134 road bridge at Bury St Edmunds	Cyprinid	Guideline fail / Imperative pass
Lark - Extension to source	Cyprinid	Guideline fail / Imperative pass
Cam - Confluence with Swaffham Bulbeck Lode to Soham Lode	Cyprinid	Guideline fail / Imperative pass
Cam - Clayhithe to confluence with Swaffham Bulbeck Lode	Cyprinid	Guideline fail / Imperative pass
Cam - The A45 road bridge to Clayhithe	Cyprinid	Guideline fail / Imperative pass
Cam - Extension to source	Salmonid	Guideline fail / Imperative pass
Bourn Brook - B1046 to the M11 road bridge	Cyprinid	Guideline fail / Imperative pass
Bourn Brook - Wimpole Way to the B1046 road bridge	Cyprinid	Guideline fail / Imperative pass
Rhee - Barrington to Cantelupe Farm	Salmonid	Guideline fail / Imperative pass
Rhee - Whaddon Brook to Barrington	Salmonid	Guideline fail / Imperative pass
Rhee - Mill River to Whaddon Brook	Salmonid	Guideline fail / Imperative pass
Rhee - Hooks Mill to Mill River	Salmonid	Guideline fail / Imperative pass
Rhee - Ashwell Village to Hooks Mill	Salmonid	Guideline fail / Imperative pass
Shep - Black Peak to River Rhee	Salmonid	Guideline fail / Imperative pass
Granta - Road Bridge at Babraham to the River Cam	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Granta - The A11 road bridge to the road bridge at Babraham	Salmonid	Guideline fail / Imperative pass
Granta - Fish Pond Moat to the A11 road bridge	Salmonid	Guideline fail / Imperative pass
Granta - Bartlow to Fish Pond Moat Little Linton	Salmonid	Guideline fail / Imperative pass
Granta - Extension to source	Salmonid	Guideline fail / Imperative pass
Kym - Pastures Farm to confluence with the River Ouse	Cyprinid	Guideline fail / Imperative pass
Kym - Rushey Farm to Pastures Farm	Cyprinid	Guideline fail / Imperative pass
Kym - Great Staughton to Rushey Farm	Cyprinid	Guideline fail / Imperative pass
Kym - Tilbrook to Great Staughton	Cyprinid	Guideline pass / Imperative pass
Kym - Extension to source	Cyprinid	Guideline pass / Imperative pass
Ivel - Girtford to Tempsford	Salmonid	Guideline fail / Imperative pass
Ivel - Manor Farm to Girtford	Cyprinid	Guideline fail / Imperative pass
Ivel - Confluence with Ivel Navigation to Manor Farm	Cyprinid	Guideline fail / Imperative pass
Ivel - Confluence with the River Hiz to confluence with Ivel Navigation	Cyprinid	Guideline fail / Imperative pass
Ivel - Baldock to confluence with the River Hiz	Cyprinid	Guideline fail / Imperative pass
Millbridge-Common Brook - Galley Hill to the River Ivel	Cyprinid	Guideline fail / Imperative fail
Millbridge/Common Bk - Extension to source	Cyprinid	Guideline fail / Imperative fail
Ivel Navigation - Confluence with the River Flit at Shefford to confluence with the River Ivel	Salmonid	Guideline fail / Imperative pass
Flit - Chicksands Priory to Shefford	Cyprinid	Guideline fail / Imperative pass
Flit - Beadlow to Chicksands Priory	Cyprinid	Guideline fail / Imperative pass
Flit - Hall End to Beadlow	Cyprinid	Guideline fail / Imperative pass
Flit - Extension to source	Cyprinid	Guideline fail / Imperative pass
Campton Brook - Rectory Farm to confluence with the River Flit	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Campton Bk. - Extension to source	Cyprinid	Guideline fail / Imperative pass
Hiz - Holwellbury Brook to the Grange Henlow	Cyprinid	Guideline fail / Imperative pass
Hiz - Confluence with the River Oughton to Holwellbury Bridge	Cyprinid	Guideline fail / Imperative pass
Purwell - Railway Line to confluence with the River Oughton	Cyprinid	Guideline fail / Imperative pass
Purwell - Extension to source	Cyprinid	Guideline fail / Imperative pass
Elstow Brook - The A421 road to Octagon Farm	Cyprinid	Guideline fail / Imperative pass
Elstow Brook - Stewartby Lake Outlet to the A421 road	Cyprinid	Guideline fail / Imperative pass
Ouzel - Confluence with Broughton Brook to Birchmoor Farm	Cyprinid	Guideline fail / Imperative pass
Ouzel - The A421 road bridge to confluence with Broughton Brook	Cyprinid	Guideline fail / Imperative pass
Ouzel - Eaton Leys Farm to the A421 road bridge	Cyprinid	Guideline fail / Imperative pass
Ouzel - Stapleford Mill to Eaton Leys Farm	Cyprinid	Guideline fail / Imperative fail
Ouzel - Linslade Sewage Treatment Works to Stapleford Mill	Cyprinid	Guideline fail / Imperative fail
Ouzel Brook - Stanbridgeford Sewage Treatment Works to the A4146 road bridge	Cyprinid	Guideline fail / Imperative fail
Ouzel Bk - Extension to source	Cyprinid	Guideline fail / Imperative fail
Broughton Brook - The M1 Motorway to Ouzel	Cyprinid	Guideline fail / Imperative pass
Broughton Brook - Birchmoor Green to the M1 Motorway	Cyprinid	Guideline fail / Imperative pass
Tove - Radmore to confluence with Blakesley Brook	Cyprinid	Guideline fail / Imperative pass
Tove - Manor Farm to Radmore	Salmonid	Guideline fail / Imperative fail
Tove - Headwaters to Manor Farm	Salmonid	Guideline fail / Imperative fail
Padbury Bk. - Extension to source	Cyprinid	Guideline fail / Imperative pass
Claydon Brook - Extension to source	Cyprinid	Guideline fail / Imperative fail
Stiffkey - Extension to source	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Binham Tributary - Westgate to Stiffkey	Salmonid	Guideline fail / Imperative pass
Wensum - Whissonett to Sculthorpe	Salmonid	Guideline fail / Imperative pass
Wensum - Extension to source	Salmonid	Guideline fail / Imperative pass
Kings Bk - Extension to source	Cyprinid	Guideline fail / Imperative pass
Waveney - North Cove Staithe to Burgh St Peter	Cyprinid	Guideline fail / Imperative pass
Waveney - Beccles Yacht Station to North Cove Staithe	Cyprinid	Guideline fail / Imperative pass
Waveney - Shipmeadow to Beccles Yacht Station	Cyprinid	Guideline fail / Imperative pass
Waveney - Ellingham Mill to Shipmeadow	Salmonid	Guideline fail / Imperative pass
Waveney - Bungay to Ellingham Mill	Salmonid	Guideline fail / Imperative pass
Waveney - Mendham Bridge to Bungay	Salmonid	Guideline fail / Imperative pass
Waveney - Needham Mill to Mendham Bridge	Salmonid	Guideline fail / Imperative pass
Waveney - Billingford...needham Mill	Salmonid	Guideline fail / Imperative pass
Waveney - Denmark Bridge to Billingford Bridge	Cyprinid	Guideline fail / Imperative pass
Yare - Brundall to Cantley Red House	Cyprinid	Guideline fail / Imperative pass
Yare - Bramerton W.E. to Brundall	Cyprinid	Guideline fail / Imperative pass
Yare - Crown Point to Bramerton W.E	Cyprinid	Guideline fail / Imperative pass
Yare - Trowse Mill to Crown Point	Cyprinid	Guideline fail / Imperative pass
Yare - Extension to source	Cyprinid	Guideline fail / Imperative pass
Tas - Markshall Bridge to the River Yare	Salmonid	Guideline fail / Imperative pass
Tas - Stoke Mill to Markshall Bridge	Salmonid	Guideline fail / Imperative pass
Tas - Tasburgh to Stoke Mill	Salmonid	Guideline fail / Imperative pass
Tas - Forncett St Mary to Tasburgh	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Tas - Old Hall Bridge to Forncett St Mary	Cyprinid	Guideline fail / Imperative pass
Tas - Extension to source	Cyprinid	Guideline fail / Imperative pass
Tiffey - Kimberley Lake to the River Yare	Salmonid	Guideline fail / Imperative fail
Tiffey - Chapel Bridge to Kimberley Lake	Salmonid	Guideline fail / Imperative fail
Tiffey - Abbey Bridge to Chapel Bridge	Salmonid	Guideline fail / Imperative fail
Tiffey - Tifford Bridge to Abbey Bridge	Salmonid	Guideline fail / Imperative fail
Tiffey - Ashwellthorpe to Tifford Bridge	Salmonid	Guideline fail / Imperative fail
Whitewater - Wendling to the River Wensum	Salmonid	Guideline fail / Imperative pass
Whitewater - Extension to source	Salmonid	Guideline fail / Imperative pass
Blackwater - Willow Grange to the Whitewater	Salmonid	Guideline fail / Imperative pass
Blackwater - Extension to source	Salmonid	Guideline fail / Imperative pass
Blyth - Holton Bridge to Blyford Bridge	Cyprinid	Guideline fail / Imperative pass
Blyth - Extension to source	Cyprinid	Guideline fail / Imperative pass
Deben - Brandeston Bridge to Kettleburgh Mill	Salmonid	Guideline fail / Imperative pass
Deben - Debenham Bridge to Brandeston Bridge	Cyprinid	Guideline fail / Imperative pass
Deben - Extension to source	Cyprinid	Guideline fail / Imperative pass
Gipping - Norwich Rail Bridge to Horseshoe Weir	Salmonid	Guideline fail / Imperative pass
Gipping - British Sugar Corporation Weir to Norwich Rail Bridge	Salmonid	Guideline fail / Imperative pass
Gipping - Sproughton Intake to British Sugar Corporation Weir	Salmonid	Guideline fail / Imperative pass
Gipping - Bramford Mill to Sproughton Intake	Salmonid	Guideline fail / Imperative pass
Gipping - The B1113 road bridge at Claydon to Bramford Mill	Salmonid	Guideline fail / Imperative pass
Gipping - Blakenham Mill to the B1113 road bridge Claydon	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Gipping - Baylham Mill to Blakenham Mill	Salmonid	Guideline fail / Imperative pass
Gipping - Quintons Mill to Baylham Mill	Salmonid	Guideline fail / Imperative pass
Gipping - Hawkes Mill to Quintons Mill	Salmonid	Guideline fail / Imperative pass
Gipping - Badley Mill to Hawkes Mill	Salmonid	Guideline fail / Imperative pass
Gipping - Ordanance Bridge to Badley Mill	Salmonid	Guideline fail / Imperative pass
Gipping - Munton and Fisons to Ordanance Bridge	Cyprinid	Guideline fail / Imperative pass
Gipping - Imperial Chemical Industries Weir to Munton and Fisons	Cyprinid	Guideline fail / Imperative pass
Gipping - Stowmarket to Imperial Chemical Industries Weir	Cyprinid	Guideline fail / Imperative pass
Minsmere - Sibton to Yoxford A12 road bridge	Salmonid	Guideline fail / Imperative pass
Minsmere - Extension to source	Salmonid	Guideline fail / Imperative pass
Stour - Stoke By Clare to Chilton Brook	Cyprinid	Guideline fail / Imperative pass
Stour - Stour Brook to Stoke By Clare	Cyprinid	Guideline fail / Imperative pass
Stour - Kedington to Stour Brook	Cyprinid	Guideline fail / Imperative pass
Stour - Haverhill Meat Products to Kedington	Cyprinid	Guideline fail / Imperative pass
Stour - Thurlow to Haverhill Meat Products	Salmonid	Guideline fail / Imperative pass
Stour - Kirtling Brook to Thurlow	Salmonid	Guideline fail / Imperative pass
Stour - Extension to source	Salmonid	Guideline fail / Imperative pass
Old River Brett - Brettenham to Chelsworth	Salmonid	Guideline fail / Imperative pass
Box - Boxford Sewage Treatment Works to Polstead	Salmonid	Guideline fail / Imperative pass
Box - Edwardstone to Boxford Sewage Treatment Works	Salmonid	Guideline fail / Imperative pass
Box - Little Waldringfield Tributary to Edwardstone	Salmonid	Guideline fail / Imperative pass
Box - Great Waldringfield to Little Waldringfield Tributary	Salmonid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Box - Extension to source	Salmonid	Guideline fail / Imperative pass
Glem - Denston to Glemsford Sewage Treatment Works	Salmonid	Guideline fail / Imperative fail
Glem - Extension to source	Salmonid	Guideline fail / Imperative fail
Colne - Halstead Sewage Treatment Works to Earls Colne Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass
Colne - Poole Street to the B1058 road	Salmonid	Guideline fail / Imperative fail
Colne - Ridgewell to Poole Street	Salmonid	Guideline fail / Imperative fail
Colne - Extension to source	Salmonid	Guideline fail / Imperative fail
Roman - Railway to Stanway Bridge	Cyprinid	Guideline fail / Imperative pass
Roman - Extension to source	Cyprinid	Guideline fail / Imperative pass
Bourne Brook - Sparrows Pond Outlet to the River Colne	Cyprinid	Guideline fail / Imperative pass
Bourne Brook - Gosfield Sewage Treatment Works to Sparrow Pond Outlet	Salmonid	Guideline fail / Imperative fail
Bourne Brook - Gosfield Lake to Gosfield Sewage Treatment Works	Salmonid	Guideline fail / Imperative fail
Bourne Brook - Extension to source	Salmonid	Guideline fail / Imperative fail
Pant - Radwinter Bridge to Great Sampford Sewage Treatment Works	Salmonid	Guideline fail / Imperative pass
Pant - Extension to source	Salmonid	Guideline fail / Imperative pass
Chelmer - Great Easton Tributary to Great Dunmow	Salmonid	Guideline fail / Imperative pass
Chelmer - Armitage Bridge to Great Easton Tributary	Salmonid	Guideline fail / Imperative pass
Chelmer - Extension to source	Salmonid	Guideline fail / Imperative pass
Ter - Headwaters to Great Leighs Sewage Treatment Works	Salmonid	Guideline fail / Imperative pass
Sandon Brook - East Tributary to the River Chelmer	Cyprinid	Guideline fail / Imperative pass
Sandon Brook - Headwaters to East Tributary	Cyprinid	Guideline fail / Imperative pass
East Tributary Of Sandon Brook - Cock Clarks to Sandon Brook	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
East Tributary Of Sandon Brook - Extension to source	Cyprinid	Guideline fail / Imperative pass
Can - Roxwell Brook to the River Wid	Salmonid	Guideline fail / Imperative pass
Can - Chignall to Roxwell Brook	Cyprinid	Guideline fail / Imperative pass
Can - Waresr Brook to Chignall	Cyprinid	Guideline fail / Imperative pass
Can - Headwaters to Wares Brook Tributary	Cyprinid	Guideline fail / Imperative pass
Wid - Widford to the River Can	Cyprinid	Guideline fail / Imperative pass
Wid - Margaretting Brook to Widford	Cyprinid	Guideline fail / Imperative pass
Wid - Ingatestone Sewage Treatment Works to Margaretting Brook	Cyprinid	Guideline fail / Imperative pass
Wid - Haveringsgrove Brook to Ingatestone Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass
Wid - Shenfield Sewage Treatment Works to Haveringsgrove Brook	Cyprinid	Guideline fail / Imperative pass
Wid - Wash Road Tributary to Shenfield Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass
Wid - Chainbridge to Wash Road Tributary	Cyprinid	Guideline fail / Imperative pass
Wid - Chain Bridge Tributary to Chainbridge	Cyprinid	Guideline fail / Imperative pass
Wid - Headwaters to Chain Bridge Tributary	Cyprinid	Guideline fail / Imperative pass
Brain - Chipping Hill to the River Blackwater	Cyprinid	Guideline fail / Imperative fail
Brain - White Notley Sewage Treatment Works to Chipping Hill	Cyprinid	Guideline fail / Imperative fail
Brain - Bulford Mill to White Notley Sewage Treatment Works	Cyprinid	Guideline fail / Imperative fail
Brain - Braintree Sewage Treatment Works to Bulford Mill	Cyprinid	Guideline fail / Imperative fail
Brain - Notley Road to Braintree Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass
Brain - A120 road bridge to Notley Road	Cyprinid	Guideline fail / Imperative pass
Brain - Rayne Sewage Treatment Works to the A120 road bridge	Cyprinid	Guideline fail / Imperative pass
Brain - Headwaters to Rayne Sewage Treatment Works	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
Brain - Extension to source	Cyprinid	Guideline fail / Imperative pass
Crouch - Nevendon Brook to the Tidal Limit	Cyprinid	Guideline fail / Imperative fail
Crouch - Outwood Common Brook to Nevendon Brook	Cyprinid	Guideline fail / Imperative fail
Crouch - Headwaters to Outwood Common Brook	Cyprinid	Guideline fail / Imperative fail
West Mardyke Tributary - Extension to source	Cyprinid	Guideline fail / Imperative pass
GREAT EAU - Calceby to Long Eau	Salmonid	Guideline fail / Imperative pass
GREAT EAU - Long Eau to Cloves Bridge Sluice	Cyprinid	Guideline fail / Imperative pass
RIVER WITHAM - Colsterworth to Marston	Salmonid	Guideline fail / Imperative fail
CRINGLE BECK - Headwaters to River Witham	Salmonid	Guideline fail / Imperative pass
RIVER WITHAM - Marston to North Hykeham Bridge	Cyprinid	Guideline fail / Imperative pass
RIVER BAIN - Ludford sewage treatment works to Horncastle	Salmonid	Guideline fail / Imperative pass
HORNCASTLE CANAL - Horncastle to River Witham	Cyprinid	Guideline fail / Imperative pass
RIVER SLEA - Sleaford to Coblers Lock	Salmonid	Guideline fail / Imperative pass
EYE BROOK - Eye Brook Reservoir to River Welland	Cyprinid	Guideline pass / Imperative pass
RIVER WELLAND - Eye Brook to Tinwell	Cyprinid	Guideline fail / Imperative pass
RIVER WELLAND - Tinwell to tidal limit Spalding	Cyprinid	Guideline fail / Imperative pass
RIVER CHATER - Morcott Arm to River Welland	Salmonid	Guideline fail / Imperative pass
RIVER NENE - Brampton Branch to Great Billing sewage treatment works	Cyprinid	Guideline fail / Imperative pass
RIVER OUSE - Bidlesden Park to Brackley Evenly	Cyprinid	Guideline fail / Imperative pass
RIVER OUSE - Brackley Evenly to Cosgrove Park	Cyprinid	Guideline fail / Imperative pass
RIVER OUSE - Cosgrove Park to Newport Pagnell	Cyprinid	Guideline fail / Imperative pass
PADBURY BROOK - Twyford Mill to River Ouse	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
CLAYDON BROOK - Hogshaw Tributary to Padbury Brook	Cyprinid	Guideline fail / Imperative fail
RIVER TOVE - Sulgrave/Helmdon Brooks to Cappenham Bridge	Cyprinid	Guideline fail / Imperative pass
RIVER TOVE - Cappenham Bridge to Lincoln Lodge	Cyprinid	Guideline fail / Imperative pass
RIVER TOVE - Lincoln Lodge to River Ouse	Cyprinid	Guideline fail / Imperative pass
RIVER OUZEL - Billington to Leighton Linslade sewage treatment works	Cyprinid	Guideline fail / Imperative fail
RIVER OUSE - Harrold Mill to Bromham Mill	Cyprinid	Guideline fail / Imperative pass
RIVER OUSE - Bromham Mill to Bedford sewage treatment works	Cyprinid	Guideline fail / Imperative pass
ELSTOW BROOK - Harrowden to River Ouse	Cyprinid	Guideline fail / Imperative pass
R.OUSE/NEW BEDFORD RIVER - Godmanchester to Brownshill Staunch	Cyprinid	Guideline fail / Imperative pass
R.OUSE/NEW BEDFORD RIVER - Brownshill Staunch to Welney Bridge	Cyprinid	Guideline fail / Imperative pass
RIVER CAM - Newport to Hinxton Bridge	Salmonid	Guideline fail / Imperative pass
RIVER CAM - Hinxton Bridge to Hauxton Mill	Salmonid	Guideline fail / Imperative pass
RIVER CAM - Hauxton Mill to Cambridge sewage treatment works	Cyprinid	Guideline fail / Imperative pass
BOURN BROOK - Cantelupe Farm to River Cam	Cyprinid	Guideline fail / Imperative pass
RIVER LARK - Mildenhall Gas Pool to Lea Brook	Cyprinid	Guideline fail / Imperative pass
RIVER LARK - Lea Brook to Ely Ouse	Cyprinid	Guideline fail / Imperative fail
TEN MILE RIVER - Little Ouse to Denver Sluice	Cyprinid	Guideline fail / Imperative pass
LITTLE OUSE/BOTESDALE BRK - Broom Hills Botesdale to Thetford	Cyprinid	Guideline fail / Imperative pass
LITTLE OUSE/BOTESDALE BRK - Thetford to Hockwold Cum Wilton	Cyprinid	Guideline fail / Imperative pass
LITTLE OUSE/BOTESDALE BRK - Hockwold Cum Wilton to Ten Mile River	Cyprinid	Guideline fail / Imperative pass
RIVER THET - Portwood Brook to Little Ouse	Cyprinid	Guideline fail / Imperative pass
RIVER WISSEY - Hilborough to Northwold Common	Salmonid	Guideline fail / Imperative pass

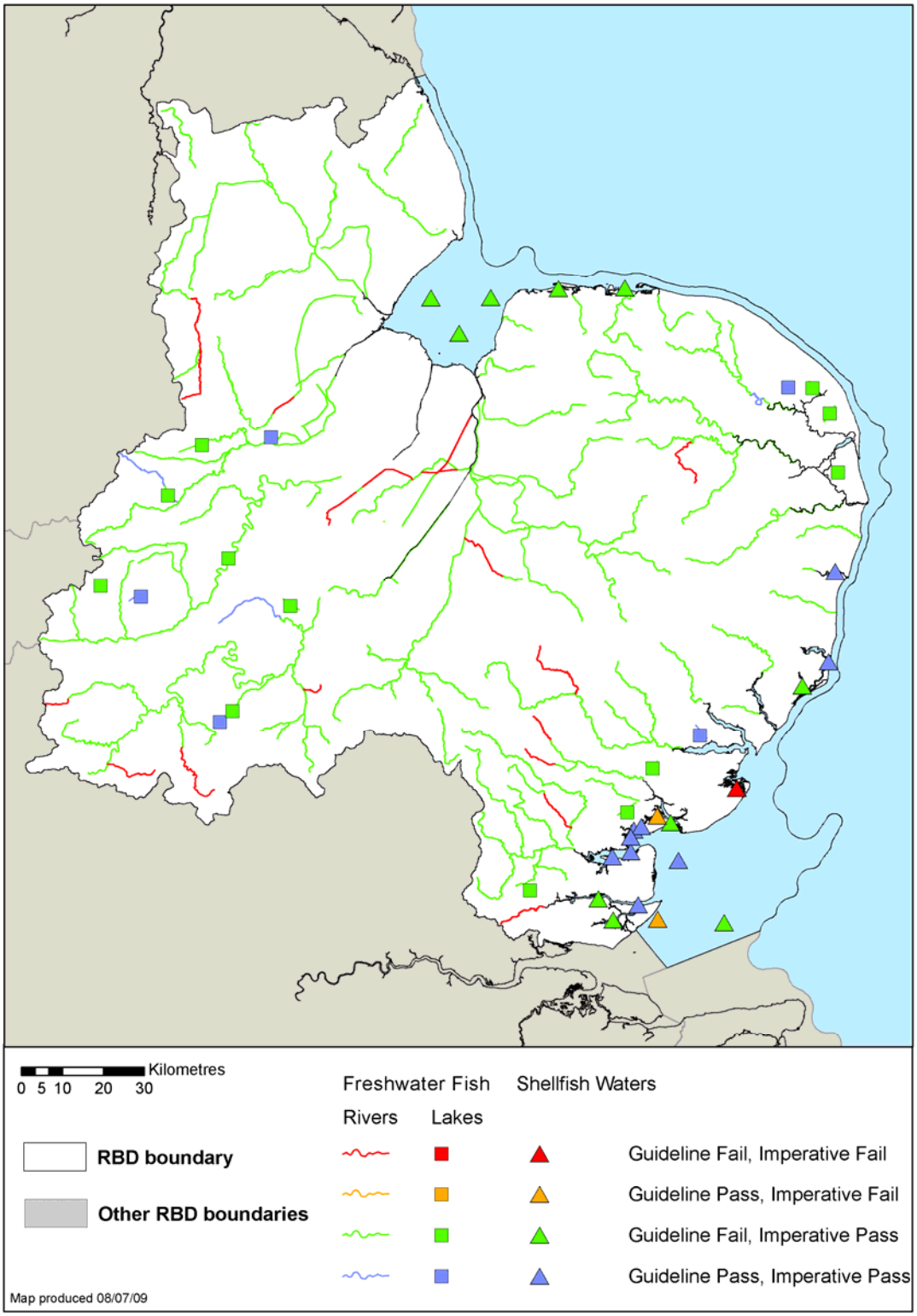
Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
RIVER WISSEY - Northwold Common to Ten Mile River	Cyprinid	Guideline fail / Imperative pass
RELIEF CHANNEL - Head Sluice Denver to Tail Sluice King's Lynn	Cyprinid	Guideline fail / Imperative pass
CUT OFF CHANNEL - Barton Mills to B1386 Feltwell	Cyprinid	Guideline fail / Imperative pass
CUT OFF CHANNEL - B1386 Feltwell to Denver	Cyprinid	Guideline fail / Imperative pass
RIVER NAR - Lexham Hall to Marham Water Works Intake	Salmonid	Guideline fail / Imperative pass
RIVER NAR - Marham Water Works Intake to Tail Sluice Kings Lynn	Cyprinid	Guideline fail / Imperative pass
BABLINGLEY RIVER - Flitcham Abbey to A149 Road Bridge	Salmonid	Guideline fail / Imperative pass
RIVER STOUR - Clare to Ballingden Bridge	Cyprinid	Guideline fail / Imperative pass
RIVER STOUR - Ballingden Bridge to Langham	Cyprinid	Guideline fail / Imperative pass
RIVER STOUR - Langham to Cattawade	Cyprinid	Guideline fail / Imperative pass
RIVER GLEM - Hartest Tributary to River Stour	Salmonid	Guideline fail / Imperative fail
RIVER BOX - Polstead to River Stour	Salmonid	Guideline fail / Imperative pass
RIVER BRETT - Chelsworth to River Stour	Cyprinid	Guideline fail / Imperative pass
RIVER COLNE - Nunnery Bridge to Halstead	Cyprinid	Guideline fail / Imperative pass
RIVER COLNE - Earls Colne to East Mills Colchester	Cyprinid	Guideline fail / Imperative pass
ROMAN RIVER - Stanway to Abberton	Cyprinid	Guideline fail / Imperative pass
RIVER PANT - Great Sampford to Wethersfield	Salmonid	Guideline fail / Imperative pass
RIVER BLACKWATER - Wethersfield to Bradwell Bridge	Cyprinid	Guideline fail / Imperative pass
RIVER BLACKWATER - Bradwell Bridge to Langford	Cyprinid	Guideline fail / Imperative pass
RIVER CHELMER - Churchend to Felstead Mill	Salmonid	Guideline fail / Imperative pass
RIVER CHELMER - Felstead Mill to Springfield Mill	Cyprinid	Guideline fail / Imperative pass
RIVER CHELMER - Springfield Mill to Heybridge Basin	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
RIVER CAN - River Wid to River Chelmer	Cyprinid	Guideline fail / Imperative pass
RIVER TER - Great Leighs to River Chelmer	Cyprinid	Guideline fail / Imperative pass
RIVER BURN - Headwater to Burnham Overy Mill	Salmonid	Guideline fail / Imperative pass
RIVER STIFFKEY - Fulmodeston to East Barsham	Salmonid	Guideline fail / Imperative pass
RIVER STIFFKEY - East Barsham to Coast Road Bridge	Salmonid	Guideline fail / Imperative pass
RIVER GLAVEN - Bodham to Cley Sluice	Salmonid	Guideline fail / Imperative pass
RIVER BURE - Briston to Aylsham	Salmonid	Guideline fail / Imperative pass
SCARROW BECK - Scarrow Beck	Salmonid	Guideline fail / Imperative pass
KINGS BECK - Kings Beck	Cyprinid	Guideline fail / Imperative pass
RIVER BURE - Aylsham to Horstead Mill	Cyprinid	Guideline fail / Imperative pass
RIVER BURE - Horstead Mill to Wroxham Rail Bridge	Cyprinid	Guideline pass / Imperative pass
RIVER BURE - Wroxham Rail Bridge to Thurne Mouth	Cyprinid	Guideline fail / Imperative pass
RIVER WENSUM - Raynham to Great Ryburgh	Salmonid	Guideline fail / Imperative pass
RIVER WENSUM - Great Ryburgh to Lenwade	Cyprinid	Guideline fail / Imperative pass
RIVER WENSUM - Lenwade to Attlebridge	Salmonid	Guideline fail / Imperative pass
RIVER WENSUM - Attlebridge to River Yare	Cyprinid	Guideline fail / Imperative pass
RIVER YARE - Whinburgh to Bawburgh Bridge	Cyprinid	Guideline fail / Imperative pass
RIVER YARE - Bawburgh Bridge to Trowse Norwich	Cyprinid	Guideline fail / Imperative pass
KESSINGLAND HUNDRED - Hulver Bridge to Benacre	Cyprinid	Guideline fail / Imperative pass
Kessingland Hundred - Extension to source	Cyprinid	Guideline fail / Imperative pass
MINSMERE RIVER - Yoxford to Minsmere Sluice	Cyprinid	Guideline fail / Imperative pass
RIVER DEBEN - Kettleburgh to Melton	Cyprinid	Guideline fail / Imperative pass

Freshwater fish water name (watercourse & stretch name)	Designation (cyprinid or salmonid)	Compliance status[(a)] (guideline pass, imperative pass, fail)
BUCKLESHAM MILL RIVER - Ipswich to Kirton Sluice	Salmonid	Guideline fail / Imperative pass
HEACHAM RIVER - Heacham River	Salmonid	Guideline fail / Imperative pass
stillwater - Barton Broad	Cyprinid	Guideline pass / Imperative pass
stillwater - Common Farm Lake	Cyprinid	Guideline pass / Imperative pass
stillwater - Eyebrook Reservoir	Cyprinid	Guideline fail / Imperative pass
stillwater - Fritton Decoy	Cyprinid	Guideline fail / Imperative pass
stillwater - Grafham Water	Cyprinid	Guideline fail / Imperative pass
stillwater - Hanningfield Reservoir	Cyprinid	Guideline fail / Imperative pass
stillwater - Hickling & Duck Broad, & Heigham Sound	Cyprinid	Guideline fail / Imperative pass
stillwater - Hollowell Reservoir	Cyprinid	Guideline fail / Imperative pass
stillwater - Pitsford Water	Cyprinid	Guideline pass / Imperative pass
stillwater - Abberton Reservoir	Cyprinid	Guideline fail / Imperative pass
stillwater - Rollesby, Lily, Ormesby Little & Filby Broads	Cyprinid	Guideline fail / Imperative pass
stillwater - Stewartby Lake	Cyprinid	Guideline fail / Imperative pass
stillwater - Alton Water Reservoir	Cyprinid	Guideline pass / Imperative pass
stillwater - Titchmarsh Nature Reserve	Cyprinid	Guideline fail / Imperative fail
stillwater - Tallington Lakes	Cyprinid	Guideline pass / Imperative pass
stillwater - Ardleigh Reservoir	Cyprinid	Guideline fail / Imperative pass

[(a)] using 2008 data

D.21 Results of monitoring for significant species (freshwater fish & shellfish waters)



Economically Significant Species (Shellfish Waters)

Compliance against objectives for shellfish waters has been assessed using the relevant monitoring data from 2008. The results are shown in Figure D.22. The results are also presented as a map in Figure D.21 above.

Figure D.22 Results of monitoring for economically significant species (shellfish waters)

Shellfish water name	Compliance status[(b)] (guideline pass, imperative pass, fail)
Alde	Guideline pass /Imperative pass
Blackwater	Guideline pass /Imperative pass
Blakeney	Guideline fail /Imperative pass
Blyth	Guideline fail /Imperative pass
Butley River	Guideline fail /Imperative pass
Colne	Guideline fail /Imperative pass
Dengie	Guideline pass /Imperative pass
Foulness	Guideline pass /Imperative fail
North East Wash	Guideline fail /Imperative pass
Norton Creek	Guideline fail /Imperative pass
Osea Island including extension	Guideline pass /Imperative pass
Outer Thames	Guideline fail /Imperative pass
Pyefleet	Guideline pass /Imperative fail
Roach & Lower Crouch	Guideline pass /Imperative pass
Salcott Channel	Guideline pass /Imperative pass
South East Wash	Guideline fail /Imperative pass
Strood Channel	Guideline pass /Imperative pass
Tollesbury Channel	Guideline pass /Imperative pass
Upper Crouch	Guideline fail /Imperative pass
Upper Roach	Guideline fail /Imperative pass
Walton Backwaters	Guideline fail /Imperative fail
West Wash	Guideline fail /Imperative pass

[(b)] using 2008 data

Recreational Waters (Bathing Waters)

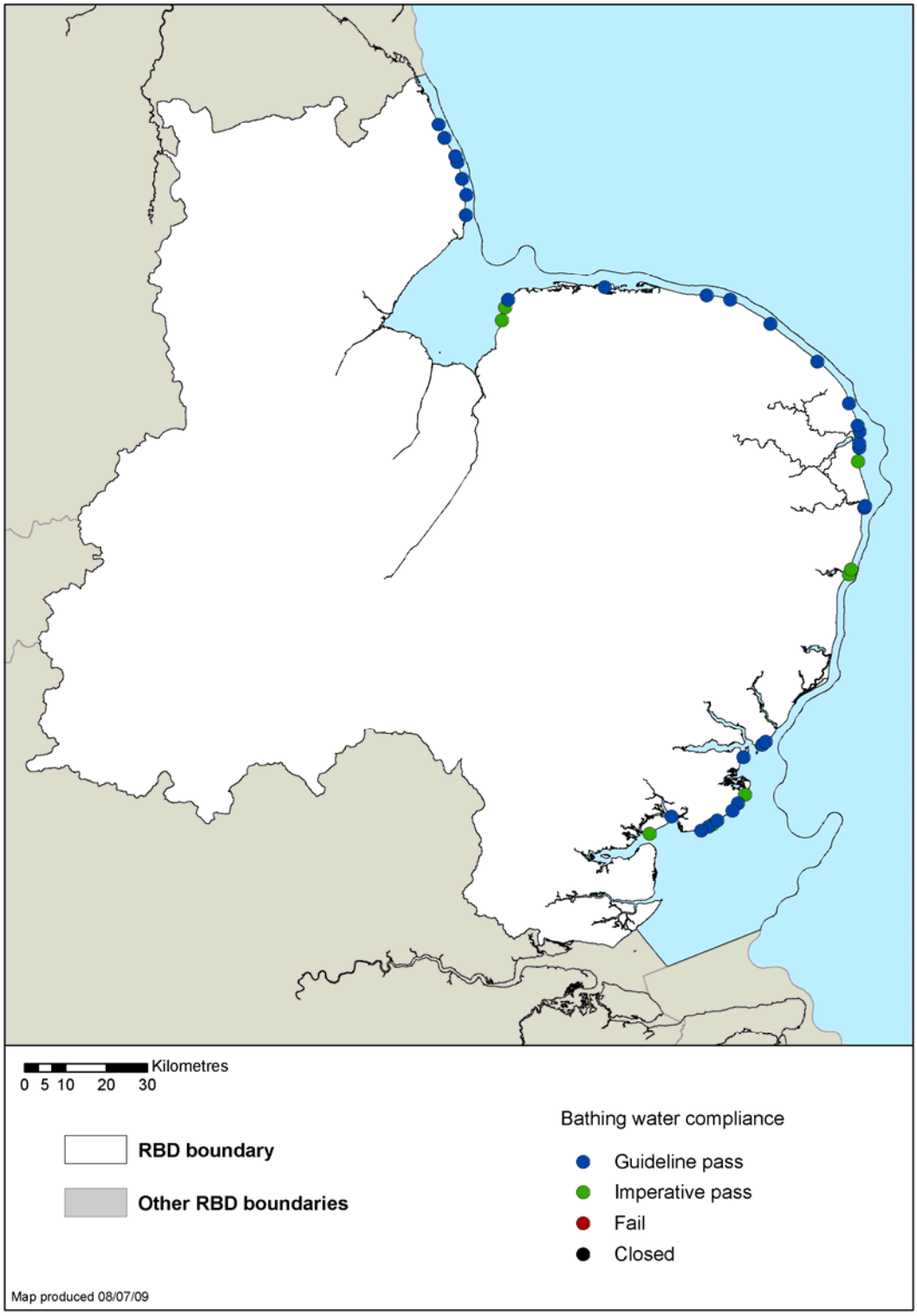
Compliance against objectives for bathing waters has been assessed using the relevant monitoring data from 2008. The results are shown in Figure D.23. The results are also presented as a map in figures D.24 (current Directive) and D.25 (prediction against revised Directive standards).

Figure D.23 Results of monitoring for recreational waters (bathing waters)

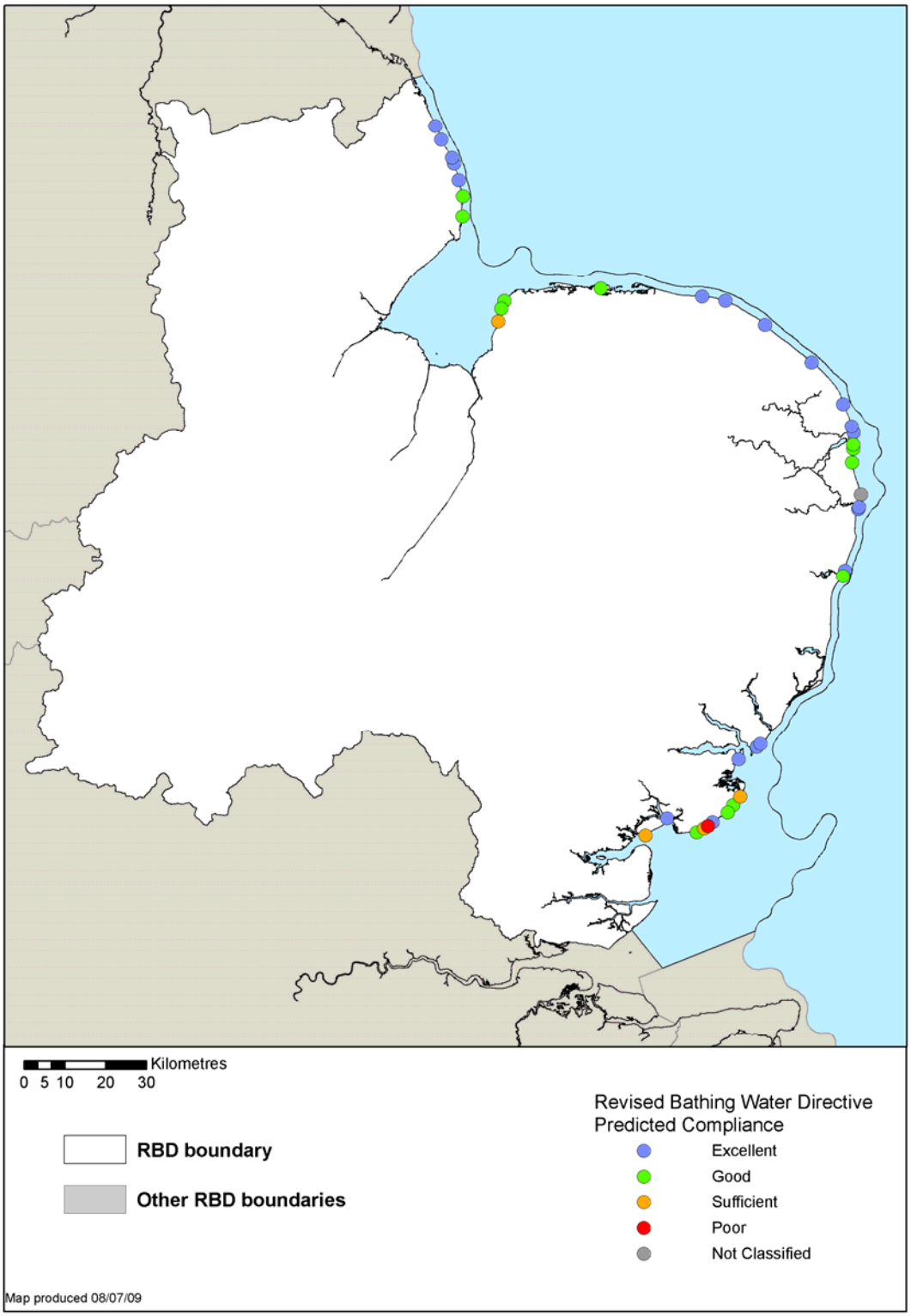
Bathing water name	Compliance status under current BWD[c] (guideline pass, imperative pass, fail)	Predicted compliance assessment under revised BWD[d] (excellent, good, sufficient, poor)
Anderby	Guideline pass	Excellent
Brightlingsea	Guideline pass	Excellent
Caister Point	Guideline pass	Excellent
Chapel St Leonard	Guideline pass	Excellent
Clacton	Guideline pass	Excellent
Clacton (Groyne 41)	Imperative pass	Poor
Clacton Beach Martello Tower	Guideline pass	Sufficient
Cromer	Guideline pass	Excellent
Dovercourt	Guideline pass	Excellent
Felixstowe North	Guideline pass	Excellent
Felixstowe South	Guideline pass	Excellent
Frinton	Guideline pass	Good
Gorleston Beach	Imperative pass	Good
Great Yarmouth North	Guideline pass	Excellent
Great Yarmouth Pier	Guideline pass	Good
Great Yarmouth South	Guideline pass	Good
Heacham	Imperative pass	Sufficient
Hemsby	Guideline pass	Excellent
Holland	Guideline pass	Good
Hunstanton Beach	Guideline pass	Good
Hunstanton Main Beach	Imperative pass	Good
Ingoldmells South	Guideline pass	Good
Jaywick	Guideline pass	Good
Lowestoft (North of Claremont Pier)	Guideline pass	Excellent
Lowestoft (South of Claremont Pier)	Guideline pass	Excellent
Mablethorpe Town	Guideline pass	Excellent
Moggs Eye	Guideline pass	Excellent
Mundesley	Guideline pass	Excellent
Sea Palling	Guideline pass	Excellent
Sheringham	Guideline pass	Excellent
Skegness	Guideline pass	Good
Southwold The Denes	Imperative pass	Good
Southwold The Pier	Imperative pass	Excellent
Sutton-on-Sea	Guideline pass	Excellent
Walton	Imperative pass	Sufficient
Wells	Guideline pass	Good
West Mersea	Imperative pass	Sufficient

[c] using 2008 data
[d] using 2004-2008 data

D.24 Results of monitoring for recreational waters (bathing waters under current BWD)



D.25 Results of monitoring for recreational waters (bathing waters using prediction under revised BWD)



Nutrient Sensitive Areas (Nitrate Vulnerable Zones)

The Nitrates Directive does not use a standard-based compliance regime for the areas designated under it. Compliance is therefore not monitored against an environmental standard, as in the Freshwater Fish Directive, for example. Rather compliance is measured by the appropriate designation of NVZs and the undertaking of action programmes to reduce or prevent further pollution caused by nitrates.

We periodically review where nitrate pollution from agriculture is affecting waters and the success of the action programmes that are undertaken in the designated NVZs draining to these polluted waters. As a result additional NVZs are designated where the following criteria apply and agriculture is a significant source of nitrate:

- surface freshwaters, including those used or intended for the abstraction of drinking water, contain or could contain more than 50 mg/litre of nitrate;
- groundwater which contains, or could contain, more than 50 mg/litre of nitrate;
- natural freshwater lakes, or other freshwater bodies, estuaries, and coastal waters which are eutrophic[5] or may become so in the near future.

The location of NVZs is shown in Figure D.6 (NVZs subject to appeals). A list of NVZs in the Anglian River Basin District is given in the register of protected areas. This can be found at http://www.environment-agency.gov.uk/research/planning/33346.aspx.

Nutrient Sensitive Areas (Urban Waste Water Treatment Directive)

The UWWTD does not use a standard-based compliance regime for the areas designated under it. Compliance is therefore not monitored against an environmental standard, as in the Freshwater Fish Directive, for example. Rather compliance is measured by the appropriate designation of Sensitive Areas and monitoring relevant discharges affecting these Areas to ensure they meet the emission standards set out in the Directive.

We periodically review where phosphate and/or nitrate pollution from sewage treatment works serving populations above 10,000 is affecting waters. As a result additional Sensitive Areas are designated where protective action is not taken:

- freshwaters, estuaries and coastal waters are eutrophic[5] or may become so in the near future.
- surface freshwaters, including those used or intended for the abstraction of drinking water, contain or could contain more than 50 mg/litre of nitrate.

The location of UWWTD Sensitive Areas is shown in Figure D.6. Compliance for relevant discharges affecting UWWTD Sensitive Areas has been assessed using the relevant monitoring data from 2008. The results are shown in Figure D.26. The results are also presented as a map in figure D.27.

[5] The Nitrates Directive and UWWTD define the process of eutrophication as "the enrichment of water by nutrients (especially nitrogen and/or phosphorus compounds for UWWTD, nitrogen compounds for Nitrates Directive), causing an accelerated growth of algae and higher forms of plant life, to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned."

Figure D.26 Results of monitoring for relevant discharges into UWWTD sensitive areas

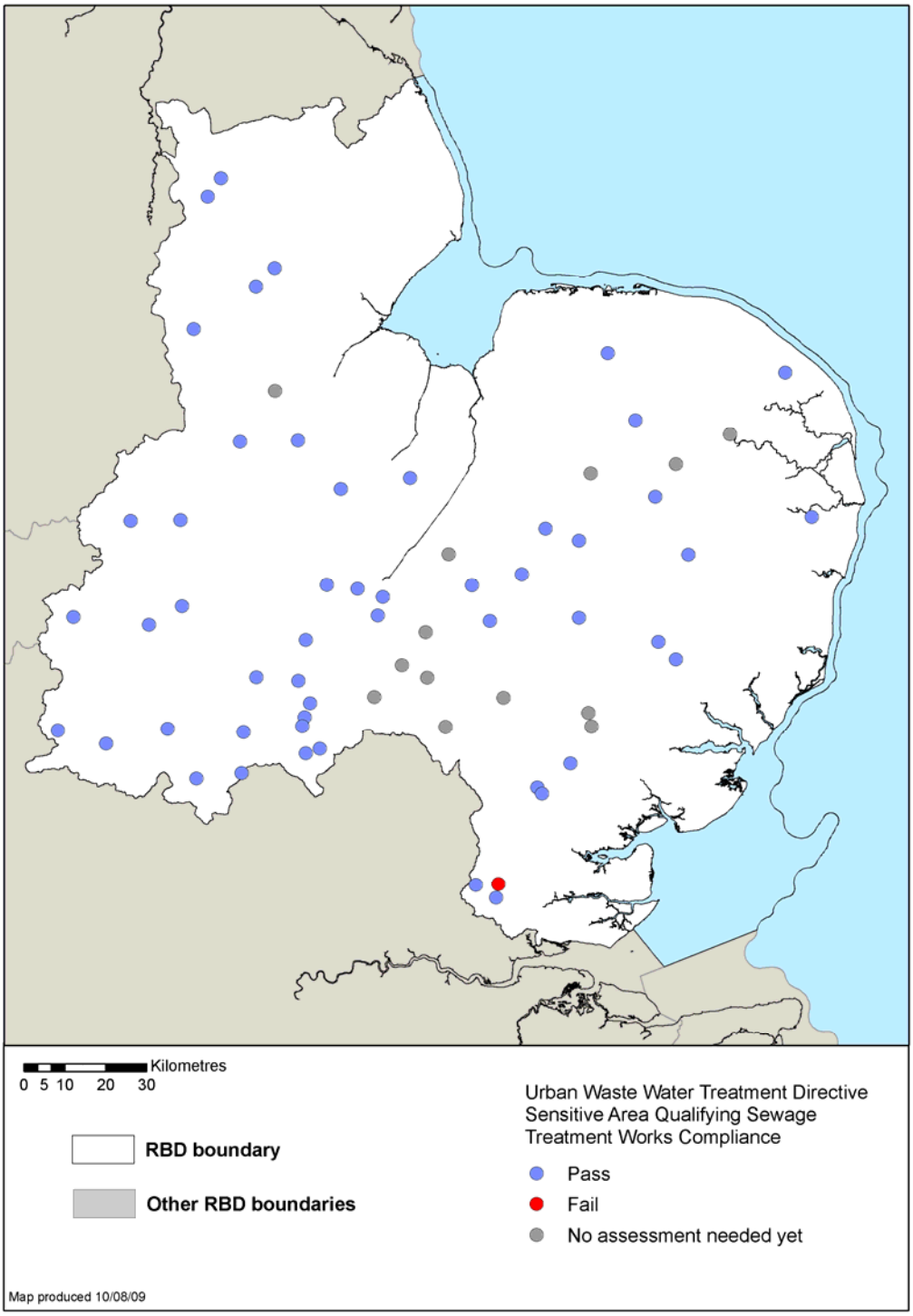
Sensitive Area name	Year of designation	Year UWWTD emissions standards come into force[e]	Relevant discharge name	UWWTD Compliance Status of discharge[f] (pass, fail, n/a[g])
Alton Reservoir	1994	2001	STOWMARKET STW	Pass
Alton Reservoir	1994	2001	NEEDHAM MARKET STW	Pass
Ardleigh Reservoir	1994	2001	HALSTEAD STW	Pass
Cut Off and Relief Channel	1994	2001	BURY ST. EDMUNDS STW	Pass
Cut Off and Relief Channel	1994	2001	SAFFRON WALDEN STW	Pass
Cut Off and Relief Channel	1994	2001	SAWSTON STW	Pass
Cut Off and Relief Channel	1994	2001	ROYSTON STW	Pass
Cut Off and Relief Channel	1994	2001	CAMBRIDGE STW	Pass
Cut Off and Relief Channel	1994	2001	ELY STW	Pass
Cut Off and Relief Channel	1994	2001	OVER STW	Pass
Cut Off and Relief Channel	1994	2001	NEWMARKET STW	Pass
Cut Off and Relief Channel	1994	2001	SOHAM STW	Pass
Cut Off and Relief Channel	1994	2001	MILDENHALL STW	Pass
Cut Off and Relief Channel	1994	2001	THETFORD STW	Pass
Cut Off and Relief Channel	1994	2001	ATTLEBOROUGH STW	Pass
Foxcote Reservoir	1994	2001	BRACKLEY (NEW) STW	Pass
Grafham Water	1994	2001	BEDFORD	Pass
Grafham Water	1994	2001	COTTON VALLEY	Pass
Hanningfield Reservoir	1994	2001	SHENFIELD STW	Pass
Hanningfield Reservoir	1994	2001	BOCKING STW	Pass
Hanningfield Reservoir	1994	2001	DODDINGHURST STW	Pass
Pitsford Reservoir	1994	2001	DAVENTRY (WHILTON) STW	Pass
River Ant	1994	2001	STALHAM STW	Pass
River Nene	1994	2001	CORBY STW	Pass
River Nene	1994	2001	DAVENTRY (WHILTON) STW	Pass
River Nene	1994	2001	NORTHAMPTON (GREAT BILLING) STW	Pass
River Nene	1994	2001	WELLINGBOROUGH (BROADHOLME) STW	Pass
Headwaters of the Great Ouse	1997	2004	BRACKLEY (NEW) STW	Pass
Headwaters of the Great Ouse	1997	2004	BUCKINGHAM(MAIDS MORETON) STW	Pass
Headwaters of the Great Ouse	1997	2004	DUNSTABLE STW	Pass
Headwaters of the Great Ouse	1997	2004	LEIGHTON LINSLADE STW	Pass

Sensitive Area name	Year of designation	Year UWWTD emissions standards come into force[e]	Relevant discharge name	UWWTD Compliance Status of discharge[f] (pass, fail, n/a[g])
River Waveney	1997	2004	DISS STW	Pass
Rivers Blackwater and Brain	1997	2004	BOCKING STW	Pass
Little Ouse	1998	2005	ATTLEBOROUGH STW	Pass
Little Ouse	1998	2005	THETFORD STW	Pass
Middle Level	1998	2005	MARCH STW	Pass
Middle Level	1998	2005	WHITTLESEY STW	Pass
River Gipping	1998	2005	NEEDHAM MARKET STW	Pass
River Gipping	1998	2005	STOWMARKET STW	Pass
River Great Ouse	1998	2005	BAR HILL (UTTONS DROVE) STW	Pass
River Great Ouse	1998	2005	BEDFORD STW	Pass
River Great Ouse	1998	2005	BRACKLEY (NEW) STW	Pass
River Great Ouse	1998	2005	BUCKINGHAM(MAIDS MORETON) STW	Pass
River Great Ouse	1998	2005	DUNSTABLE STW	Pass
River Great Ouse	1998	2005	HUNTINGDON STW	Pass
River Great Ouse	1998	2005	LEIGHTON LINSLADE STW	Pass
River Great Ouse	1998	2005	OVER STW	Pass
River Great Ouse	1998	2005	ST IVES STW	Pass
River Great Ouse	1998	2005	ST NEOTS STW	Pass
River Ivel	1998	2005	BIGGLESWADE STW	Pass
River Ivel	1998	2005	CHALTON STW	Pass
River Ivel	1998	2005	CLIFTON STW	Pass
River Ivel	1998	2005	FLITWICK STW	Pass
River Ivel	1998	2005	HITCHIN STW	Pass
River Ivel	1998	2005	LETCHWORTH STW	Pass
River Ivel	1998	2005	POPPY HILL STW	Pass
River Ivel	1998	2005	SANDY STW	Pass
River Lark	1998	2005	BURY ST. EDMUNDS (FORNHAM ALL SAINTS) STW	Pass
River Lark	1998	2005	MILDENHALL STW	Pass
River Stour / Stour Brook	1998	2005	HAVERHILL STW	Pass
River Stour / Stour Brook	1998	2005	SUDBURY STW	Pass
River Waveney / Starston Brook & River Dove	1998	2005	BECCLES STW	Pass
River Waveney / Starston Brook & River Dove	1998	2005	DISS STW	Pass
River Welland	1998	2005	DEEPINGS STW	Pass
River Welland	1998	2005	MARKET HARBOROUGH STW	Pass
River Welland	1998	2005	STAMFORD STW	Pass
River Wensum	1998	2005	DEREHAM STW	Pass
River Wensum	1998	2005	FAKENHAM STW	Pass

Sensitive Area name	Year of designation	Year UWWTD emissions standards come into force[e]	Relevant discharge name	UWWTD Compliance Status of discharge[f] (pass, fail, n/a[g])
River Witham	1998	2005	ANWICK STW	Pass
River Witham	1998	2005	GRANTHAM (MARSTON) STW	Pass
River Witham	1998	2005	LINCOLN (CANWICK) STW	Pass
River Witham	1998	2005	NORTH HYKEHAM STW	Pass
River Witham	1998	2005	SLEAFORD STW	Pass
Rivers Brain, and Blackwater (Essex)	1998	2005	BOCKING STW	Pass
Rivers Wid, Can & Chelmer	1998	2005	DODDINGHURST STW	Pass
Rivers Wid, Can & Chelmer	1998	2005	SHENFIELD STW	Pass
Soham Lode	1998	2005	NEWMARKET STW	Pass
Soham Lode	1998	2005	SOHAM STW	Pass
River Chelmer	2002	2009	DODDINGHURST STW	n/a
River Chelmer	2002	2009	INGATESTONE STW	n/a
River Chelmer	2002	2009	SHENFIELD STW	n/a
River Stour	2002	2009	GREAT CORNARD STW	n/a
River Stour	2002	2009	HAVERHILL STW	n/a
River Stour	2002	2009	SUDBURY STW	n/a
Bourne Eau/River Glen	2002	2009	BOURNE STW	n/a
Old West & Ely Ouse	2002	2009	ELY STW	n/a
River Cam (Cambridgeshire)	2002	2009	CAMBRIDGE STW	n/a
River Cam (Cambridgeshire)	2002	2009	ROYSTON STW	n/a
River Cam (Cambridgeshire)	2002	2009	SAFFRON WALDEN STW	n/a
River Cam (Cambridgeshire)	2002	2009	SAWSTON STW	n/a
River Tiffey & Yare	2002	2009	NORWICH (WHITLINGHAM) STW	n/a
River Tiffey & Yare	2002	2009	WYMONDHAM STW	n/a
Rivers Itchen	2002	2009	BOURNE STW	n/a
Rivers Brain, and Blackwater (Essex)	1998	2005	BRAINTREE STW	Pass
Little Ouse	1998	2005	BRANDON STW	Pass
River Cam (Cambridgeshire)	2002	2009	HASLINGFIELD STW	n/a
Wissey	2002	2009	WATTON STW	n/a
Rivers Wid, Can & Chelmer	1998	2005	INGATESTONE STW	Fail

[e] requirement to meet the Directive's emission standards is at the latest seven years after designation of the Sensitive Area
[f] using 2008 data
[g] not applicable (n/a) if within seven years of designation of the Sensitive Area

D.27 Results of monitoring for relevant discharges into UWWTD sensitive areas



Natura 2000 Protected Areas (water dependent SACs & SPAs)

Compliance against conservation objectives has been assessed by Natural England. The results are shown in Figure D.28.

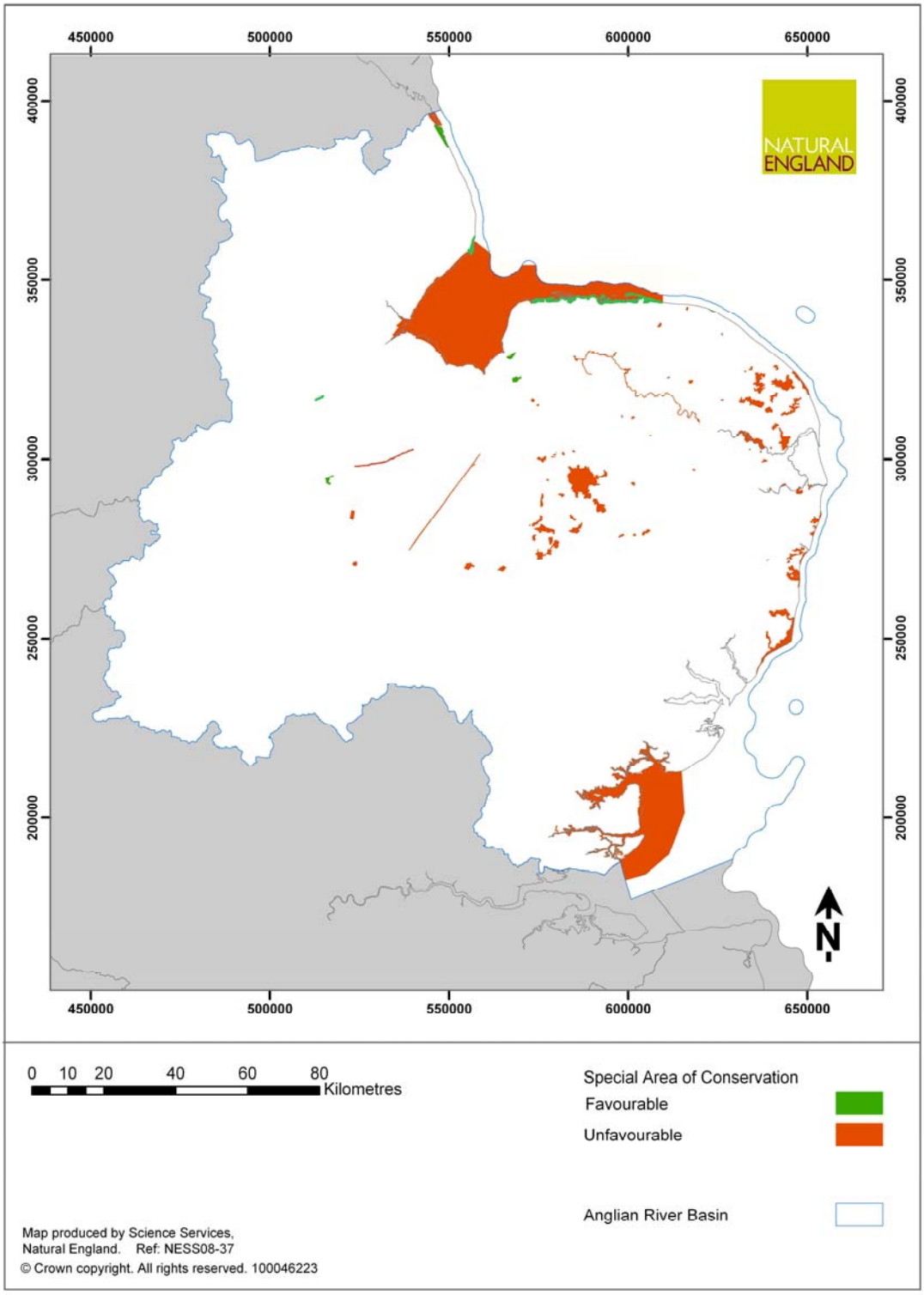
Figure D.28 Results of status assessments for Natura 2000 Protected Areas (water dependent SACs and SPAs) in Anglian river basin district

	Number of Natura 2000 Protected Areas currently achieving favourable conservation status	Number of Natura 2000 Protected Areas predicted to achieve favourable conservation status by 2015	Number of Natura 2000 Protected Areas predicted to achieve favourable conservation status by 2021
SAC	7	21	23
SPA	6	21	22
pSPA	1	1	1
Total	14	43	46

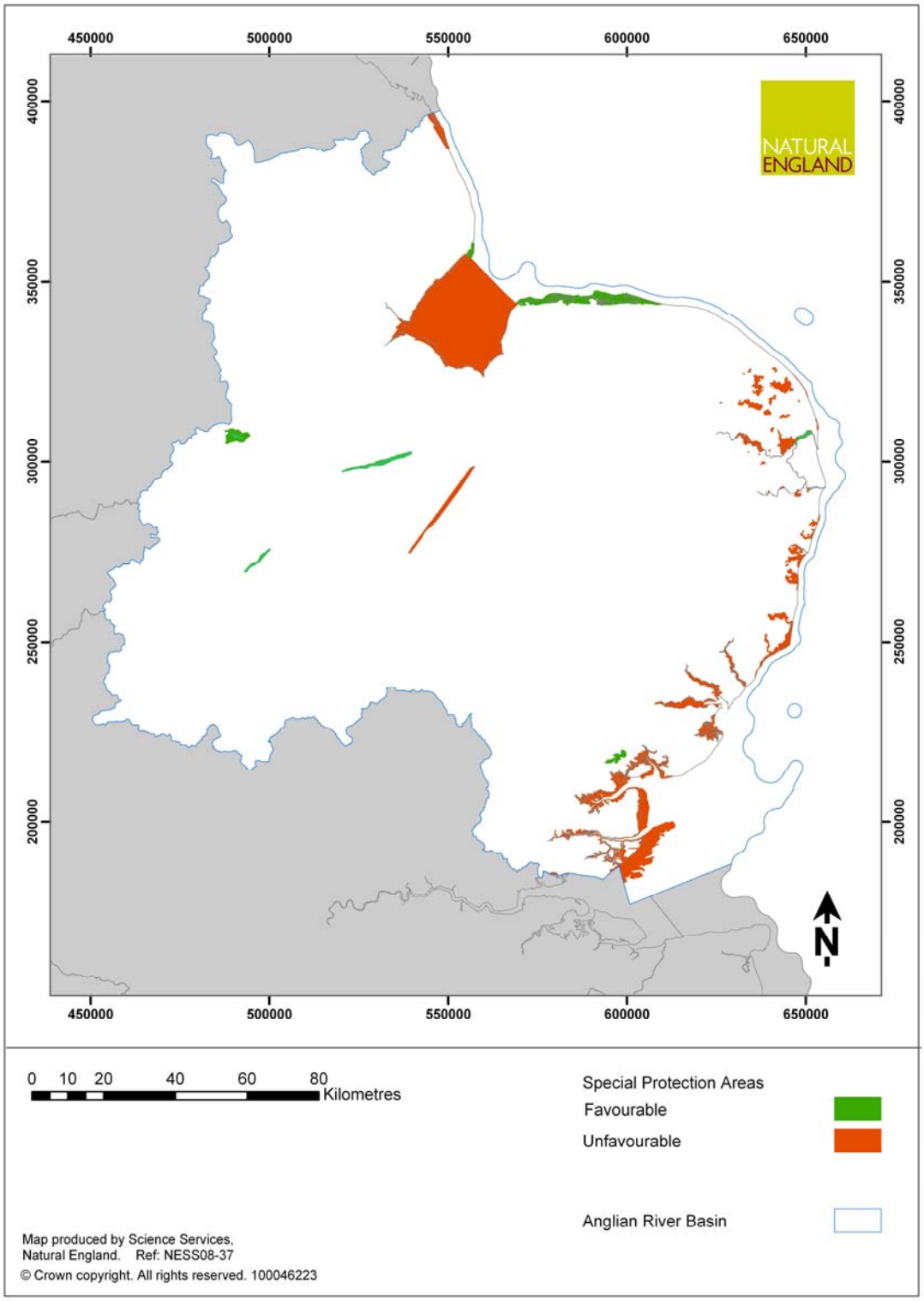
Potential SPAs (pSPAs) are sites that have been approved by Government but are currently in the process of being classified.

The results are also presented as maps in Figures D.29 and D.30.

D.29 Results of status assessments for Natura 2000 Protected Areas (water dependent SACs)



D.30 Results of status assessments for Natura 2000 Protected Areas (water dependent SPAs).



Actions (measures) for Natura 2000 Protected Areas (water dependent SACs & SPAs)

The United Kingdom Technical Advisory Group (UKTAG) has produced guidance on Natura 2000 Protected Areas and the Water Framework Directive:

- Guidance on the Identification of Natura Protected Areas (UKTAG, 2003)
- Guidance in determining whether Natura 2000 Protected Areas are meeting the requirements of Article 4 (1c) for the 1st RBMP (UKTAG)

These documents can be found on the UKTAG website (http://www.wfduk.org).

Government guidance has also been issued: *River Basin Planning Guidance Vol 2* (Defra/Welsh Assembly Government, 2008). This document can be found on the Defra website (http://www.defra.gov.uk/environment/quality/water/wfd/documents/riverbasinguidance-Vol2.pdf)

The following section has been prepared jointly by the Environment Agency and Natural England. Natural England has a significant role to play in river basin planning and management.

Natural England has identified the actions that need to be taken to achieve conservation objectives, and to avoid deterioration at Natura 2000 Protected Areas. This is part of a programme of work to achieve the objectives of the EC Habitats Directive and Birds Directive in the United Kingdom. The Government has set a Public Sector Agreement (PSA) target for 95% of SSSIs to achieve 'favourable' or 'recovering' condition by 2010. Actions are based on the PSA programme of delivery and may be subject to change. This will continue after 2010 as an indicator for Defra's Departmental Strategic Objective 2.

Where Natura 2000 Protected Areas coincide with water bodies, there is also the requirement to aim to achieve the Water Framework Directive status objectives for the relevant water bodies. The actions presented in Annex D are specifically aimed at ensuring the continued maintenance of, and restoration to, favourable conservation status for the protected areas: they may also contribute to the water body objectives.

Actions shown in this Annex are summarised for ease of reference in Annex C alongside other actions to achieve water body status objectives.

Natural England has provided advice on whether the deadlines for ensuring the continued maintenance of, and restoration to, favourable conservation status should be extended in accordance with the criteria under Article 4.4 of the Water Framework Directive and have provided the 'reasons for extended deadlines' and justification.

A table has been produced for each Natura 2000 Protected Area based on the details provided by Natural England (Figure D.31). The tables include information about each site including: the water-dependent features, status, objectives, actions (measures) and information on extended deadlines.

Only those actions which address water-related impacts are included in the tables. The tables do not include water-related actions that address impacts other than those affecting the European features of interest specific to each Natura 2000 Protected Area.

The actions identified by Natural England include:

- 'Remedies' that have been identified by Natural England to address the reasons for adverse condition of the SSSIs that underpin all SACs and SPAs in England above low-water mark. The protection of SACs and SPAs in England is largely secured through the legal provisions for SSSIs. The Wildlife and Countryside Act 1981 requires Ministers and all public bodies to further the conservation of SSSIs. Natural England must be consulted before any operations are undertaken or permitted that are likely to damage an SSSI.

- Revocation or amendment of consents or permissions granted by statutory bodies that are assessed, by those bodies in consultation with Natural England, as having an adverse effect on the integrity of SACs and SPAs. For the past ten years, the Environment Agency has carried out a comprehensive review of consents (RoC) under the Conservation (Natural Habitats &c) Regulations 1994. The relevant results of RoC are included in the tables.

- Schemes that have been included in water company investment programmes under the Habitats Directive driver for 2005-10 and 2010-15. Many schemes, especially those relating to abstraction, have been identified by investigations funded under the Periodic Reviews.

- Actions for marine Natura 2000 Protected Areas. These have been drawn from the PSA programme and from Management Schemes prepared by the relevant authorities under Regulation 34 of the 1994 Regulations.

Further information on the Natura 2000 Protected areas in England is available on Natural England's website (www.naturalengland.org.uk/ourwork/position/water/waterdirective.aspx).

The following diagram gives further explanation of the information in these tables.

The legislation under which the site was designated and links to further information on the SAC or SPA.

Indicates whether the water-dependent features of the site are meeting the objective of Favourable Conservation Status – and if not, by when it is to be met. Article 4.1(c) of the WFD sets 2015 as the deadline to meet the objectives for Protected Areas. Where there are valid reasons to extend this deadline,these are shown.

N2K Protected Area in Western Wales River Basin District (Afon Eden-Cors Goch Trawsfynydd SAC)

The name of the Natura 2000 site.

Protected Area name	***Protected Area designation***	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No**
Afon Eden-Cors Goch Trawsfynydd SAC	Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/special-sites-project/aber-to--brecon-sac-list/afon-eden--cors-goch-trw.aspx	***If not, date for achieving environmental objectives*** **Extended to 2021** If extended, justification provided at end of this table

Shows the overall objective for the Protected Area.

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

The list of habitats and species (features) for which the site was designated under Community legislation.

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Active raised bogs (H7110); Atlantic salmon (S1106); Floating water-plantain (S1831); Freshwater pearl mussel (S1029); Otter (S1355)

The list of water bodies found in the Protected Area.

Waterbody ID:

GB110064048710; GB110064048720; GB110064048730; GB110064048740; GB110064048750; GB110064054630

Reasons for the site not being at Favourable Conservation Status. These are related to the pressures (attributes) recognised under the Water Framework Directive.

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	–	*Reason*	*Measure*	*Organisation responsible*	
	-	Water pollution - discharge	■ Other competent authority functions	Welsh Assembly Government	2012
	-	Water pollution - discharge	Undertake review of consents	Environment Agency	2012
Water quality	-	Boats - not powered	Undertake review of consents	Snowdonia National Park	2012
Water quality	-	Ditch management	Land management scheme	Welsh Assembly Government	2012
Water quality	-	Freshwater fish stocking	Fisheries enhancement projects	Environment Agency	2012
Water quality	-	Pest control	Land management scheme	Welsh Assembly Government	2012
Water quality	-	Siltation	Land management scheme	Welsh Assembly Government	2012

The latest date by which the measure will be made operational.

The organisation responsible for the implementation of the measure.

Reason for feature/s not meeting objective by 2015
Pearl Mussel population recovery – natural conditions: ecological recovery time
Justification for extended deadline
Fisheries improvements required for host salmon population. Measures are being enacted but given slow reproductive rate of Pearl Mussel full population recovery will take time.

Reasons and justifications for extending the deadline for meeting the objective of Favourable Conservation Status.

Measures required to achieve Favourable Conservation Status. These measures have been derived from existing programmes, e.g. SSSI PSA remedies, Review of Consents, water company investment programme (see above). Where measures are marked with "■" they will be subject to further discussion to finalise details.

D.31 Objectives and actions (measures) for Natura 2000 Protected Areas (water dependent SACs & SPAs).

See following page

N2K Protected Area in Anglian River Basin District (Abberton Reservoir SPA)

Protected Area name **Abberton Reservoir SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Coot; Cormorant; Gadwall; Goldeneye; Great-crested grebe; Mute swan; Pochard; Shoveler; Teal; Tufted duck; Waterfowl assemblage; Wigeon

Waterbody ID:

GB105037034130; GB30540418

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Alde-Ore & Butley Estuaries SAC)

Protected Area name **Alde-Ore & Butley Estuaries SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Atlantic salt meadows (H1330); Estuaries (H1130); Intertidal mudflats and sandflats (H1140)

Waterbody ID:

GB105035040160; GB105035040180; GB105035040190; GB105035045960; GB105035077800; GB520503503800; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Alde-Ore Estuary SPA)

Protected Area name **Alde-Ore Estuary SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Lesser black-backed gull; Little tern; Marsh harrier; Redshank; Ruff; Sandwich tern; Waterfowl assemblage

Waterbody ID:

GB105035040160; GB105035040180; GB105035040190; GB105035045960; GB105035077800; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Baston Fen SAC)

Protected Area name **Baston Fen SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Spined loach (S1149)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Benacre to Easton Bavents SPA)

Protected Area name **Benacre to Easton Bavents SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Bittern; Little tern; Marsh harrier

Waterbody ID:

GB105035046220; GB105035046250; GB610050071000; GB610050081000; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Inappropriate coastal management	Flood risk management	Environment Agency	2012
Water quality	-	Water pollution - discharge	Discharge/PPC consent	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Benacre to Easton Bavents Lagoons SAC)

Protected Area name **Benacre to Easton Bavents Lagoons SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Coastal Lagoons (H1150)

Waterbody ID:

GB105035046220; GB105035046250; GB610050071000; GB610050081000; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Flood management programme	Environment Agency	2012
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Flood management programme	Environment Agency	2012
Morphology	-	Inappropriate weirs dams and other structures	Flood management programme	Environment Agency	2012
Water quality	-	Water pollution - discharge	Discharge consent - revoke or amend	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (Benfleet and Southend Marshes SPA)

Protected Area name **Benfleet and Southend Marshes SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Dark-bellied brent goose; Knot; Ringed plover; Waterfowl assemblage

Waterbody ID:

GB105037028610; GB530603911401

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Inappropriate coastal management	Flood risk management	Local authorities, Natural England	2012
Water quality	-	Water pollution - discharge	Discharge/PPC consent	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Blackwater Estuary (Mid-Essex Coast Phase 4) SPA)

Protected Area name **Blackwater Estuary (Mid-Essex Coast Phase 4) SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Black-tailed godwit; Dark-bellied brent goose; Dunlin; Grey plover; Hen harrier; Little tern; Pochard; Ringed plover; Waterfowl assemblage

Waterbody ID:

GB105037028410; GB105037028430; GB105037028450; GB105037033510; GB105037033520; GB105037033630; GB105037033670; GB105037033730; GB105037033780; GB105037033790; GB105037033800; GB105037033810; GB105037033820; GB520503713900; GB650503200000

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Breckland SAC)

Protected Area name **Breckland SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Alder woodland on floodplains (H91E0); Great crested newt (S1166); Naturally nutrient-rich lakes or lochs which are dominated by pondweed (H3150)

Waterbody ID:

GB105033043050; GB105033043090; GB105033043400; GB105033043450; GB105033047650; GB105033047840; GB30537309

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Drainage	Water level management plan	Environment Agency	2012
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (Breydon Water SPA)

Protected Area name **Breydon Water SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Bewicks swan; Common tern; Golden plover; Lapwing; Ruff; Waterfowl assemblage

Waterbody ID:

GB105034050810; GB510503410700

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Broadland SPA)

Protected Area name **Broadland SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **Extended to 2021** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Bewicks swan; Bittern; Gadwall; Hen harrier; Marsh harrier; Ruff; Shoveler; Whooper swan; Wigeon

Waterbody ID:

GB105034045900; GB105034050810; GB105034050830; GB105034050840; GB105034050860; GB105034050890; GB105034050930; GB105034050940; GB105034050970; GB105034051210; GB105034051300; GB105034051310; GB105034051330; GB105034051360; GB105034051370; GB30535640; GB30535645; GB30535655; GB30535738; GB30535959; GB30535977; GB30535981; GB30536029; GB30536050; GB30536202; GB30536730; GB30537033; GB510503410700

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Drainage	Water level management plan	Broads IDB	2012
Hydrology	-	Inappropriate water levels	Flood management programme	Environment Agency	2012
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Essex and Suffolk Water	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012
Morphology	-	Inappropriate ditch management	Undertake specific management works	RSPB - Central	2012
Morphology	-	Loss of reedbed	Navigation works	The Broads National Park Authority	2012
Morphology	-	Siltation	Undertake specific management works	The Broads National Park Authority	2012
Morphology	-	Siltation	Undertake specific management works	Norfolk Wildlife Trust	2012
Morphology	-	Siltation	Water level management plan	Broads IDB	2012
Water quality	-	Water pollution - agriculture / run off	Flood management programme	The Waveney, Lower Yare and Lothingland Internal Drainage Board	2012
Water quality	-	Water pollution - agriculture / run off	Lake restoration project	Natural England	2012

N2K Protected Area in Anglian River Basin District (Broadland SPA)

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Water quality	-	Water pollution - agriculture / run off	Lake restoration project	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Lake restoration project	Broads IDB	2012
Water quality	-	Water pollution - agriculture / run off	Undertake specific management works	Suffolk Wildlife Trust	2012
Water quality	-	Water pollution - agriculture / run off	Undertake specific management works	The Broads National Park Authority	2012
Water quality	-	Water pollution - discharge	Discharge consent - revoke or amend	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

Reason for feature/s not meeting objective by 2015
Lake restoration projects - technically infeasible: practical constraints of a technical nature
Lake restoration projects - natural conditions: ecological recovery time
Justification for extended deadline
Good progress is being made. The Lake restoration strategy for The Broads (Broads Authority, 2008) has identified the most cost-effective priorities for future investment comprising restoration of seven Natura 2000 lakes. Practical constraints in obtaining the necessary permissions (eg Waste Disposal Licence and planning permission for change of use of land used for storage of pumped or dredged silt) will mean time delays before pumping can begin. Once the silt is removed, time is required for conditions to stabilise and the inputs from rivers to be diverted before assisted ecological recovery through bio-manipulation (eg removal of fish and introduction of plants) can enable a self-sustaining ecosystem to develop. Inputs of nutrients and silt from sewage works and farming activities is being addressed through investment by Anglian Water and the Defra Catchment Sensitive Farming initiative, managed by Natural England and the Environment Agency.

N2K Protected Area in Anglian River Basin District (Colne Estuary (Mid-Essex Coast Phase 2) SPA)

Protected Area name **Colne Estuary (Mid-Essex Coast Phase 2) SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.colne-estuary.org/Index.html	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Dark-bellied brent goose; Hen harrier; Little tern; Pochard; Redshank; Ringed plover; Waterfowl assemblage

Waterbody ID:

GB105037033850; GB105037034170; GB105037034180; GB105037034190; GB105037034200; GB105037034220; GB105037041310; GB520503713900; GB650503200000; GB650503520001

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA)

Protected Area name **Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.crouchandroach.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Dark-bellied brent goose; Hen harrier; Waterfowl assemblage

Waterbody ID:

GB105037028570; GB105037028620; GB105037028780; GB520503704100

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Agri-environment scheme	Natural England	2012
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Deben Estuary SPA)

Protected Area name **Deben Estuary SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Dark-bellied brent goose

Waterbody ID:

GB105035040200; GB105035040240; GB105035040250; GB105035040280; GB105035046310; GB520503503900

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Dengie (Mid-Essex Coast Phase 1) SPA)

Protected Area name **Dengie (Mid-Essex Coast Phase 1) SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Dark-bellied brent goose; Grey plover; Hen harrier; Knot; Waterfowl assemblage

Waterbody ID:

GB105037028580; GB105037033880; GB520503704100; GB520503713900; GB650503200000; GB650503520001

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Dew's Ponds SAC)

Protected Area name **Dew's Ponds SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Great crested newt (S1166)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Essex Estuaries SAC)

Protected Area name **Essex Estuaries SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Atlantic salt meadows (H1330); Cord-grass sward (H1320); Estuaries (H1130); Glasswort and other annuals colonising mud and sand (H1310); Intertidal mudflats and sandflats (H1140); Mediterranean saltmarsh scrub (H1420); Subtidal sandbanks (H1110)

Waterbody ID:

GB105037028410; GB105037028430; GB105037028450; GB105037028570; GB105037028580; GB105037028620; GB105037028780; GB105037033510; GB105037033520; GB105037033630; GB105037033670; GB105037033780; GB105037033790; GB105037033800; GB105037033810; GB105037033820; GB105037033850; GB105037033880; GB105037034170; GB105037034180; GB105037034190; GB105037034200; GB105037034220; GB105037041310; GB520503704100; GB520503713900; GB530603911401; GB640603690000; GB650503200000; GB650503520001

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Fenland SAC)

Protected Area name **Fenland SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Calcium-rich fen dominated by great fen sedge (saw sedge) (H7210); Great crested newt (S1166); Purple moor-grass meadows (H6410); Spined loach (S1149)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Water level management plan	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Foulness (Mid-Essex Coast Phase 5) SPA)

Protected Area name **Foulness (Mid-Essex Coast Phase 5) SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Bar-tailed godwit; Common tern; Dark-bellied brent goose; Grey plover; Hen harrier; Knot; Little tern; Oystercatcher; Redshank; Ringed plover; Sandwich tern; Waterfowl assemblage

Waterbody ID:

GB520503704100; GB530603911401; GB640603690000; GB650503520001

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency, Southend on Sea Borough Council, Ministry of Defence	2012

N2K Protected Area in Anglian River Basin District (Gibraltar Point SPA)

Protected Area name **Gibraltar Point SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.esfjc.co.uk/ems/pages/ems.htm	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Bar-tailed godwit; Grey plover; Little tern; Sanderling

Waterbody ID:

GB105030056390; GB530503016300; GB640402490000; GB640523160000

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Great Yarmouth North Denes SPA)

Protected Area name **Great Yarmouth North Denes SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Little tern

Waterbody ID:

GB650503520003

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Inappropriate coastal management	Flood management programme	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Investigation	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Hamford Water SPA)

Protected Area name **Hamford Water SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Black-tailed godwit; Dark-bellied brent goose; Little tern; Redshank; Ringed plover; Waterfowl assemblage

Waterbody ID:

GB105037034050; GB105037034240; GB520503713700; GB650503190000; GB650503520001

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency, Natural England, Defra	2012

N2K Protected Area in Anglian River Basin District (Minsmere to Walberswick Heaths and Marshes SAC)

Protected Area name **Minsmere to Walberswick Heaths and Marshes SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Annual vegetation of drift lines (H1210); Coastal shingle vegetation outside the reach of waves (H1220)

Waterbody ID:

GB105035046270; GB610050076000; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Flood risk management	Environment Agency	2012
Water quality	-	Water pollution - discharge	Discharge/PPC consent	Environment Agency, water companies	2012

N2K Protected Area in Anglian River Basin District (Minsmere-Walberswick SPA)

Protected Area name **Minsmere-Walberswick SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Bittern; Gadwall; Hen harrier; Little tern; Marsh harrier; Shoveler; Teal; White-fronted goose

Waterbody ID:

GB105035046270; GB610050076000; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Flood risk management	Environment Agency	2012
Water quality	-	Water pollution - discharge	Discharge/PPC consent	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Nene Washes SAC)

Protected Area name **Nene Washes SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Spined loach (S1149)

Waterbody ID:

GB105032050382

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Nene Washes SPA)

Protected Area name **Nene Washes SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Bewicks swan; Black-tailed godwit; Gadwall; Garganey; Pintail; Shoveler; Teal; Waterfowl assemblage; Wigeon

Waterbody ID:

GB105032050382

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Water level management plan	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Norfolk Valley Fens SAC)

Protected Area name **Norfolk Valley Fens SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Alder woodland on floodplains (H91E0); Alkaline fen (H7230); Calcium-rich fen dominated by great fen sedge (saw sedge) (H7210); Desmoulin's whorl snail (S1016); Narrow-mouthed whorl snail (S1014); Purple moor-grass meadows (H6410); Wet heathland with cross-leaved heath (H4010)

Waterbody ID:

GB105033047840; GB105034055780

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (North Norfolk Coast SAC)

Protected Area name **North Norfolk Coast SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Coastal shingle vegetation outside the reach of waves (H1220); Dune grassland (H2130); Humid dune slacks (H2190); Lagoons (H1150); Mediterranean saltmarsh scrub (H1420); Otter (S1355); Petalwort (S1395); Shifting dunes (H2110); Shifting dunes with marram grass (H2120)

Waterbody ID:

GB105034055750; GB105034055780; GB105034055830; GB610050082000; GB640503300000; GB640523160000

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (North Norfolk Coast SPA)

Protected Area name **North Norfolk Coast SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.esfjc.co.uk/ems/pages/ems.htm	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Bittern; Common tern; Dark-bellied brent goose; Knot; Little tern; Marsh harrier; Pink-footed goose; Sandwich tern; Wigeon; Wintering waterfowl and wildfowl assemblage

Waterbody ID:

GB105034055750; GB105034055780; GB105034055830; GB510503403500; GB520503403600; GB610050082000; GB640503300000; GB640523160000

Reason for feature/s either not meeting objective or being at risk of deterioration		***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - *Reason*		*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Orfordness-Shingle Street SAC)

Protected Area name **Orfordness-Shingle Street SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Annual vegetation of drift lines (H1210); Coastal shingle vegetation outside the reach of waves (H1220); Lagoons (H1150)

Waterbody ID:

GB520503503800; GB650503520002

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Inappropriate coastal management	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Orton Pit SAC)

Protected Area name **Orton Pit SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Calcium-rich, nutrient-poor lakes, lochs and ponds (H3140); Great crested newt (S1166)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Ouse Washes SAC)

Protected Area name **Ouse Washes SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Spined loach (S1149)

Waterbody ID:

GB105033042880; GB105033047922; GB530503300300

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Water quality	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency	2012
Water quality	-	Water pollution - discharge	Discharge consent - revoke or amend	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (Ouse Washes SPA)

Protected Area name **Ouse Washes SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Bewicks swan; Black-tailed godwit; Breeding bird assemblage; Coot; Cormorant; Gadwall; Garganey; Hen harrier; Lapwing; Mallard; Moorhen; Mute swan; Oystercatcher; Pintail; Pochard; Redshank; Ruff; Shelduck; Shoveler; Teal; Waterfowl assemblage; Whooper swan; Wigeon

Waterbody ID:

GB105033042880; GB105033047922

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Special project	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (Overstrand Cliffs SAC)

Protected Area name **Overstrand Cliffs SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Vegetated sea cliffs (H1230)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Portholme SAC)

Protected Area name **Portholme SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Lowland hay meadows (H6510)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Water level management plan	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (River Wensum SAC)

Protected Area name **River Wensum SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **Extended to 2021** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Brook lamprey (S1096); Bullhead (S1163); Desmoulin's whorl snail (S1016); Rivers with floating vegetation often dominated by water-crowfoot (H3260); White clawed crayfish (S1092)

Waterbody ID:

GB105034051010; GB105034051080; GB105034051100; GB105034051110; GB105034051130; GB105034051140; GB105034055850; GB105034055860; GB105034055880

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Agri-environment scheme	Natural England	2012
Hydrology	-	Inappropriate water levels	Water level management plan	Norfolk Rivers Internal Drainage Board	2012
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012
Invasive species	-	Invasive freshwater species	Invasive species control programme for protected areas	Natural England	2012
Invasive species	-	Invasive freshwater species	Invasive species control programme for protected areas	Environment Agency	2012
Morphology	-	Inappropriate weirs dams and other structures	Agri-environment scheme	Natural England	2012
Morphology	-	Inappropriate weirs dams and other structures	River restoration programme for protected areas	Norfolk Rivers Internal Drainage Board	2012
Morphology	-	Inappropriate weirs dams and other structures	River restoration programme for protected areas	Natural England	2012
Morphology	-	Inappropriate weirs dams and other structures	River restoration programme for protected areas	Environment Agency	2012
Morphology	-	Inappropriate weirs dams and other structures	Undertake specific management works	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (River Wensum SAC)

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Norfolk County Council	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - discharge	Discharge consent - revoke or amend	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

Reason for feature/s not meeting objective by 2015
Invasive freshwater species - technically infeasible: no known technical solution
Justification for extended deadline
The American signal crayfish is established, and trapping has not been effective. Natural England are investigating technically feasible solutions to control or eradicate signal crayfish. More time is required to do this.

N2K Protected Area in Anglian River Basin District (Roydon Common and Dersingham Bog SAC)

Protected Area name **Roydon Common and Dersingham Bog SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table	**Yes**

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Depressions on peat substrates (H7150); Wet heathland with cross-leaved heath (H4010)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration		***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - *Reason*		*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Rutland Water SPA)

Protected Area name **Rutland Water SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Coot; Gadwall; Goldeneye; Great-crested grebe; Mute swan; Shoveler; Teal; Tufted duck; Waterfowl assemblage; Wigeon

Waterbody ID:

GB105031050470; GB105031050480; GB105031050490; GB30536479

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC)

Protected Area name **Saltfleetby-Theddlethorpe Dunes and Gibraltar Point SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Dune grassland (H2130); Dunes with sea buckthorn (H2160); Humid dune slacks (H2190); Shifting dunes (H2110); Shifting dunes with marram grass (H2120)

Waterbody ID:

GB530503016300; GB640402490000; GB640523160000

Reason for feature/s either not meeting objective or being at risk of deterioration	***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute - Reason	*Measure*	*Organisation responsible*	

N2K Protected Area in Anglian River Basin District (Stour and Orwell Estuaries SPA)

Protected Area name **Stour and Orwell Estuaries SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.suffolkcoastandheaths.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Avocet; Black-tailed godwit; Dark-bellied brent goose; Dunlin; Grey plover; Knot; Pintail; Redshank; Shelduck; Waterfowl assemblage

Waterbody ID:

GB105035040380; GB105035040390; GB105035040400; GB105035040410; GB105035040420; GB105036040790; GB105036040800; GB105036040850; GB105036040880; GB105036040890; GB105036041000; GB105036041060; GB520503613601; GB520503613602

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Coastal squeeze	Flood risk management	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (The Broads SAC)

Protected Area name **The Broads SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **Extended to 2021** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Alder woodland on floodplains (H91E0); Alkaline fen (H7230); Calcium-rich fen dominated by great fen sedge (saw sedge) (H7210); Calcium-rich, nutrient-poor lakes, lochs and ponds (H3140); Desmoulin's whorl snail (S1016); Fen orchid (S1903); Naturally nutrient-rich lakes or lochs which are dominated by pondweed (H3150); Otter (S1355); Purple moor-grass meadows (H6410); Very wet mires often identified by an unstable 'quaking' surface (H7140)

Waterbody ID:

GB105034045900; GB105034050810; GB105034050830; GB105034050840; GB105034050860; GB105034050890; GB105034050930; GB105034050940; GB105034050970; GB105034051210; GB105034051300; GB105034051310; GB105034051330; GB105034051360; GB105034051370; GB30535640; GB30535645; GB30535655; GB30535738; GB30535959; GB30535977; GB30535981; GB30536029; GB30536050; GB30536202; GB30536730; GB30537033; GB510503410700

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Drainage	Flood management programme	Environment Agency	2012
Hydrology	-	Drainage	Water level management plan	Broads IDB	2012
Hydrology	-	Inappropriate water levels	Flood management programme	Environment Agency	2012
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Essex and Suffolk Water	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012
Morphology	-	Inappropriate ditch management	Agri-environment scheme	Natural England	2012
Morphology	-	Inappropriate ditch management	Undertake specific management works	RSPB - Central	2012
Morphology	-	Inland flood defence works	Flood management programme	Environment Agency	2012
Morphology	-	Loss of reedbed	Navigation works	The Broads National Park Authority	2012

N2K Protected Area in Anglian River Basin District (The Broads SAC)

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Siltation	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Norfolk Wildlife Trust	2012
Morphology	-	Siltation	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	The Broads National Park Authority	2012
Morphology	-	Siltation	Lake restoration project	Environment Agency	2012
Morphology	-	Siltation	Lake restoration project	Natural England	2012
Water quality	-	Siltation	Lake restoration project	Natural England	2012
Water quality	-	Siltation	Lake restoration project	Environment Agency	2012
Water quality	-	Siltation	Lake restoration project	Broads IDB	2012
Water quality	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Suffolk Wildlife Trust	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	The Broads National Park Authority	2012
Water quality	-	Water pollution - agriculture / run off	Flood management programme	The Waveney, Lower Yare and Lothingland Internal Drainage Board	2012
Water quality	-	Water pollution - discharge	Discharge consent - revoke or amend	Environment Agency	2012
Water quality	-	Water pollution - discharge	Implement AMP scheme	Anglian Water Services Limited	2012

N2K Protected Area in Anglian River Basin District (The Broads SAC)

Reason for feature/s not meeting objective by 2015
Lake restoration projects - technically infeasible: practical constraints of a technical nature Lake restoration projects - natural conditions: ecological recovery time
Justification for extended deadline
Good progress is being made. The Lake restoration strategy for The Broads (Broads Authority, 2008) has identified the most cost-effective priorities for future investment comprising restoration of seven Natura 2000 lakes. Practical constraints in obtaining the necessary permissions (eg Waste Disposal Licence and planning permission for change of use of land used for storage of pumped or dredged silt) will mean time delays before pumping can begin. Once the silt is removed, time is required for conditions to stabilise and the inputs from rivers to be diverted before assisted ecological recovery through bio-manipulation (eg removal of fish and introduction of plants) can enable a self-sustaining ecosystem to develop. Inputs of nutrients and silt from sewage works and farming activities is being addressed through investment by Anglian Water and the Defra Catchment Sensitive Farming initiative, managed by Natural England and the Environment Agency.

N2K Protected Area in Anglian River Basin District (The Wash SPA)

Protected Area name **The Wash SPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.esfjc.co.uk/ems/pages/ems.htm	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Bar-tailed godwit; Bewicks swan; Common tern; Curlew; Dark-bellied brent goose; Dunlin; Grey plover; Knot; Little tern; Oystercatcher; Pink-footed goose; Pintail; Redshank; Sanderling; Shelduck; Turnstone; Waterfowl assemblage; Whooper swan

Waterbody ID:

GB105030056270; GB105030056370; GB105031050760; GB105031055490; GB105031055500; GB105031055540; GB105031055550; GB105033053470; GB105033053480; GB530503000100; GB530503016300; GB530503100400; GB530503200200; GB530503300300; GB530503311300; GB560503316700; GB640523160000

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Ecology / morphology	-	Inappropriate fisheries	Management agreement / modify consent	Natural England, industry	2012
Morphology	-	Inappropriate coastal management	Local authority planning permission	Local authority	2012
Water quality / hydromorphology	-	Unknown	Investigation	Natural England, Environment Agency, local authority	2012

N2K Protected Area in Anglian River Basin District (The Wash & North Norfolk Coast SAC)

Protected Area name **The Wash & North Norfolk Coast SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/ http://www.esfjc.co.uk/ems/pages/ems.htm	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Atlantic salt meadows (H1330); Common seal (S1365); Glasswort and other annuals colonising mud and sand (H1310); Intertidal mudflats and sandflats (H1140); Lagoons (H1150); Mediterranean saltmarsh scrub (H1420); Otter (S1355); Reefs (H1170); Shallow inlets and bays (H1160); Subtidal sandbanks (H1110)

Waterbody ID:

GB105030056270; GB105030056370; GB105030056390; GB105031050760; GB105031055490; GB105031055500; GB105031055540; GB105031055550; GB105033053470; GB105033053480; GB105034055750; GB105034055780; GB105034055830; GB640402490000; GB640503300000; GB640523160000

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Ecology / morphology	-	Inappropriate fisheries	Management agreement / modify consent	Natural England, industry	2012
Morphology	-	Coastal squeeze	SMP2 investigation	Natural England	2012
Morphology	-	Fisheries	Byelaw	Sea Fisheries Committee	2012
Morphology	-	Significant decline in moult counts	Investigation	Natural England	2012
Water quality / hydromorphology	-	Unknown	Investigation on lagoons	Natural England, Environment Agency, local authority	2012

N2K Protected Area in Anglian River Basin District (Upper Nene Gravel Pits pSPA)

Protected Area name **Upper Nene Gravel Pits pSPA**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **Yes** ***If not, date for achieving environmental objectives*** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Gadwall; Golden plover; Waterfowl assemblage; Wintering bittern

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Water quality	-	Water pollution - discharge	Undertake review of consents	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Waveney and Little Ouse Valley Fens SAC)

Protected Area name **Waveney and Little Ouse Valley Fens SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Calcium-rich fen dominated by great fen sedge (saw sedge) (H7210); Desmoulin's whorl snail (S1016); Purple moor-grass meadows (H6410)

Waterbody ID:

Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Hydrology	-	Inappropriate water levels	Agri-environment scheme	Natural England	2012
Hydrology	-	Inappropriate water levels	Water level management plan	Environment Agency	2012
Hydrology	-	Water abstraction	Abstraction licence - revoke or amend	Environment Agency	2012
Hydrology	-	Water abstraction	Implement AMP scheme	Anglian Water Services Limited	2012
Morphology	-	Inappropriate dredging	Water level management plan	Environment Agency	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Natural England	2012
Water quality	-	Water pollution - agriculture / run off	Develop pollution action plan (evaluate impacts and apply appropriate solution, e.g. catchment sensitive farming, water protection zone or control of discharges)	Environment Agency	2012
Water quality	-	Water pollution - discharge	Discharge consent - revoke or amend	Environment Agency	2012

N2K Protected Area in Anglian River Basin District (Winterton-Horsey Dunes SAC)

Protected Area name **Winterton-Horsey Dunes SAC**	***Protected Area designation*** Habitats Directive (Council Directive 92/43/EEC): http://www.jncc.gov.uk/page-1374 Detailed site information: http://www.natureonthemap.org.uk/	***Is the Protected Area meeting its environmental objectives as required by Article 4 (1c)?*** **No** ***If not, date for achieving environmental objectives*** **2015** If extended, justification provided at end of this table

Overall objective for Protected Area:

Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or improve to Favourable Conservation Status the water-dependent habitats and species for which the Protected Area is designated)

Water-dependent habitats or species for which the Protected Area was designated (interest features):

Humid dune slacks (H2190); Shifting dunes (H2110); Shifting dunes with marram grass (H2120)

Waterbody ID:

GB650503520003

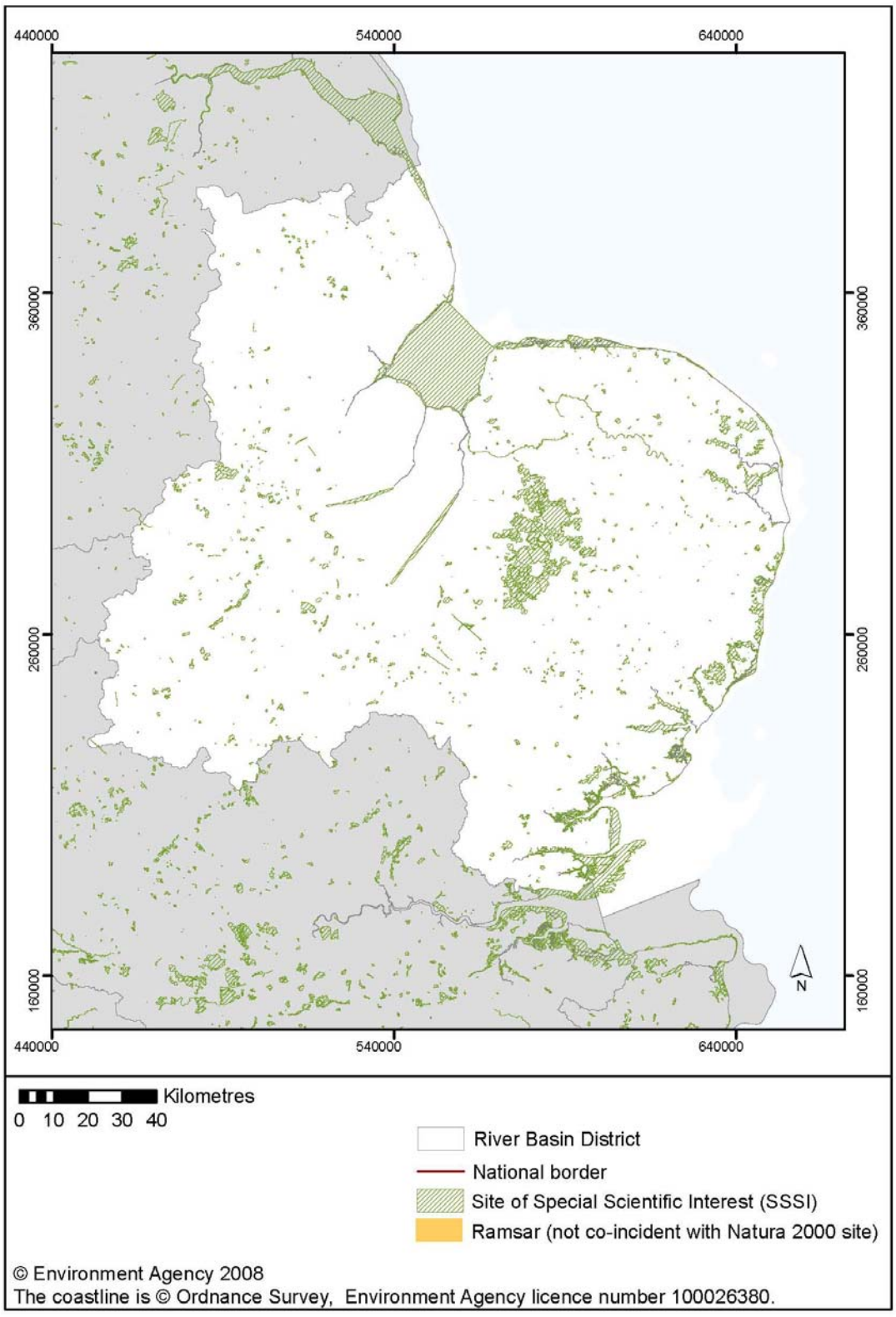
Reason for feature/s either not meeting objective or being at risk of deterioration			***Measures proposed to maintain at, or improve to, Favourable Conservation Status***		***Measure to be made operational no later than***
Attribute	-	*Reason*	*Measure*	*Organisation responsible*	
Morphology	-	Inappropriate coastal management	Flood management programme	Environment Agency	2012
Morphology	-	Inappropriate coastal management	Investigation	Environment Agency	2012

D.6 Other information

In the third consultation paper on the implementation of the EC Water Framework Directive (2000/60/EC), published in August 2003, the Government stated that it would be beneficial to include a map showing nationally designated conservation sites and Ramsar sites that are not coincident with Natura 2000 designations to further policy and delivery integration. This map is presented in Figure D.32. It shows all Sites of Special Scientific Interest (SSSIs) including those that are not water dependent.

Water Framework Directive objectives only apply to SSSIs that are part of Natura 2000 Protected Areas or are designated as water bodies in their own right.

D.32 Location of Sites of Special Scientific Interest and Ramsar sites that do not overlap with Natura 2000 Protected Areas



defra
Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex E: Actions appraisal and justifying objectives

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ANC2a	GC1a	M1f	P1e
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E1 Introduction

This annex describes the process we used to identify and appraise measures and to develop water body objectives for the first cycle of river basin management. It also provides details on the justifications for setting any alternative objectives. In carrying out this process we have been guided by the River Basin Planning Guidance published by Defra and Welsh Assembly Government in 2006 and 2008 (http://www.defra.gov.uk/environment/water/wfd/management.htm).

We have also taken account of the Common Implementation Strategy (CIS) Guidance Document Number 20, which provides Member States with guidance on the use of exemptions to environmental objectives (http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/documentn20_mars09pdf/_EN_1.0_&a=d)

The guidance document emphasises the point that the Water Framework Directive (WFD) provides the framework and sets the general direction, but that there is scope for differences in understanding and application. Where we have taken a particular approach to the use of exemptions, we have tried to make the decisions as transparent as possible, offering explanations of the reasons behind use of exemptions either for reasons of disproportionate cost, technical feasibility or natural conditions. We have attempted to phase the implementation of measures to spread the costs of implementation while undertaking demonstrable action in the first cycle.

We will also attempt to identify alternative financing mechanisms to fund necessary and cost-effective action in the first cycle, and in cycles two and three. This might include distribution of costs among polluters and users (where the polluter can be identified), use of the public budget, private investment, EU and international funds etc.

We are also following the CIS guidance in our approach, by ensuring that aggregated information is relevant to the individual water body concerned, whilst acknowledging that this does not necessarily imply that the reasons for justifying an exemption must always be located within the water body for which the exemption is sought.

Article 4.8 of the WFD, and reiterated in the CIS document, also requires us, when applying an exemption to a water body to “ensure that the application does not permanently exclude or compromise the achievement of the objectives of this Directive in other bodies of water within the same river basin district and is consistent with the implementation of other Community environmental legislation.” There are various references throughout this annex and plan to ensure this is the case e.g. Birds and Habitats Directives, Nitrates Directive, Bathing Water Directive.

The management of uncertainty will play a large part in the first cycle of river basin management plans as we continue to gather more monitoring data and evidence to establish the cause of water quality failures, or in order to develop the most cost-effective solution. We have taken uncertainty into account in setting objectives and deciding on the appropriate action to take for water bodies. This action is based largely on undertaking further investigations and making most use of new monitoring data to reduce the uncertainties in the future. The types of uncertainty considered in the CIS guidance, include:

- whether, and to what extent, a water body is adversely impacted and what and/or who causes the impact;
- the impact of policies already in place or planned and various trends and developments, including innovation and technical change;

- the effectiveness of measures in addressing an adverse impact on a water body (note that this will have an effect on the certainty of the benefits as well);
- the assessment of the achievement of good status;
- the costs associated with measures;
- the benefits resulting from improvements to the status of water bodies, particularly the calculation of the non-marketable benefits.

These uncertainties may lead to an extended deadline for the reason of technical infeasibility (for example where we do not know the source of a problem) or disproportionate cost (for example where we are not sure a water body isn't already at good status) because of the impact on cost and benefit estimates.

The river basin management plan is subject to economic and environmental assessment. An impact assessment has been produced (http://www.environment-agency.gov.uk/research/planning/33106.aspx) which reviews the costs and benefits of implementing the plan. The plan has also been the subject of a Strategic Environmental Assessment, and an environmental report has been produced which looks at the broader impacts that the plan may have on the environment, including the effects the plan may have on climate change. (Annex H sets out how climate change may itself impact on measures that we are able to put forward in the plan). The potential for the plan to have any significant negative effects on Natura 2000 sites has also been assessed by us, in consultation with Natural England and the Countryside Council for Wales.

E1.1 The Water Framework Directive's objectives

The Directive sets out in Article 4 the default environmental objectives that we should aim to meet. In summary, they are:

In relation to surface waters

- prevent deterioration in the status of water bodies;
- by 2015 achieve good ecological and chemical status[1] in all water bodies other than those which are artificial or heavily modified;
- by 2015 achieve good ecological potential and surface water chemical status for artificial and heavily modified water bodies;
- by 2015, achieve the objectives and comply with the standards for protected areas;
- reduce pollution from priority substances and cease discharges, emissions and losses of priority hazardous substances.

In relation to groundwaters

- prevent deterioration in status;
- take all measures necessary to prevent the input of hazardous substances into groundwater and to limit the input of other pollutants to groundwater;
- by 2015 achieve good quantitative and chemical status[2];
- reverse any significant and sustained upward trend in the concentration of pollutants resulting from human activities;
- by 2015, comply with objectives and standards for protected areas.

[1] Also known as 'good surface water status': Article 2(18)
[2] Also known as 'good groundwater status': Article 2(20)

In relation to protected areas

The objectives for protected areas are mostly governed by the other European Community legislation under which they are designated, for example the Habitats Directive. For drinking water protected areas, the objectives are set out in the Water Framework Directive (WFD) itself. The protected areas objectives apply in addition to the requirement to achieve the environmental objectives of the WFD. It is not always possible to link the water body objectives with the protected area objectives as they are not always directly comparable, and in a number of cases, the size and scale of water bodies is not the same as waters identified as protected areas and so are not comparable. Where water body boundaries overlap with protected areas, and the objectives align, the most stringent objective applies. More details on protected areas and their objectives are set out in Annex D.

Alternative objectives

In certain circumstances (set out in Article 4.4 and 4.5 of the WFD) Member States may deviate from achieving the default objectives (e.g. good status by 2015). Objectives which are different from the default objectives are referred to here as alternative objectives.

Use of the alternative objectives is the mechanism which the WFD provides for:

- considering, amongst other things, other environmental, social and economic priorities alongside water management priorities; and
- prioritising action over successive river basin management planning cycles.

The alternative objectives and their conditions are the only relevant considerations when justifying the prioritisation of action under the WFD.

The types of alternative objective are:

- an extended deadline, e.g. achieving good ecological status by 2027;
- a less stringent objective, e.g. achieving moderate ecological status by 2015;
- different objectives for heavily modified or artificial water bodies, e.g. good ecological potential.

Alternative objectives are determined through a process of measures appraisal and objective setting. This process is at the heart of river basin management planning, and includes technical assessments (including consideration of technical infeasibility), economic assessment (to consider issues of disproportionate expense) and public consultation.

We have produced a list of simplified reasons for setting alternative objectives (extended deadlines and/or less stringent objectives). These are shown in Table 1.

Table 1: **Reasons for not achieving good status**

Reason	Sub-reason	Guidance notes
Technically infeasible	No known technical solution is available	Applies where there is no practical technique for making the necessary improvement. Does not include financial considerations. Techniques which may be under development but which are not yet known to be effective in practice will fall into this category.
	Cause of adverse impact unknown	Applies where a water body is classed as worse than good but the reason (the pressure or the specific source of the pressure) for this failure has not yet been determined. Consequently, a solution cannot feasibly be identified.
	Practical constraints of a technical nature prevent implementation of the measure by an earlier deadline	Includes administrative constraints in terms of commissioning, gaining permission for, and undertaking the necessary works. Does not include constraints due to a lack of legislative mechanisms or of funding.
	Problem cannot be addressed because of lack of action by other countries	Application expected to be very limited in the UK. May possibly be applicable: (a) in the international river basin districts shared between Northern Ireland and the Republic of Ireland if the problem cannot be resolved through the established partnership working arrangements for those basins. (b) where problems are caused by aerial deposition of transboundary pollutants and (a) local mitigation cannot solve the problem; and (b) discussions with the other countries have not led to effective action. Where this reason is applied, the Commission must be informed about the issue under Article 12.
Disproportionately expensive	Unfavourable balance of costs and benefits	Attaining the default objective is not worthwhile because the costs of the measure are out of proportion to the benefits, taking into account qualitative as well as quantitative information.

Reason	Sub-reason	Guidance notes
	Significant risk of unfavourable balance of costs and benefits	Applies where there is a sufficiently low confidence that a water body is adversely impacted. In these circumstances, there is a significant risk that putting in place additional measures to attain the objective is not worthwhile (because the default objective may already be achieved), producing no benefits and wasted investments. Potential measures can still be implemented where there is general agreement to proceed even where we have low confidence that a particular water body is adversely affected.
	Disproportionate burdens	Applies where the measure would be: (a) unaffordable to implement within a particular timetable without creating disproportionate burdens for particular sectors or parts of society; or (b) the only solution would be significantly at odds with the polluter pays principle.
Natural conditions	Ecological recovery time	Applies where there is expected to be a delay before the biological quality of the water body recovers. The delay may be due to the time taken for the plants and animals to re-colonise and become established after the hydromorphological, chemical and physicochemical conditions have been restored to 'good'; or the time taken for the habitat conditions to 'stabilise' after improvement works. For example, this may apply to lakes affected by eutrophication.
	Groundwater status recovery time	Applies where the climatic or geological characteristics dictate the rate at which groundwater levels recover or saline (or other) intrusions reverse once over-abstraction has been addressed.

Of these reasons only “Technically infeasible - No known technical solution is available” or “Disproportionately expensive - Unfavourable balance of costs and benefits” could lead to setting a less stringent objective. However, in most cases they could also lead to setting an extended deadline. All other reasons lead to setting an extended deadline.

The CIS guidance document on the use of exemptions states that “disproportionality” is a political judgement, informed by economic information, and an analysis of the costs and benefits of measures necessary to make a decision on exemptions. We have used the principles on the approach to disproportionate cost set out in the CIS document to guide us in our use of exemptions in the plans. These principles include:

- disproportionality should not begin at the point where measured costs simply exceed quantifiable benefits;
- the assessment of costs and benefits will have to include qualitative costs and benefits as well as quantitative;
- the margin by which costs exceed benefits should be appreciable and have a high level of confidence;
- in the context of disproportionality the decision-maker may also want to take into consideration the ability to pay of those affected by the measures and some information on this may be required.

The costs of measures required under other existing Community water legislation (e.g. Nitrates Directive) already agreed when the WFD was adopted cannot be considered when deciding on disproportionate cost.

We will also make a concerted effort to overcome practical issues of a technical nature, so that there is a greater likelihood of finding further technically feasible improvements.

Detailed justification[3] for setting alternative objectives for specific water bodies is given in section E2 to E11.

Temporary deterioration in status

In certain circumstances (set out in Article 4.6 of the WFD) a temporary deterioration in status of a water body, caused by exceptional or unforeseen events such as extreme floods, prolonged droughts or accidents, is allowed. The exception does not apply to those effects of extreme floods and prolonged droughts which could reasonably have been planned for and prevented, nor does it apply in the case of accidents which could reasonably have been foreseen.

Droughts
In England and Wales, the main bodies responsible for managing water resources are the Environment Agency, water companies and the Government. All of these bodies have a role in drought management.[4]

Defining and then monitoring indicators helps the Environment Agency and water companies decide when a drought is happening and what actions they need to take. These indicators are often called drought triggers and a range of different triggers are used to identify whether drought actions need to be taken. Triggers can be based on:

- hydrological thresholds: rainfall, rivers levels and flows, reservoir storage, groundwater levels;
- environmental indicators: water quality, ecology;
- levels of customer demand;
- management actions.

As a trigger is approached or crossed, a water company or the Environment Agency will consider whether to implement a pre-determined action or move to the next stage of drought management. The decision to take action will be based on a range of factors, including present and forecast weather conditions and how effective the action would be.

The Environment Agency and water companies prepare for droughts by producing Drought Plans detailing the actions that will be taken if a drought occurs. These actions aim to

[3] As required by Article 4.4 or 4.5 of the WFD
[4] For more details see Environment Agency report "Managing drought in England and Wales"; http://publications.environment-agency.gov.uk/pdf/GEHO0308BNTR-E-E.pdf

manage water resources effectively, both for the environment and for public water supply, when they come under pressure by drought.

Droughts usually take a long time to develop and different actions are needed as a drought progresses. The sequence of actions will not always be the same as droughts are all different and need to be managed on an individual basis.

Floods
The Environment Agency is responsible for providing flood forecasting and warnings to the public in England and Wales. This involves monitoring rainfall, river levels and sea conditions. Combined with weather data and tidal reports the Environment Agency provides local area forecasts on the possibility of flooding and its likely severity.

There are four levels of flood warning: three of the codes indicate the severity of the warning (Flood Watch, Flood Warning, Severe Flood Warning) and a fourth is an 'All Clear', meaning the threat has passed.

Severe floods may impact on water body status through effects such as the loss of habitat (e.g. scouring of sediments and instream vegetation), the physical displacement of species or increased inputs of pollutants including sediment. These impacts may be localised and of insufficient magnitude to affect the status of an entire water body.

Water bodies are classified on an annual basis and therefore any deterioration in status due to a severe flood may not be detected until up to a year after the event.

Accidents
The Environmental Damage (Prevention and Remediation) (England) Regulations 2009 and the Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 bring the Environmental Liability Directive into effect in England and Wales. Under the Regulations, environmental damage of either surface water or groundwater is defined as damage causing a change of water body status,

This means:
- either a deterioration of water status overall, for example the water body as a whole would now be classified as 'poor' rather than 'good'.
- or a deterioration of any of the individual elements or parameters such that the value of that element or parameter is now consistent with a lower status than before. This applies even if the water body is not reclassified as being of lower status. For example, suppose a water body would be good status but for a dam preventing fish migration. Because of the dam, the status is currently poor even though water quality is good. An accident causes pollution of this water body. Water quality is now moderate status. The pollution is, therefore, significant enough on its own to cause a change of status even though the overall poor status – as dictated by the impact of the dam – has not changed. This is environmental damage.

Water bodies are classified on an annual basis and therefore environmental; damage is only likely to be determined if the effects of the accident last for up to a year. Adverse effects that are short-term or limited in their geographical extent are unlikely to amount to environmental damage.

When environmental damage is confirmed, the Regulations include a remediation objective of achieving the same level of natural resources or services that would have existed if the damage had not occurred.

E1.2 Measures and mechanisms - actions to meet our objectives

The term 'measures' in the Water Framework Directive encompasses both on the ground actions and the policy and legislative instruments to achieve these actions. In this plan separate terms are used as follows:

- **Measure** - any action which will be taken on the ground to help achieve Water Framework Directive objectives.
- **Mechanism** - the policy, legislation, financial tools and other relevant means which are used to bring about those actions. Mechanisms include, for example: licensing systems; legislation; economic instruments; codes of good practice; negotiated agreements; promotion of water efficiency; educational projects; research, development and demonstration projects.

Annex F describes the mechanisms that are available for implementing measures.
We have a long history of protecting and improving the water environment and there are many existing measures in place that are continuing to help improve the water environment. There are also many measures that are planned for reasons other than the Water Framework Directive. These measures fall under the 'umbrella' of the Water Framework Directive. As part of the measures appraisal process we need to understand how they can help meet the Directive's default objectives.

We have categorised measures in four broad groups to help simplify the river basin management planning process (see table 2 below). This ensures there is a common way of distinguishing between those measures that already exist (not driven by the Water Framework Directive), and those additional measures that we are proposing in order to meet Water Framework Directive objectives. The categories relate mainly to the nature of the driver and not necessarily the measure. As a result, a particular type of measure may appear in more than one category depending on the reason for using it.

Table 2: **Categories of measures**

M1	Measures already happening (not driven by WFD): Actions already agreed and funded, which may help to meet the objectives of the Water Framework Directive. This group includes the National Environment Programme for Periodic Review 2004 (PR04), the Coal Authority mine water restoration programme, ongoing local initiatives and partnerships measures.
M2	New measures that will happen (not driven by WFD): Actions that will happen irrespective of the Water Framework Directive (usually under other Directives) but which may help to meet the objectives of the Water Framework Directive. This group mainly covers new action for Directives on Freshwater Fish, Urban Waste Water Treatment, Habitats, Nitrates, current and revised Bathing Waters and Shellfish Waters. In some cases, there may be choices over the standards or objective to be achieved, or the date by which the objective is to be met and where further work is needed on the benefits (for example for Guideline Standards in Directives, or for diffuse pollution measures for Natura 2000 sites). In these cases, the measures will be treated, for management purposes, as M3b or M4[5].

[5] This is because the process is similar and the benefits affect the attractiveness of other M3b and M4 schemes (and vice versa) but it is important to retain the point that the initial driver is M2.

M3	(a) New measures that will happen – national (driven by WFD): Measures for the Water Framework Directive that only require national decisions. For example, controls on chemicals, fertilisers and the formulation of other products (such as detergents), as well as national general binding rules and codes of practice that apply to specific activities.
	(b) New measures that will happen – national, river basin district (RBD) targeted (driven by WFD): Measures led nationally that require targeting at the water body or catchment scale. For example, bespoke calculations of permit conditions, targeted use of uniform emission limits, targeted use of diffuse pollution measures (for example England Catchment Sensitive Farming Delivery Initiative new catchments, catchment scale water protection zones).
M4	New measures that will happen – local, RBD agreed (driven by WFD): New measures specifically for objectives of the Water Framework Directive that require no national decisions. For example, a local partnership to create a new wetland, new rivers trusts initiatives or a local awareness/education campaign.

Toolkit of measures

We have compiled a comprehensive list of measures that may be used to deal with particular environmental problems and may be applied locally or across a much wider area, including nationally. They have been referenced to the pressures that give rise to the problems, and the sectors and their activities that are associated with these. We have carried out further work to consider more specifically measures to manage hydromorphological problems.

We used this 'measures toolkit' to help identify or confirm:

- which sectors may be contributing to particular environmental problems and pressures;
- what measures we could use to tackle these;
- what mechanisms exist to bring about this action;
- which existing processes may help to implement these mechanisms;
- what to consider in selecting mechanisms - in some cases the same measure could be implemented via more than one mechanism;
- how to assess and compare the effectiveness of measures.

We were also able to use this to help identify where new or amended delivery mechanisms might be needed.

E1.3 Selecting and appraising measures

Overall process

The measures appraisal process is central to the objective setting process. The process is used to consider whether;

- it is technically feasible to implement measures to achieve a desired objective,
- doing so would be disproportionately expensive (by comparing the costs of the measures with the benefits and other impacts implementing the measure will deliver), and
- whether natural conditions affect the ability or the timing of the achievement of an objective.

The process in principle can be summarised in a number of steps, shown below and diagrammatically in figure 1:

Step one – Identify current (M1) or planned measures (M2) and assess how far these go to meeting default objectives.

Step two – If default objectives are not achieved after step 1, identify potential additional M3 measures.

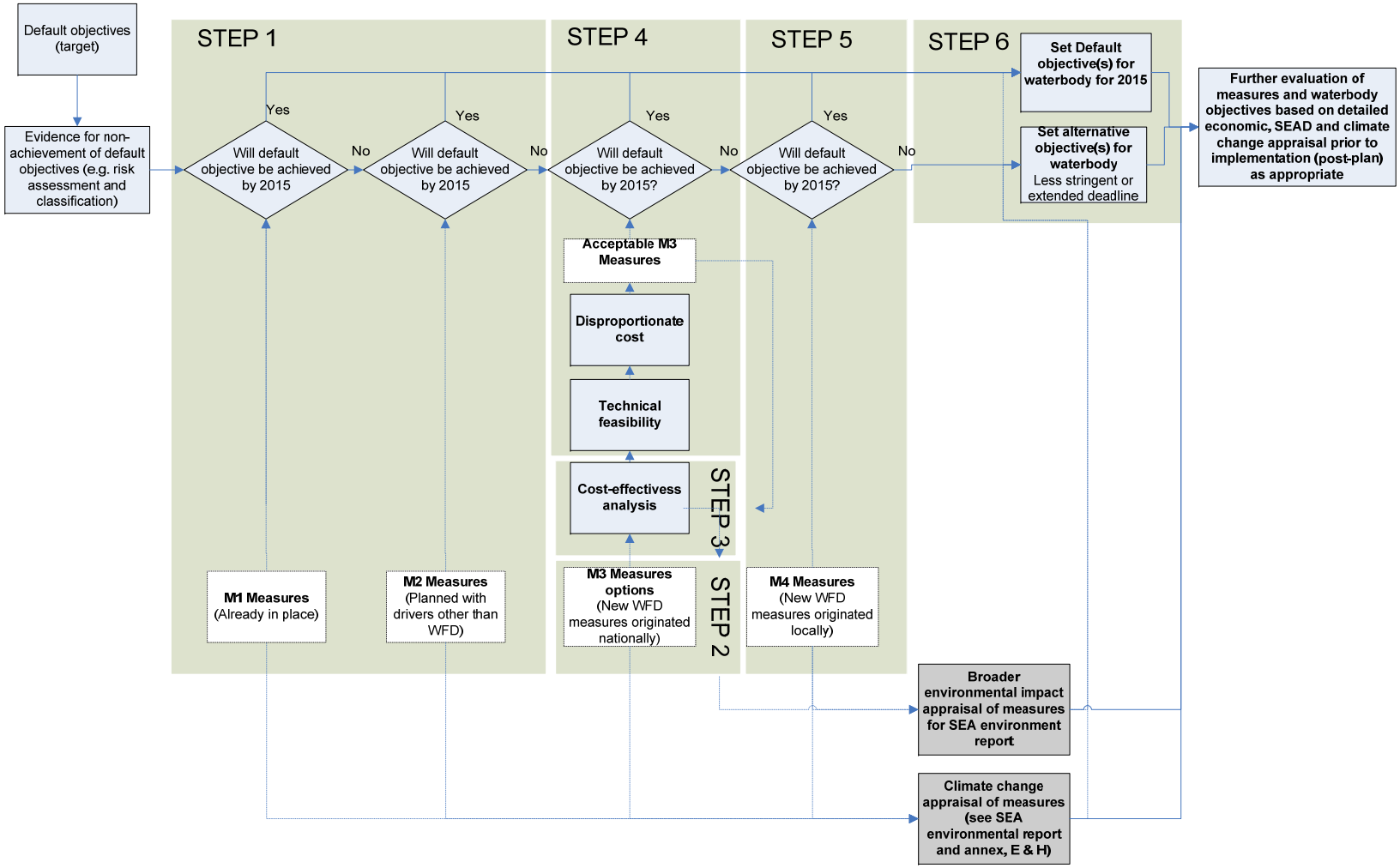
Step three - Identify cost-effective options for M3 measures.

Step four - Appraise cost-effective option(s) for M3 measures to see whether they are currently technically feasible and not disproportionately costly (by comparing the costs of the measures with the benefits and other impacts implementing the measure will deliver) and identify how much further these take us to meeting default objectives.

Step five - If default objectives are not achieved after steps 2-4, identify and appraise M4 measures and evaluate how much further these take us to meeting default objectives.

Step six - Identify and report final water body objectives (default or alternative objectives) and any justifications for alternative objectives. The choice of which alternative objective is set (extended deadline or a less stringent objective) will depend on whether the particular conditions in Article 4.4 and/or 4.5 of the WFD are met. Where the conditions of both Article 4.4 and Article 4.5 are met, we have, in most cases, set an objective of reaching good status by an extended deadline.

Figure 1: **Summary of measures appraisal and objectives setting process**



In practice the measures appraisal process operated at three different, but overlapping levels:

1. national strategic level led by Defra and Welsh Assembly Government
2. national/river basin district led by the Environment Agency
3. river basin district led by the Environment Agency and the liaison panels

The national strategic level consisted of the Defra and/or Welsh Assembly Government consultations on new or amended powers (delivery mechanisms) to control diffuse pollution and morphology and the preliminary cost effectiveness analysis. These are discussed further below.

The national/river basin district level consisted of the application of a range of existing approaches (e.g. application of routine water quality planning methods to determine new discharge consent limits for sewage treatment works) and the development and application of new methods such as those for the identification and designation of heavily modified water bodies and associated morphological mitigation measures (see Annex I). These approaches are described in sections E2 to E11 of this annex, which gives detailed information on action appraisal for individual pressures.

We also worked with liaison panels[6] and other stakeholders to identify a range of locally applied measures. This is described in section E12 on the identification and appraisal of M4 measures.

The appraisal process was designed to avoid incurring unnecessary costs in situations where it is not clear that there is a problem, that the cause of the problem is not certain, or that the most cost-effective action to deal with the problem can not yet be determined.

Confidence about status assessments

Surface waters

Our assessments of water body status are accompanied by a description of how certain we can be that the water body is below good status. These assessments can be found in Annex B for each quality element in each water body, and for the overall water body status.

The Environment Agency has used three expressions to describe how certain we are that a water body does not achieve the objective of good status. Although the terms confidence and certainty can be interchangeable, the Environment Agency has taken the decision to use an expression of certainty to describe all surface water classifications.

How certain we are that the water body is less than good status	Threshold
Very certain	≥95% certain that the water body does not meet the objective of good status
Quite certain	≥75to ≤95% certain that the water body does not meet the objective of good status
Uncertain	>50% to <75% certain that the water body does not meet the objective of good status

[6] For information on liaison panels see annex L

This description of certainty takes account of the precision of our results. Precision is influenced by natural variation in the data over time, as well as errors in the assessment process. The Environment Agency can assess how the probability of misclassification changes in relation to the amount of sampling for each biological element. This allows us to estimate the most likely levels of certainty we can achieve with a given sampling effort. For example, a diatom sample from spring and autumn will allow no more than a 70% certainty of being at a particular status, but often gives high certainty (>95%) of being somewhere below good status.

In some situations our expression of certainty is based on weight of evidence or expert opinion. There are three examples of this:

- The way different water bodies respond to nutrient enrichment can be complicated. Sometimes we find that the water body does not meet the required standard for phosphorus but the biological community shows no sign of damage. In such situations it would be misleading to say we are very certain that the water body is at less than good status. In other situations, the water body does not meet the required standard for phosphorus, and the biological community – the diatoms and macrophytes – also show signs of damage: The result for each element on its own may be uncertain. But the fact that all elements suggest the same thing – weight of evidence that there is an impact – means that we become more certain that there is a problem. So we modify the overall certainty according to the statistical certainty of each test.
- As our monitoring programme for estuarine and coastal water bodies is new, certainty in our draft classifications for these water bodies is partly based on the amount of data available for each of the classification tools. We say we are uncertain where our data sets are limited. Our marine monitoring programme will continue to provide more data, so the certainty of our assessments in estuarine and coastal waters should steadily improve over time.
- Where expert judgement has been used to provide a classification we can only ever be uncertain in our assessment.

Groundwater status

For groundwater, confidence is reported as a qualitative statement and is used as an indicator for prioritising action. All poor status classifications for groundwater, irrespective of confidence, will require some form of action. This is because the classification criteria for both chemical and quantitative status comprise a rigorous weight of evidence approach.

Confidence in poor status will be reported as either “high” or “low”, depending on the test. These terms are defined as follows:

- “High” confidence will usually mean that competent authorities can proceed immediately to considering restorative action, or, for example, improvement to existing measures, according to procedures in the Directive. In some cases there may be “high” confidence in the poor status, but uncertainty over the measures that should be implemented, and an options appraisal of measures/objectives will be required
- “Low” confidence will usually mean that further investigation should be carried out as a priority to improve confidence and measures taken in the first river basin management planning cycle where appropriate.

It is stressed that the assessment of confidence in status should not be used as the only driver for instigating measures. Good status groundwater bodies may require higher priority attention if they are predicted to fail either the trend objective in the long term or some other measure of the risk of future deterioration in status.

Confidence in good status will be reported as either “high” or “low”, depending on the test. These terms are defined as follows:

- "High" confidence will usually mean that the only requirement is to assess potential future deterioration using surveillance monitoring.
- "Low" confidence is associated with a more limited evidence base, often in groundwater bodies that are at risk. Further operational monitoring will be required to improve the level of confidence.

Further details of how confidence in groundwater status is determined are given in Annex A.

New Water Framework Directive measures & mechanisms

Several Defra/Welsh Assembly Government consultations[7] have explored the case for new and amended powers and controls that will enable Water Framework Directive objectives to be met[8]. Whilst the cases for some of these additional powers and measures were being finalised in 2009 (including those on diffuse pollution), we were guided in mid 2008 by Defra/Welsh Assembly Government via the River Basin Planning guidance Volume 2 on what assumptions to make regarding their use and availability for the first RBMP. In addition, with the launch of the Defra Water Strategy for England in February 2008 (http://www.defra.gov.uk/Environment/quality/water/strategy/index.htm) and in Wales the Environment Strategy for Wales (http://wales.gov.uk/topics/environmentcountryside/epq/envstratforwales/?lang=en) further measures were signalled (not necessarily driven by the Water Framework Directive) by the Government, which will help meet Water Framework Directive objectives within the first cycle of river basin management planning.

Measures or mechanisms that have been confirmed following recent consultations have been included in Annex C (Actions to deliver objectives). For example, the use of Water Protection Zones.

However, there are further measures or mechanisms which may also be taken forward during the first planning cycle, and which will consequently improve the ambition of the plan. For example:

- a statutory code of practice to provide guidance on the use and management of septic tanks;
- a possible ban on phosphorus in detergents;
- measures to reduce the impacts from sewer misconnections;
- possible General Binding Rules, based on best practice, which will cover the abuse of the drainage system, commercial washing activities, surface water control plans on construction sites and site management for industrial, institutional and commercial sites;
- using the proposed Floods and Water Bill to reduce risk of diffuse pollution through improved management of surface water drainage.
- potential review of the Oil Storage Regulations

Preliminary Cost Effectiveness Analysis

A national preliminary cost effectiveness analysis (pCEA) exercise was completed in 2007. This considered the scope and scale of measures on a national basis, and their costs and effectiveness for the first round of river basin management plans. The findings of the pCEA meant that very little additional work on cost effectiveness was needed at a more local level.

[7] Listed in Annex L – Consultation record
[8] Listed in Annex C – Actions to deliver objectives

Preliminary cost effectiveness analysis

The work was coordinated by Defra, and involved participation from the Welsh Assembly Government, Department of Trade and Industry (as was), the Environment Agency, Ofwat, British Waterways the Department for Communities and Local Government (DCLG), and working groups representing key interested groups.

The assessment considered:

- what should be done in the first planning cycle using consistent national measures, and what happens if we take longer to meet objectives;
- the types and costs of measures to be decided at national or river basin district level, reducing the need for further detailed analysis;
- the overall costs and what is affordable;
- the role of industry and other organisations in implementing measures;
- what measures could be ruled in or out of the first cycle from a national assessment.

The working groups were based on key industry and business sectors, with final reports based on cross-cutting pressures. The groups were tasked with agreeing combinations of measures for addressing pressures on water bodies attributable to the sectors concerned, and providing high level analysis on the cost and effectiveness of these measures. They took into account existing obligations and costs, but also considered what could be achieved with new national measures. It showed that, given the uncertainties associated with classification, source apportionment and the effectiveness of measures, a longer term adaptive approach to river basin management planning will ultimately be more effective and cost-effective than an unphased approach, given current state of knowledge.

www.wfdcrp.co.uk See table of Non Related CRP Outputs - Results of Preliminary Cost Effectiveness Analysis of the Water Framework Directive Revised After Stakeholder Review December 2007.

National Benefits Survey

The UK Collaborative Research Programme into the Water Framework Directive use survey methods to estimate, in monetary terms, the value placed by households on improvements to the water environment brought about by the WFD. In July 2007, 1487 interviews were undertaken in 50 locations throughout England and Wales. From the survey results a range of willingness to pay benefit estimates were produced. These results have been used in the national impact assessment for the WFD (http://www.defra.gov.uk/environment/quality/water/wfd/documents/RIA-river-basin-v2.pdf), the river basin district impact assessment that accompanies this plan, and as part of the assessment of costs, benefits and other impacts when assessing disproportionate costs issues at water body level.

Further information on the national benefits survey can be found at www.wfdcrp.co.uk.

Where an alternative objective has been set, the benefits of achieving good status will not be realised. The level of these foregone benefits depends on the current status of the water body. These benefits (in monetary terms) of improving a water body to good status in this river basin district are given in table 3.

Table 3: **Monetary benefits of improving a water body to good status in the Anglian River Basin District**

Current status	Benefits (£ per water body per year)
Bad	404,100
Poor	295,428
Moderate	222,980

Ministerial Guidance

The pCEA, national impact assessment and formal public consultation were used by Defra and Welsh Assembly Government to provide guidance to the Environment Agency (http://www.defra.gov.uk/environment/quality/water/wfd/management.htm). This guidance included advice to:

- phase implementation to ensure an adaptive, cost-effective and proportionate long term approach meeting all WFD requirements by 2027 or as soon as possible thereafter given feasibility, proportionality and natural conditions and the progressive reduction/cessation of priority substances and priority hazardous substances;
- ensure overall costs (i.e. negative consequences) of action to achieve WFD objectives do not exceed the overall benefits (positive consequences);
- favour the most cost-effective measures;
- make use of alternative objectives, and
- when the conditions of both Article 4.4 and 4.5 are met set objectives with an extended deadline rather then a less stringent objective.

Identification and appraisal of M4 measures

We have identified the gap between the improvements resulting from M1-M3b measures and the achievement of Water Framework Directive default objectives in each water body. Local (M4) measures have been developed to help to close this gap, many of which were developed with liaison panels. A common set of appraisal criteria was developed with liaison panels and a national measures workshop was held in October 2007 to discuss and agree the criteria. This means that each M4 measure was developed, evaluated and recorded in the same way across England and Wales. More information on the identification of M4 measures in this river basin district is given in section E12.

Inclusion of carbon in disproportionate cost assessment in measures appraisal

We have taken initial steps to include the cost of carbon in our disproportionate cost assessments. We have focused on PR09 water quality measures since this is where the most significant additional carbon emissions will occur (as a result of requirements for additional treatment, construction of new works or upgrades to existing works). The majority of other actions are likely to have low impact as they are investigations, partnerships or encouraging best practice management. The potential impact of these can be assessed as the work is progressed. Methodologies and policies are being developed to ensure carbon costs are included in further appraisal work prior to the implementation of measures.

Specific scheme information on the carbon dioxide emissions associated with both building within schemes (embedded carbon) and operation of schemes was obtained from water company final business plans. The figures for embedded and operational carbon were then used to calculate a cost of carbon in the assessment based on Defra guidance. Our findings highlight that the additional carbon emissions are currently too small to make a significant

difference to the disproportionate cost assessment. In future, the shadow price of carbon may be revised upwards and start to have more impact on investment choices in future cycles of river basin management planning.

Consulting on measures

Measures were included for consultation as part of the draft river basin management plan. They were presented in three planning scenarios:

Scenario A included all the known and funded measures that already operate, or are likely to operate. This scenario comprised all M1 and M2 measures that would occur in the absence of the Water Framework Directive (but which are now a core part of the Water Framework Directive and help to achieve the Directive's objectives) and new M3a measures that had been determined through national decisions and processes.

Scenario B represented the estimate of the measures that would be included in the first river basin management plans to deliver the environmental outcomes and support the proposed water body objectives.

Scenario C included all measures in scenario B plus measures that may be worthwhile but where the case had not been confirmed yet. To enable these measures to be implemented, additional information was needed to reduce uncertainty and justify further funding, where appropriate.

Annex L (Consultation and Engagement) lists the many approaches taken for engagement on developing the river basin management plan. These included the active involvement of stakeholders in the pCEA, development of new and amended mechanisms by Defra and Welsh Assembly Government, liaison panels discussing and influencing the planning scenarios and, together with local stakeholders, the development of M4 measures. In addition, the consultation on the draft plan was a key process to gather further information to improve the certainty of the effectiveness and benefits of the measures identified in scenario C and enable some of them to be included in this first plan.

E1.4 Identifying objectives

The measures appraisal process has enabled us to identify the expected outcomes for each of the elements that together define the status of a water body, based on implementing a challenging but realistic set of measures (see Annex C). We have used these expected outcomes to propose default or alternative objectives for each water body (see Annex B).

In carrying out these processes, we have reviewed the programme of measures and:

- for each water body predicted (using modelling and/or expert judgement) the status that each non-biological element will achieve (and by when) when the measures are implemented;
- checked that the measures proposed for different pressures are compatible in terms of timing and benefits - they should not work against each other and ideally should complement each other;
- predicted the status for the biological elements that we would expect to be achieved. These predictions were made by a panel of Environment Agency officers with local, expert knowledge supported by decision rules and a variety of data sets.
- the predicted outcomes have been translated to a set of overall objectives for each water body using the same 'one out all out rules' used in classification. Where any of the

predicted outcomes for the elements of status are not 'good status by 2015' we have set alternative objectives. The status objectives[9] for each water body are shown in Annex B.

For water bodies adversely affected by multiple pressures (e.g. physical modifications to the bed and banks; over abstraction; etc), we have separately assessed the timescale needed to tackle each impact preventing the achievement of good status. We have then combined these assessments to identify the earliest date by which all the conditions needed for good status can be achieved in the water bodies (e.g. for surface waters, the right water quality; flows and levels; structure and condition of the bed, banks, shores; etc). We can then decide if good status can be achieved by 2015.

Improvements in some of the characteristics of these water bodies can be made, and are proportionate to make, earlier than others. This means that water bodies whose overall objective is good status by 2021 or 2027, may nevertheless be subject to significant improvements in the interim.

In identifying objectives, we have used the best information currently available to us. Our initial focus has been on gathering information on water bodies that can be improved by 2015.

There is significant uncertainty about how pressures and technology will change after 2015. Climate change will bring wetter, warmer winters; hotter, drier summers; and more frequent extreme events, including sea level rise, storms, summer droughts, and floods. It is not known how the biology in waters will respond to this. The population in the river basin district is likely to increase, with further urbanisation. Agriculture will respond to the changed climate (both here and abroad), market conditions, financial incentives and regulatory pressures. Technology and other solutions to address the pressures will improve, but the future economic climate (nationally or for particular sectors or groups of society) which will govern the rate at which some new solutions can be introduced is unknown.

Where we have set an objective using an extended deadline, we have generally set an objective of good status by 2027. However, many water bodies will achieve good status by 2021, but given the above uncertainty we are currently unable to say which water bodies these will be.

Investigations will take place to help improve the understanding of the changing pressures on the water environment and the current and future impact they will have on the achievement of good status (and other WFD objectives).

Investigations will also be undertaken to:

- confirm the current status, where this is uncertain;
- gather corroborative evidence of biological problems to justify expenditure where there is low confidence of failure of chemical standards;
- identify the cause of the problem, including its location, the specific activity causing it and/or the pathway by which a pollutant is entering a water body;
- assess whether existing and currently planned actions will resolve the problem;
- identify cost effective solutions;
- find new technical solution or improve the cost effectiveness of current ones;
- assess whether the costs, benefits and other impacts of potential solutions are disproportionate; and
- seek alternative financing mechanism, where current methods of funding solutions could impose a disproportionate burden on a particular sector or part of society.

[9] Note that all Protected Area objectives are presented in Annex D

In developing the river basin management plans approximately 8,500 investigations have been identified for England and Wales, including further monitoring. The vast majority of these will be undertaken by the Environment Agency and all of these will be completed by the end of 2012. The investigations will focus on resolving what is causing the problem and what the best method to tackle it is. As a result of the evidence they will provide, we will be able to take further action in the first cycle where practicable.

By using the decision codes to cross reference the individual water body tables in Annex B ('Water body status objectives'), with the tables in section E2 to E11 of this annex, the types of investigation that will be carried out for each water body can be identified. The specific timing of each investigation is not yet known. This will be identified when the plan is implemented at the catchment level. More information on specific investigations, including their timing (where known) is given in Annex C ('Actions to deliver objectives').

When investigations are completed the results may lead to:

- the implementation of more of the measures we are already using
- modifications or improvements to the measures we are already using
- the implementation of new measures
- the justification of less stringent objectives

We are confident that a proportion of investigations will lead to improvement action that be can put in place within the first cycle. This will mean that more water bodies than those currently identified will achieve good status by 2015.

Alternative objectives in the Anglian River Basin District

In this river basin district the only alternative objectives we have set are those with extended deadlines. No less stringent objectives have been set.

Table 4 below shows how many times alternative objectives have been set for the different standard reasons within the Anglian River Basin District (please note that the numbers in the table cannot be summed to give total numbers of water bodies since more than one reason may apply to any particular water body).

Table 4: **Alternative objectives for the Anglian River Basin District**

Alternative objective reason	Sub-reason	No. of water bodies in RBD
Technically infeasible	No known technical solution is available	377
	Cause of adverse impact unknown	240
	Practical constraints of a technical nature	0
	Number of water bodies in RBD where technically infeasible has been used	514
Disproportionately expensive	Unfavourable balance of costs and benefits	64
	Significant risk of unfavourable balance of costs and benefits	594
	Disproportionate burdens	4
	Number of water bodies in RBD where disproportionately expensive has been used	618
Natural conditions	Ecological recovery time	0
	Groundwater status recovery time	0
	Number of water bodies in RBD where natural conditions has been used	0
	Total number of water bodies in RBD with an alternative objective (extended deadline and/or less stringent status objective)	690

We have not made use of the WFD article 4.7 exemption for new modifications or new sustainable human development activity in this river basin district.

Use of expert judgement

Our monitoring programmes do not give us assessments for all water bodies. This is because we target our monitoring at water bodies at risk of degradation and because we have a roving monitoring programme that moves from one location to the next on an annual basis. By 2010 our roving monitoring programme will complete its first phase and most water bodies will have been monitored. The remainder are typically small water bodies. Where we lack data we have used expert judgements to provide an initial assessment of the water body (see Annex A). Expert judgement of status was based on risk assessments (see Annex G), information from Natural England and the Countryside Council for Wales on the condition of Sites of Special Scientific Interest (SSSIs), national expert opinion and information from local Environment Agency staff. In addition for lakes, modelled total phosphorus concentration was compared with the relevant environmental standard for the lake type, then a risk matrix was constructed to determine which lakes were likely to be at good status and which were moderate status (see table 5). Clearly, such status assessments are uncertain.

Classification results based on expert judgement are clearly marked in Annex B.

Table 5: **Expert judgement risk matrix for lakes without monitoring data**

	Risk Assessment	At Risk	Probably at Risk	Probably not at Risk	Not at Risk	Not Risk assessed
Conservation Condition (SSSI)		7	6	5	4	1
No data or not SSSI	0	Moderate	Moderate	Good	Good	Moderate
Favourable	1	Moderate	Moderate	Good	Good	Good
Unfavourable recovering	2	Moderate	Moderate	Good	Good	Moderate
Unfavourable no change	3	Moderate	Moderate	Moderate	Moderate	Moderate
Unfavourable declining	4	Moderate	Moderate	Moderate	Moderate	Moderate

Objectives for these water bodies are also based on expert judgement. Following a review of the effect of available measures, if the predicted status was still less than good, and given the uncertainty about the current status, we have set an alternative objective of an extended deadline. This is for reasons of 'Technically infeasible; cause of adverse impact unknown' - there has been insufficient time to investigate the causes of the failures (if indeed they do fail) and 'Disproportionately expensive; significant risk of unfavourable balance of costs and benefits' - because although we have used all information available at the time of the assessment, we do not have high confidence that the water bodies are at less than good status.

E1.5 Assessments of the river basin management plan

Impact assessment

The river basin management plan is subject to an impact assessment (IA) which looks at the costs of the reference case and the costs and benefits of implementing the main policy option (http://www.environment-agency.gov.uk/research/planning/33106.aspx). In accordance with IA guidance the reference case relates to the baseline of existing policy actions, while the main policy relates to the expected impacts of additional policy actions on both private and public sectors.

Strategic environmental assessment

River basin management plans fall within the scope of the Strategic Environmental Assessment Directive (SEAD). In accordance with this, we have undertaken a strategic environmental assessment and produced an Environmental Report published together with the draft plan. When finalising the plan we have taken the results of the consultation on the draft plans and the SEAD Environmental Reports into account. The Post Adoption Statement and accompanying Statement of Environmental Particulars published with this river basin management plan, explains how the issues raised during consultation have been addressed and includes an assessment of the changes between the draft plans and the first plans.

Habitats Regulations assessments

Any plan that may have a significant effect on a Natura 2000 site (Special Area of Conservation (SAC) or Special Protection Area (SPA))[10] must be subject to an appropriate assessment of its implications for Natura 2000 sites, in view of the site's conservation objectives.

An assessment of the effects of the draft river basin management plan on Natura 2000 sites, and consultation with Natural England and the Countryside Council for Wales, has informed development of this plan.

The Habitats Regulations Assessment, which considers if this plan may have a significant effect on any Natura 2000 site, has also been undertaken by the Environment Agency. The assessment, conclusions and implications are discussed in Annex C.

A copy of the Habitats Regulations Assessment of this plan is available at http://www.environment-agency.gov.uk/research/planning/33106.aspx .

Objectives for Natura 2000 Protected Areas (water dependent SACs and SPAs)

There is no specific date in the EC Habitats and Birds Directives for meeting the objectives for Natura 2000 sites. The Water Framework Directive introduces the 2015 deadline; this applies to the Natura 2000 Protected Areas (water dependent SACs and SPAs).

Where a Natura 2000 Protected Area is also a water body, or forms part of a 'water body' it will also have water body status objectives in Annex B. Alternative objectives may have been applied to the water body status objectives in Annex B. Where a water body is also a Natura 2000 Protected Area, alternative water body status objectives do not mean that the objective of Favourable Conservation Status by 2015 should not be met. The tables in Annex B indicate any water bodies that coincide with Natura 2000 Protected Areas.

The deadline for favourable conservation status may be extended if the Natura 2000 Protected Area is also a 'water body', or forms part of a 'water body'. The objectives for Natura 2000 Protected Areas are detailed in Annex D, and that annex indicates any sites where the objective of favourable conservation status has been extended and provides the reasons and justifications for the extended deadlines. Natural England and the Countryside Council for Wales provided advice on whether the deadlines for favourable conservation status should be extended.

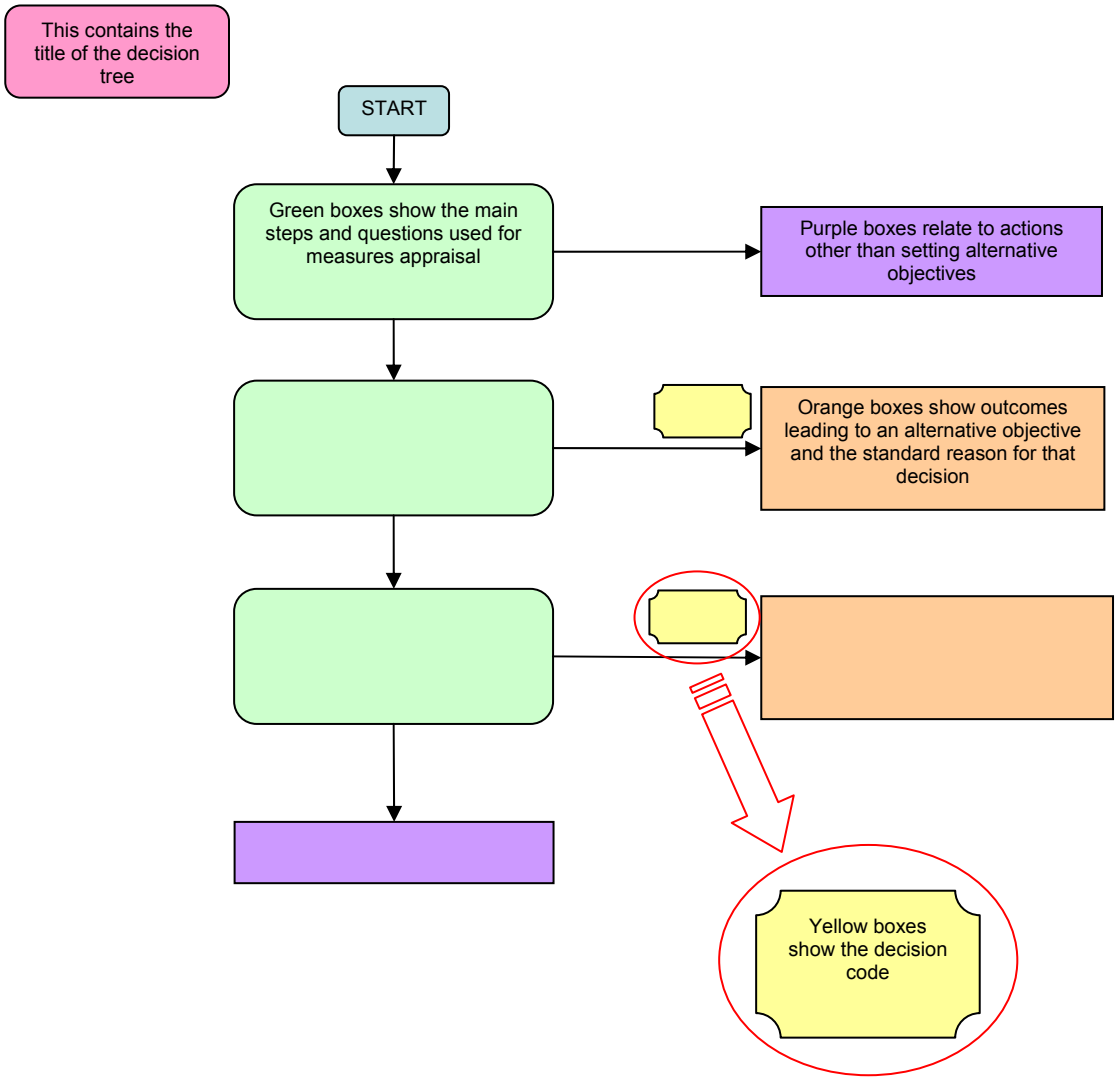
[10] The Regulations also apply to candidate SACs and Sites of Community Importance (SCI)). As a matter of policy, the Environment Agency is also applying this approach to potential SPAs and designated Ramsar sites. The Habitats Regulations do not apply as a matter of law or government policy to proposed SACs or proposed Ramsar sites".

E1.6 Detailed information on actions appraisal for individual pressures and justification of alternative objectives

The following sections (E2 to E11) set out detailed information on actions appraisal for individual pressures and include more information on the justification for setting alternative objectives.

Each of these sections includes one or more decision trees. These decision trees show the main steps taken in appraising the measures needed to address a pressure and achieve good status. The trees also set out where decisions can lead to the setting of an alternative objective. A generalised decision tree is shown in Figure 2 below.

Figure 2. **A generalised decision tree**



Each branch of a tree leading to an alternative objective has a ‘decision code’. These codes are unique to a particular decision tree (e.g. S1 is from the sediments tree, P1 from the phosphorus tree).

For any branch on the decision tree, the information supporting the decision to set an alternative objective may vary. For example, if the source of the pressure varies then the other supporting information (such as possible future measures to address the pressure) may vary too. Therefore the decision code for a particular branch in the tree may have sub-divisions e.g. S1a, S1b.

Each decision code therefore records the current progress in appraising measures to tackle a pressure. The tree sets out the steps that remain in the appraisal process once the uncertainty relating to the current step is resolved. The uncertainty will be resolved by carrying out investigations or additional monitoring.

More detailed information about the decisions to set alternative objectives is presented in tables in each of the pressure sections. There is a separate table relating to each decision code. Each table describes the type of investigation required to reduce the uncertainty and allow the appraisal process to progress to the next step in the decision tree. The table also describes the types of measures that may be implemented once the appraisal process is completed. A summary of the information contained in these tables is provided in table 6.

The decision codes also appear in the Annex B water body tables against the relevant classification element (within the justifications column). This provides a cross-reference from the Annex B tables to the supporting information presented in this annex. This cross-referencing between the information in Annexes B and E is shown in Figure 3 below.

Some of the information in the tables in the pressure sections is repeated in different tables several times. This is to allow people who are navigating the plan from Annex B to access a complete set of information in just one pressure table.

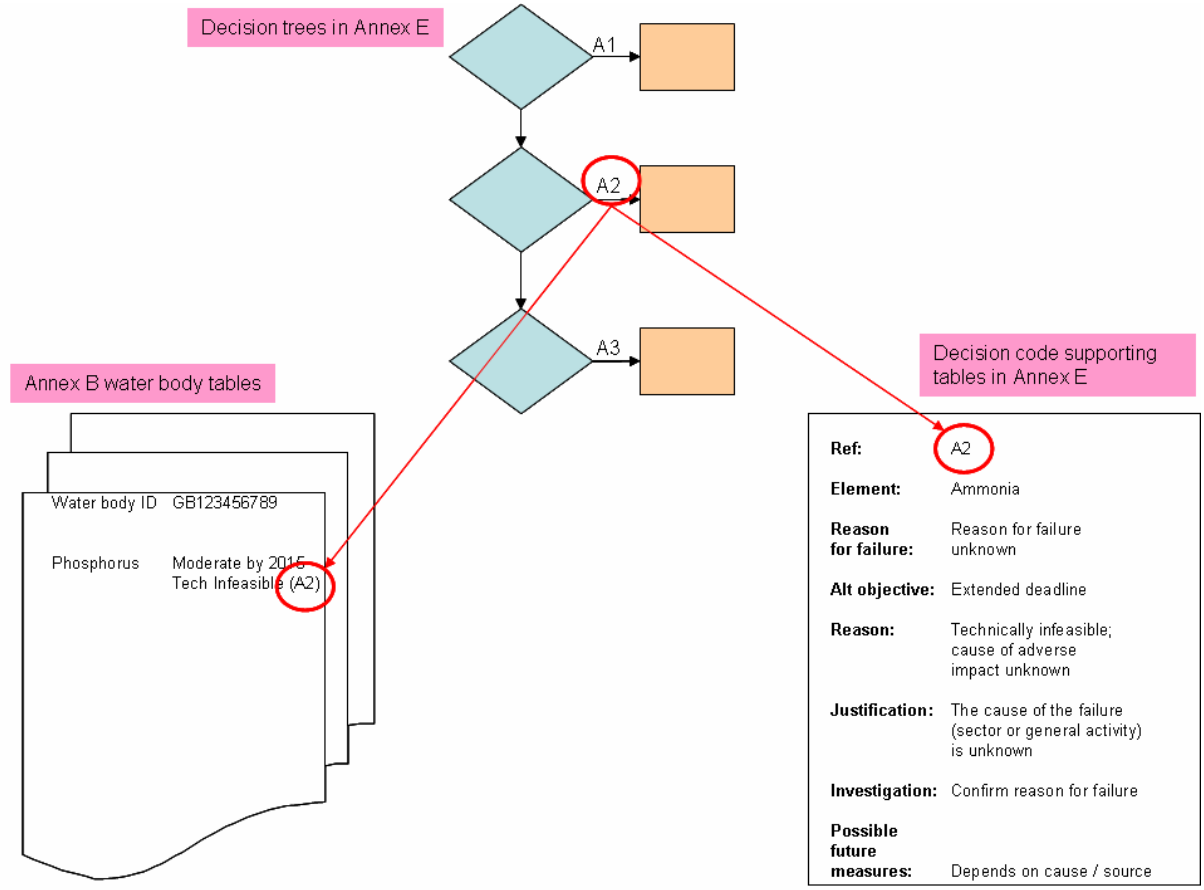
The aim of setting out the information in this way is to make the key decision making processes used in the preparation of this plan as transparent as possible.

Please note that further detailed information for surface water Drinking Water Protected Areas (DrWPAs), including compliance information and objectives, appears in Annex D.

Table 6: **Explanation of supporting tables**

Reference	*The decision code(s) e.g. S1a.*
Element predicted not to achieve good by 2015	*The relevant classification element(s) to which the code applies.*
Reason for failure	*The reason(s) for failure.*
Alternative objective	*The type of alternative objective i.e. extended deadline or less stringent objective.*
Reason for alternative objective	*The reason and sub-reason (as described in table 1) for setting the alternative objective.*
Justification for alternative objective	
A one line summary of the justification is given here *A more detailed explanation of why an alternative objective has been set and the nature of the uncertainty that led to the decision. If relevant, any information on costs and benefits is included here.*	
Investigation type	
The general type of investigation required to resolve the uncertainty and allow the actions appraisal process to proceed to the next step in the decision tree.	
Example of investigation	
A more detailed description of the type of investigation(s) that might be carried out. Where possible, these investigations will take place before 2013 so that the results are known in time for the formal review of this plan by 2015.	
Possible future measures	
The types of measures that may be implemented once the actions appraisal process has been completed. Depending on progress, some of these measures may be implemented during the first cycle (i.e. by December 2012).	
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive	
The types of measures that might be required in order to address the pressure and achieve good status in all water bodies, although these measures are currently thought to be likely to be technically infeasible or disproportionately expensive.	

Figure 3 **Schematic showing how decision codes provide cross reference between Annex B and Annex E**



E2 Assessing biological elements

Biological elements at less than good status

If a biological element in a water body is classified as being at less than good status then the presumption is that this is due to one or more pressures acting on the biology and causing an impact. It is therefore necessary to identify the pressure(s) and then appropriate (feasible and proportionate) measures to reduce or remove the pressure, allowing the biology to recover to good status.

The processes for determining measures to tackle specific pressures are outlined in the subsequent sections in this annex.

However, the first steps in appraising a biological element are generic and these are set out in the decision tree below. These steps include assessing the level of certainty that the biological element really is at less than good status and whether the pressure causing the failure, and the source of that pressure, have been identified with a reasonable level of confidence.

In some cases the pressure that has caused the biology to be at less than good status may already have been tackled but the biology has yet to recover and achieve good status. An assessment must therefore be made on whether additional measures are required or whether, if sufficient time is allowed, the biology will recover to good status without any further action being taken.

Once these steps have all been considered then the need for additional measures to address specific pressures can be assessed using the processes set out in the rest of this annex.

Biological elements in Artificial and Heavily Modified Water Bodies

Some biological elements are sensitive to hydromorphological pressures, with the specific elements varying depending on the water body type.

Lake, transitional and coastal water bodies

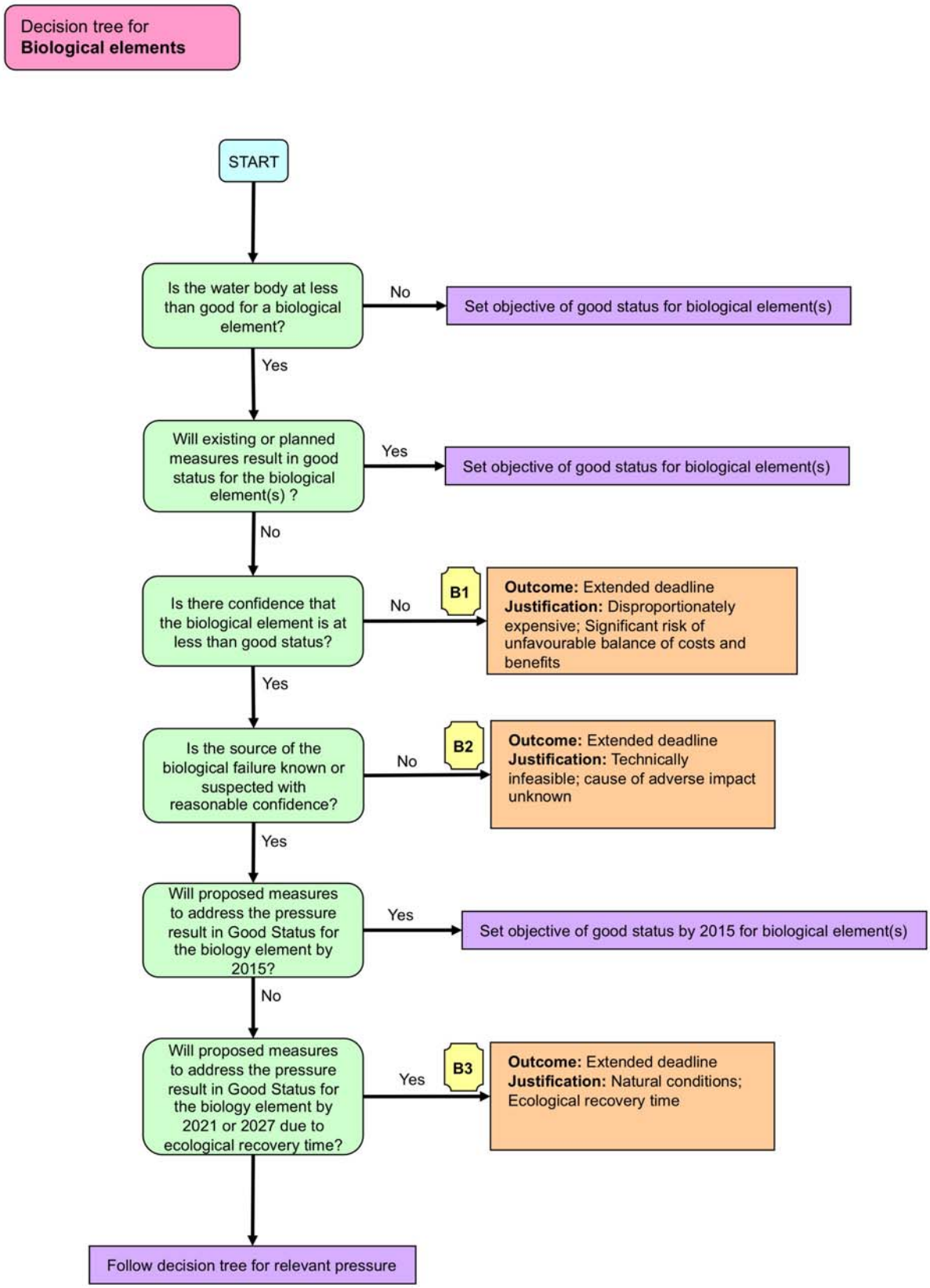
In lake, transitional and coastal water bodies designated as Artificial or Heavily Modified, these morphology-sensitive biological elements have not been used to produce ecological potential classifications and are not used in setting the objectives for these water bodies. So even though these elements may be at less than good status, they do not lead to the setting of alternative objectives in these water bodies. Therefore no justification for these elements being at less than good status in 2015 is required in terms of technical feasibility or disproportionate cost.

Where these elements are predicted to be at less than good status in 2015 in an Artificial or Heavily Modified Water Body the justification column in the Annex B water body tables will contain “Not required (MS)”. The MS decision code refers to ‘morphology-sensitive’.

River water bodies

In Artificial or Heavily Modified river water bodies where flow as a supporting condition supports good then, as described above for the other categories of water body, the morphology-sensitive biological elements are not used in classification or objective setting. Where these morphology-sensitive biological elements are predicted to be at less than good status in 2015, the justification column in the Annex B water body tables will contain “Not required (MS)”.

However, in Artificial or Heavily Modified river water bodies where the modification is not flow-related and flow as a supporting condition currently does not support good status, then all biological elements available are used in the classification and objective setting for the water body. If the flow in these water bodies is predicted to not support good in 2015 then the justification for any morphology-sensitive biology elements not achieving good status in 2015 will be the same as that assigned to flow as a supporting condition.


Decision tree for
Biological elements
START
Is the water body at less than good for a biological element?
No
Set objective of good status for biological element(s)
Yes
Will existing or planned measures result in good status for the biological element(s) ?
Yes
Set objective of good status for biological element(s)
No
Is there confidence that the biological element is at less than good status?
No
B1
Outcome: Extended deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Is the source of the biological failure known or suspected with reasonable confidence?
No
B2
Outcome: Extended deadline
Justification: Technically infeasible; cause of adverse impact unknown
Yes
Will proposed measures to address the pressure result in Good Status for the biology element by 2015?
Yes
Set objective of good status by 2015 for biological element(s)
No
Will proposed measures to address the pressure result in Good Status for the biology element by 2021 or 2027 due to ecological recovery time?
Yes
B3
Outcome: Extended deadline
Justification: Natural conditions; Ecological recovery time
Follow decision tree for relevant pressure

Reference	B1a
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Unknown – uncertain there is a failure/impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive - significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

There is not high confidence that the biology elements have failed

In these cases the biological elements do not achieve the good status boundary values but with low confidence of failure. Without confidence in a biological failure we cannot reliably consider the pressures and measures. To do so would mean a significant risk of wasted investment on additional measures in already compliant water bodies. It is therefore disproportionately expensive to achieve good status by 2015.

An extended deadline for achieving good ecological status is therefore required. This will to allow time to undertake investigations to confirm any failure with certainty, identify the pressures causing the failure and appraise additional measures. Where possible additional measures will be implemented within the first cycle.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Additional monitoring or specifically tailored investigations to improve certainty that there is an impact on the biological elements. Supplementary data could also be used to build sufficient weight of evidence to show that biological populations are impacted.

Possible future measures

If the biological populations are impacted then possible future measures will depend on the significance and/or extent of the failure, the identification of the pressure(s) causing the failure and the source of the pressure(s).

Possible measures are described in the tables of supporting information for individual

pressures.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Not possible to identify these at this stage

Reference	B2a
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Unknown – reasons for failure unknown
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible - cause of adverse impact unknown

Justification for alternative objective

The pressure causing the failure is unknown

Although the biological element is known to be at less than good status, the pressure causing the impact is not known. It is therefore technically infeasible to identify and appraise appropriate measures, and achieve good status by 2015.

Where the failure of good status for a biological element is not also supported by a failure of a standard for a physico-chemical element or priority hazardous substance, it is often not easy to identify the pressure causing the biological failure. In the time available we have not been able to identify the specific pressure(s) causing the impact on biology.

An extended deadline for achieving good ecological status is therefore required. This will to allow time to undertake investigations to identify the pressure(s) causing the failure and appraise additional measures. Where possible additional measures will be implemented within the first cycle

Investigation type

Investigate cause of failure

Example of investigation

Additional monitoring or specifically tailored investigations to identify the pressure(s) causing the impact and the source(s) of the pressure(s). Supplementary data could also be used to build sufficient weight of evidence to identify the pressure and/or source or more detailed analysis of the biological data may help to indicate the likely pressure. For example, by more detailed analysis of the invertebrate data or looking at the diagnostic data associated with the fish classification outputs.

Possible future measures

Possible future measures will depend on the identification of the pressure(s) causing the failure and the source of the pressure(s). Possible measures are described in the tables of supporting information for individual pressures.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Not possible to identify these at this stage

Reference	B2b to B2s
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Various pressures and reasons: B2b = suspected fish stocking B2c = suspected copper B2d = suspected cypermethrin B2e = suspected diazinon B2f = suspected iron B2g = suspected mecoprop B2h = suspected toxic chemicals / pollutants B2i = suspected zinc B2j = suspected hydrology (flows) B2k = suspected temperature B2l = suspected ammonia B2m = suspected dissolved oxygen B2n = suspected organic pollution B2o = suspected pH / acidification B2p = suspected morphology B2q = suspected nitrate (DIN) B2r = suspected phosphate B2s = suspected sediments
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible - cause of adverse impact unknown
Justification for alternative objective	
The pressure causing the failure is not known with certainty Although a pressure responsible for the impact on the biological element has been suggested, there is low confidence that the pressure has been correctly identified. For example, the pressure may also be an element of classification (such as ammonia) which is currently classified at good status. Further work is therefore needed to confirm that the correct pressure has been identified before work can begin to identify and appraise appropriate measures. It is therefore technically infeasible to achieve good status by 2015. An extended deadline for achieving good ecological status is therefore required. This will to allow time to undertake investigations to confirm the pressure(s) causing the failure and appraise additional measures. Where possible additional measures will be implemented within the first cycle.	
Investigation type	
Investigate cause of failure	

Example of investigation
Additional monitoring or specifically tailored investigations to identify the pressure(s) causing the impact and the source(s) of the pressure(s). Supplementary data could also be used to build sufficient weight of evidence to identify the pressure and/or source or more detailed analysis of the biological data may help to indicate the likely pressure.
Possible future measures
Possible future measures will depend on the identification of the pressure(s) causing the failure and the source of the pressure(s). Possible measures are described in the tables of supporting information for individual pressures.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Not possible to identify these at this stage

Reference	B3a
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Various pressures and sources
Alternative objective	Extended deadline
Reason for alternative objective	Natural conditions - ecological recovery time

Justification for alternative objective

The biology will not recover to good status until after 2015

All necessary measures have or will be put in place to mitigate the pressure causing the biological failure. However, there is expected to be a delay before the biology returns to good status. This may be due to the biological populations taking time to re-colonise or re-establish once the hydromorphological, chemical or physicochemical conditions have been restored to good or the time taken for the habitat conditions to stabilise after improvement works. For example, once a barrier to fish migration has been removed it will take time for fish to migrate into the now accessible area and re-establish populations and therefore good status is not expected to be achieved by 2015.

An extended deadline for achieving good ecological status is therefore required. This will to allow time for the biology to recover.

Investigation type

Monitoring of ecological recovery

Example of investigation

Monitoring of biological elements to confirm that populations recover to good status

Possible future measures

Not applicable at this stage

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

None

Reference	MS (Morphology Sensitive)
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Various pressures and sources
Alternative objective	Not applicable
Reason for alternative objective	Not required

Why a justification for alternative objective is not required

Biological element not included in classification

Some biological elements are identified as being sensitive to morphological pressures. The specific elements vary depending on the water body type:

- rivers = fish, macroinvertebrates and macrophytes
- lakes = macrophytes
- Trac waters = seagrass, fish and benthic invertebrates

As these elements are sensitive to morphological pressures, it is difficult to determine whether these biological elements in Artificial and Heavily Modified Water Bodies are at less than good status due to the effects of morphological changes alone or also the impacts from other pressures.

Where indicated by the use of this decision code, these elements have therefore not been included in the classification or objective setting processes for the Artificial and Heavily Modified Water Bodies concerned. In these instances, the status of the morphology-sensitive biological element can not lead to an alternative objective being set.

Investigation type

Not applicable

Example of investigation

Not applicable

Possible future measures

If these morphology-sensitive biological elements are at less than good status in an Artificial or Heavily Modified water body, other drivers may well require action to be taken to improve their status. For example if the water body has a protected area designation.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Not applicable

E3 Abstraction and other artificial flow pressures for surface waters and groundwaters

Introduction

The demands for water from public water supply, industry and agriculture all impact upon the natural flows and water level of most of the surface water and groundwater bodies within England & Wales. As a result, the natural flows of most surface water bodies are affected by upstream abstraction, discharges distribution and in some cases reservoirs and river basin transfers. Most abstractions and discharges have permits, though there are some activities that will be brought into regulation when parts of the Water Act 2003 are implemented. Such water resource systems have evolved over the last 150 years to form one of the most important parts of the infrastructure underpinning our economic development.

The degree that flows have been altered is reflected in the abstraction and flow regulation pressure maps reported in Annex G for surface water bodies within each river basin district.

Water Framework Directive requirements for flow and water levels

The Water Framework Directive (WFD) regards flows and water levels as an important element in supporting the biological classification of surface water bodies and that flows or water levels should be sufficient to support the biological quality elements. However, it gives no direct guidance on flow or water level requirements. The only exception is for those surface water bodies considered to be at high ecological status. For these, flows and levels should reflect totally or nearly totally undisturbed conditions.

For groundwater bodies, the WFD recognises the importance of groundwater in maintaining flows and water levels in springs, rivers and wetlands. This forms an important part of the quantitative classification of groundwater bodies. But again, no direct guidance is given on the management of groundwater required to maintain the flows or water levels in surface water bodies.

Environmental flow indicators to support WFD environmental objectives

To help guide the management of the impacts of abstraction on surface and groundwater bodies we have derived environmental flow indicators. Environmental flow indicators (EFIs) provide the proportion of the flow regime of a water body that can be allowed for abstraction without causing unacceptable impacts on the water environment. They will be applied in England and Wales, enabling us to continue to manage abstraction in an even-handed way.

Our environmental flow indicators are based on UK Technical Advisory Group (UKTAG) flow standards which were derived using expert opinion and also informed by early results from the Environment Agency Catchment Abstraction Management Strategies (CAMS). UKTAG consulted on flow condition limits as part of its technical review of proposals for WFD standards in 2007 and published final standards in 2008 (UK Environmental Standards & Conditions Phase 1 Final Report April 2008). The environmental flow indicators have been applied to the surface water bodies in England & Wales in the light of the experience and information gained from the first Catchment Abstraction Management Strategies (CAMS) completed between 2001 and 2008.

The environmental flow indicators provide an initial base for identifying those impacts of abstraction on surface flows that could limit good ecological status. However, the links between changes to flows or water levels and the ecological responses are poorly

understood. The site-specific variability in the relationships between hydrological parameters (flow rate, velocity, depth, cross-section) and biological conditions mean it is difficult to model these relationships in a generic way that can readily be applied with confidence across England and Wales. As a result there are uncertainties in both the derivation and the application of the environmental flow indicators. These limitations should be borne in mind, and the indicators on their own should not be used to inform decisions on measures to manage abstraction where there are risks that the measure may be disproportionately costly for the uncertain ecological benefits. We plan to review both the derivation and application of the environmental flow indicators to reduce uncertainty and inform revisions in time for second river basin management plans.

Assessing the impact of abstraction on surface water flows and the groundwater quantitative classification

Environmental flow indicators (EFIs) have been applied to surface and groundwater bodies to identify where flows and water levels may not be supporting good ecological status. The results of this exercise are reported in Annex B both as the 'quantity and dynamics of flow' supporting element result for surface water bodies (rivers, lakes and estuaries), and the quantitative classification 'dependent surface water' element for groundwater bodies.

For the screening of abstraction impacts on each of the surface water bodies, the current flow is derived from an estimated natural flow by adjusting for abstractions and discharges. The current flow estimate is then compared with the environmental flow indicator derived for the same water body. Where the current flow is estimated to be greater than the environmental flow indicator, it is likely to support good ecological status. Where the current flow is less than the environmental flow indicator, there is a risk that the flow will be insufficient to support good ecological status. The amount that the flow is estimated to be below or in deficit of the environmental flow indicator can provide an important clue to the scale and ecological significance of the impact. Thus, where the flow deficits are estimated to be greater than 50% of the natural flow, we have a higher confidence that the impact of abstraction on flows may be limiting ecological status.

The process we have used to arrive at outcomes for each water body is presented in the form of decision trees which are included at the end of this section. For example the decision trees show the different outcomes for high or low confidence that abstraction is affecting ecological status. The decision trees for rivers and lakes include consideration of whether the water body is heavily modified and if that modification is for water resource purposes.

The quantitative classification of groundwater bodies includes consideration of the available groundwater resources, together with the impacts of abstraction on river flows and water levels in groundwater fed wetlands, and the stability of saline intrusions. The assessment of the impacts of groundwater abstraction on wetlands and the stability of saline intrusions is based on local site specific knowledge and monitoring results. For these groundwater bodies, and where the assessment of the impacts of abstraction indicates poor status, we can have a relatively high confidence in the classification of poor status. By contrast, the assessment of available groundwater resources includes estimates of the groundwater flow to surface water bodies. Assessments of groundwater abstraction impacts on surface water flows are relative to the environmental flow indicators described above. Because of the uncertainties in this assessment we have low confidence in most results where the available groundwater resources indicate poor status. However in exceptional cases, where the evidence of impact on surface waters is clear, we have assigned high confidence to the poor status assessments for the groundwater balance and the surface water impact. The decision tree for groundwater bodies at poor quantitative status shows the process we have used to arrive at outcomes and actions for each groundwater body.

Before specific measures can be applied, investigations are needed to resolve these uncertainties, both in the assessment and to establish the best solution. The confidence levels expressed for the surface water flow deficits and groundwater classification provide a guide to the need for investigations into where, and the extent that, abstraction may be reducing the flows and levels; the significance of this reduction in either limiting or supporting good ecological status; and the need for measures to manage abstraction. The outcomes on the decision trees will guide what the focus of investigation should be, for example whether the uncertainty is in the hydrological assessment, or in the economic justification of measures. These outcomes are described further in the section 'Additional Measures' below.

Programmes of measures to support WFD environmental objectives

Water resource measures fall into two groups:

- Revision of existing mechanisms and obligations to support WFD objectives.
- Additional measures to be completed in the first and subsequent river basin management plans (RBMPs).

Environmental impacts of abstractions are controlled through the grant and change of abstraction licences. Not all abstraction licences are time limited, and the mechanism of change and the funding of the change for those that are not time limited may be complex.

Existing mechanisms and obligations

Measures to regulate new proposals for abstractions and Water Resource impoundments to prevent deterioration (M1)

The results of the surface water flow screening and groundwater quantitative classification assessments will be used to guide our abstraction licensing system (under the Water Resources Act 1991 and Water Act 2003 - see Annex F for details). These results will be translated into maps to indicate where water is available for additional abstraction (unless there is good local evidence to the contrary). These maps will be published in our future Catchment Abstraction Management Strategies (CAMS) to provide the framework to guide the determination and trading of permits.

Working with Government, we will continue with plans to extend the abstraction licensing systems to all sectors and parts of England & Wales (Water Act 2003). To this end, regulations under the Water Act 2003 will bring exempt abstractions above $20m^3$ per day within the system of abstraction licensing control. The revised system of abstraction licensing control will be used to ensure that any new abstraction, water resources impoundment or flow regulation proposals do not result in deterioration of ecological status, unless the proposal can be justified as an allowable new modification under Article 4(7) of the WFD.

Most abstractors do not abstract the full amount authorised. We have made assessments against the current abstraction (impacts on the environment now), against predicted abstraction in 2015 (the end of first river basin management plans) and against the full licensed quantity. Predicted increase in actual abstraction is generally small, but the future use of full licensed amounts requires further investigation to assess the potential no-deterioration impacts.

Measures to promote efficient and sustainable water use (M1)

We have included measures to promote efficient and sustainable water use in order to alleviate abstraction pressures on existing resources and the water environment.

Wise and efficient use of water involves us all, as water users and customers of the water companies. For water companies, the requirement and justification of such measures has been included within the draft Water Company Water Resources Management plans required under the Water Industry Act 1991 as amended by the Water Act 2003. Ofwat has set water companies water efficiency targets as part of their ongoing activities which companies will be expected to meet from 2010 onwards. Some water companies have proposed additional water efficiency activities; however, the funding and implementation of these is dependent on final decisions by Ofwat under the water company price review. For this reason some water company actions have not been included in Annex C tables at this stage.

In April 2009 the Environment Agency published its strategy "Water for people and the environment" setting out how we believe water resources should be managed throughout England and Wales to 2050 and beyond. This complements aspects of river basin management plans (RBMPs), but also covers longer term considerations of water demand and supply. Some of the actions on efficient water use set out in the strategy are also listed in Annex C of RBMPs.

For many industries, water efficiency measures are required under Environmental Permitting Regulations (2000). Where justified, permits under these regulations include measures to conserve water use and reduce leakage.

For river basin districts where agricultural water use has a significant impact on water resources we have included measures to promote efficient water use largely by education campaigns, e.g. the NFU "Water Matters" campaign. These are additional to the requirements to demonstrate reasonable need for water and use water efficiently as part of the abstraction licensing process.

The above measures will ensure that the RBMP meets the obligation to promote an efficient and sustainable water use in order to avoid compromising the achievement of the WFD environmental objectives (Article 11 3(c)).

Habitats Directive: Measures to restore existing abstraction to sustainable levels (M2)

Annexes C and D contain water resources measures to achieve our contribution to favourable conservation status of Natura 2000 sites by 2015. The monitoring and site specific investigations at these sites to justify the need for any changes to existing abstraction licences, required as a result of the Habitats Directive, are being completed as part of our current Restoring Sustainable Abstraction programme. Where changes to existing abstraction licences have been identified and justified, the relevant sites have been listed within Annex C as measures for completion by 2015 (although they are regarded as work that would have taken place without WFD).

Many of the abstraction licences identified are held by Water Companies and any reduction in abstraction rates may have to be matched by either the development of alternative supplies or more efficient water use. Most schemes for the delivery of alternative supplies and changes in licences have now been included within the PR09 Water Company plans and, where agreed with by Ofwat, will be funded by Water Companies. Once a scheme has been included within the final plan, and funding has been allocated by Ofwat, we consider that the mechanism has been secured for the delivery of this measure. The successful implementation of the scheme will be followed by a voluntary licence change by the Water Company. It is expected that all such schemes will have the mechanism in place for delivery by 2012.

For all other (mainly non-water industry) abstraction licences, delivery of actions requiring modification of abstraction licences are likely to require the payment of compensation by the Environment Agency. The rate at which these schemes can be progressed will directly relate to our ability to increase abstraction charges to pay compensation. We are aiming to have the process for most licence changes for Habitats Directive sites started by 2012, but plans may require revision once the full costs of licence changes have been assessed against our ability to raise charges via our regional based charging scheme.

Sites of Special Scientific Interest (SSSIs) Investigation of abstraction impacts (M1)

The existing Restoring Sustainable Abstraction programme includes commitments to investigate the impact of existing abstraction that are perceived to be limiting the conservation objectives of Sites of Special Scientific Interest, sites identified in the Biodiversity Action Plan and other locally important conservation sites. This programme of investigations predates, but complements, the requirements of the WFD, and will provide information on what changes in abstraction will need to be made as a part of the programme of measures for future cycles of river basin management plans. Measures currently in Annex C identify when we expect the process to be started.

Additional measures
[Note: codes in square brackets refer to outcomes in the decision trees]

Measures to reduce uncertainty: investigations to determine the ecological significance of reduced flows (M3b)

The 'quantity and dynamics of flow' supporting element results (reported in Annex B), identify those surface water bodies where the net impact of both abstraction and discharges is estimated to have reduced flow below the environmental flow indicators and where there is a risk that flow may be insufficient to support good ecological status. However, the uncertainties in the assessments and the environmental flow indicators make them unreliable in both defining the magnitude and ecological significance of reduced flows without further investigation. Any measures to reduce abstraction impacts based solely on a comparison with the environmental flow indicators may not result in any biological improvement and therefore are likely to be disproportionately expensive. The cost of the modification or cancellation of abstraction licences has been estimated to be between £1.5m to £7m per Ml/day reduction in the reliable output. The preliminary cost effectiveness analysis undertaken by Defra estimated the cost of achieving EFIs by 2015 as between £3,600 million and £25,000 million for England and £70 million to £2,100 million for Wales.

In view of the above costs and uncertainties, the following actions will be undertaken, to:

- review both the derivation and application of the environmental flow indicators for all water bodies in England and Wales, with the aim of improving them to inform the revisions to the river basin management plans in 2015.
- undertake site specific investigations to determine both the size and biological benefits of increased flows and to refine the assessment of costs, benefits and other impacts of measures to reduce the impacts of abstraction.

Without these investigations, measures to reduce abstraction could be premature and represent a high risk of being disproportionately expensive.

Site specific investigations will be included within the Restoring Sustainable Abstraction programme with the WFD as a driver. Priority will be given to completing investigations in the first RBMP cycle at those water bodies where we have a high confidence that flow may be limiting good ecological status [Rivers outcome HR3 & HR4] . The results of these will then provide the case for any measures to reduce abstraction to be included in the second cycle

of RBMPs (ending 2021). For the remaining water bodies where current flows are estimated to be below the environmental flow indicator [Rivers outcome HR2], the ecological significance of the impact of abstraction on flow will either be reviewed in the light of further monitoring or be investigated specifically in the second RBMP cycle. This phased, risk based approach was one of the recommendations of the preliminary Cost Effectiveness Analysis completed with Defra in 2007 (Water Resources pCEA 2007).

Measures to reduce uncertainty: investigations on heavily modified water bodies to determine the ecological significance of managed flows (M3b)

The designation of heavily modified water bodies (HMWB) for water supply purposes encompasses valuable and important parts of our water supply infrastructure including:

- Inter-basin water transfers, for example the Ely-Ouse scheme
- Reservoir releases for downstream abstraction, for example the river Dee
- Groundwater pumping to augment flows for downstream abstraction, for example the Shropshire groundwater scheme
- Reservoirs with direct catchment areas, for example Ladybower
- Reservoirs for pumped storage, for example Grafham water
- Semi-natural lakes with dammed outlets, for example Ennerdale

The ecological classification of these groups of HMWBs requires detailed knowledge of how the operation of such schemes may both impact on flows and limit good ecological potential. Some schemes have been constructed and are already operated to mitigate biological impacts. Consequently we have assessed the current status of the HMWB on the presence or absence of feasible mitigation measures (in line with the agreed method used for all ecological potential assessments in the UK). For HMWBs designated for water supply purposes and judged to be below good ecological potential, we have set the alternative objective of an extended deadline. This is on the basis that there is low certainty there is a problem to solve, and the ecological outcome of mitigation measures requires further investigation. The premature implementation of measures could therefore be disproportionately expensive [Rivers outcome HR1 and Lakes outcome HL1].

A programme of work will be undertaken to

- review the benefits and costs of possible mitigation measures and improve the hydrological assessment of HMWBs designated for water supply purposes, with the aim of informing a programme of measures for second cycle river basin management plans (2015)
- undertake site specific investigations to determine both the size and biological benefits of mitigation measures and changing flows to justify the need for measures to achieve good ecological potential

As most of the HMWBs are water company assets, the potential for impact on use must also be considered and this programme of work will be undertaken in partnership with the water companies. Until the above work has been completed a timetable for delivery of the measures cannot be confirmed.

Measures to Reduce Uncertainty: Poor Groundwater Quantitative Status (M3b)

In England there are 17 groundwater bodies at poor quantitative status where we have high confidence in the assessment because there are reported impacts related to groundwater abstraction. Of these, three of the groundwater bodies are in poor status resulting from a long standing saline intrusion, where the benefits of further investigation and restoring the aquifer would be limited. Less stringent objectives are set on the basis that any measures to reduce abstraction would be disproportionately expensive, because of the extreme length of

time for measures to have any effect [Groundwater outcome GQ4]. The remaining 14 groundwater bodies require further investigations to confirm that groundwater abstraction is causing poor status and determine whether or not remedial measures will produce tangible environmental benefits. For these groundwater bodies, we have set alternative objectives with extended deadlines (2027) to allow time for investigations to be completed and appropriate measures implemented [Groundwater outcome GQ3 and GQ5].

For the remaining 89 groundwater bodies in England and Wales assessed at poor status we have relatively low confidence in their assessment [Groundwater outcome GQ2]. For these groundwater bodies we have set alternative objectives of an extended deadline to 2027 to allow time to determine the impact and biological significance of groundwater abstraction on surface water flows and where necessary to justify the need for any changes to the abstraction licences involved. Without this information any measures to reduce groundwater abstraction would be disproportionately expensive because of the uncertainty of biological outcomes. To start this determination we intend to carry out at least a basic level of investigation (desk study) for each of these groundwater bodies.

Measures to Prevent Deterioration: Good Groundwater Quantitative Status (M3b)

In England and Wales there are 30 groundwater bodies at good quantitative status that we have assessed as being at risk of deterioration of one or more quantitative element due to abstraction quantities that have been licensed but not currently used. Some of these are already under investigation. We intend to carry out a basic level of investigation (desk study) for each of these groundwater bodies and where needed consider options for preventing deterioration in status of the quantitative elements.

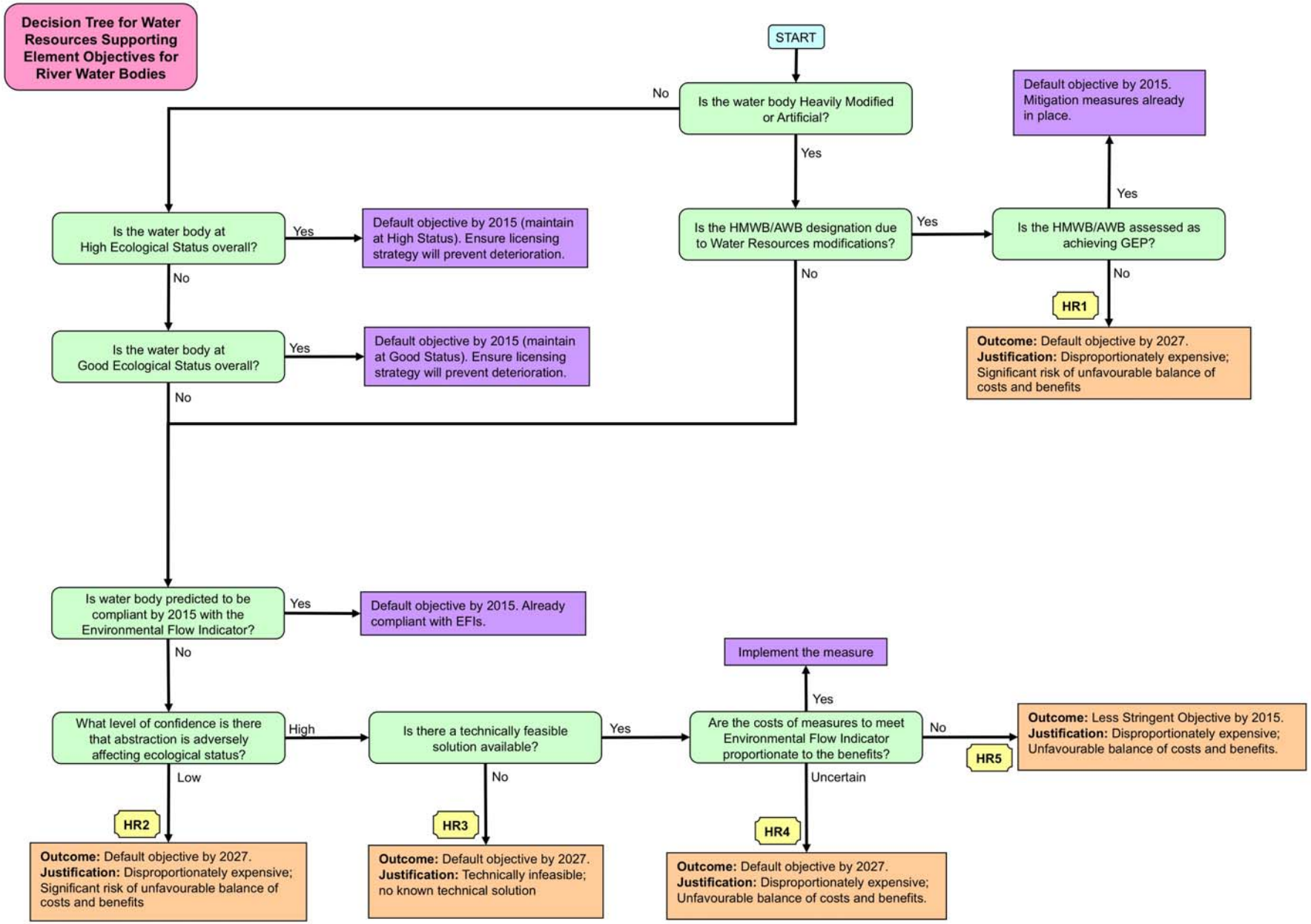
References

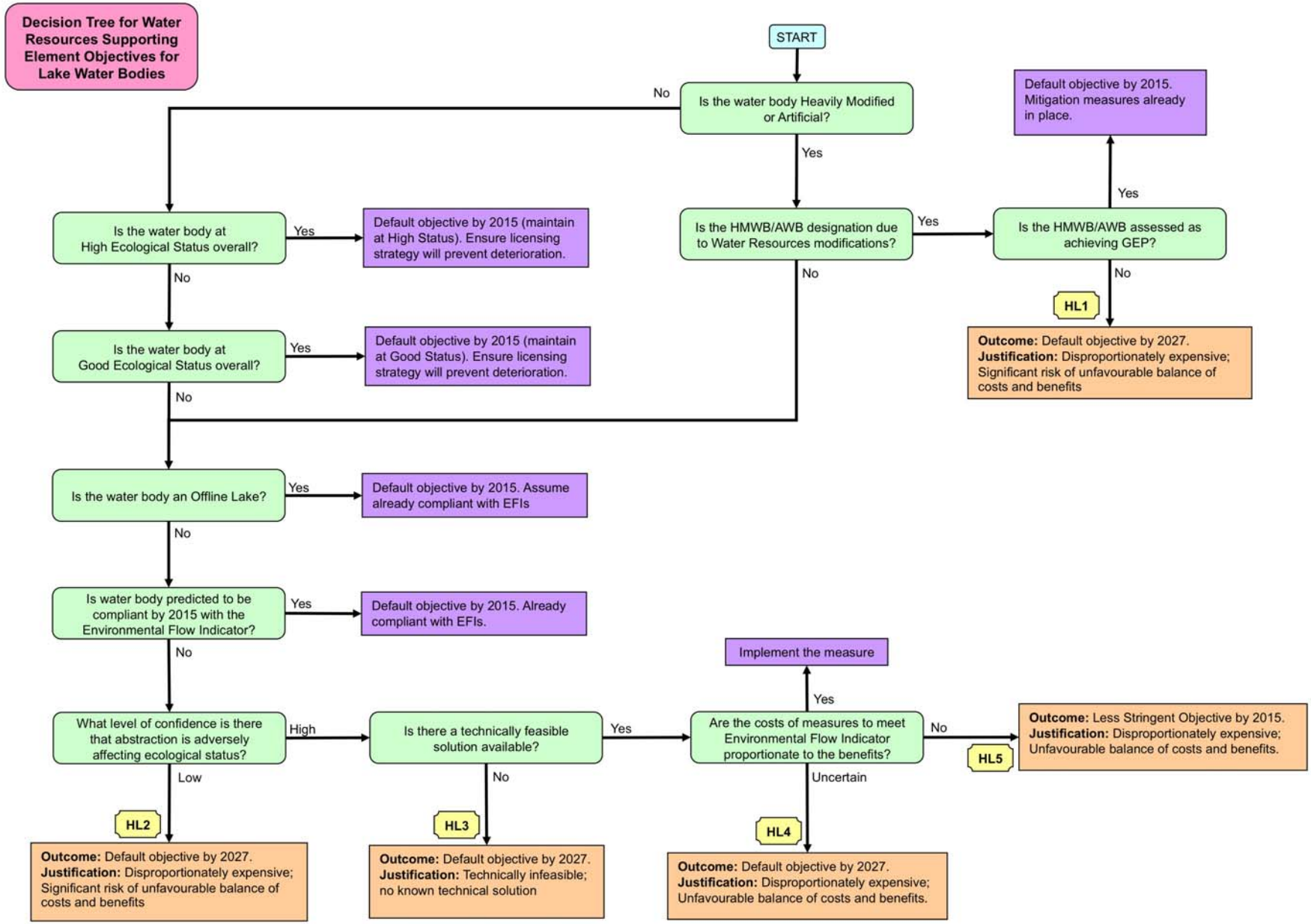
Environment Agency 2008 “Restoring Sustainable Abstraction programme” (available on: http://www.environment-agency.gov.uk/business/topics/water/32020.aspx

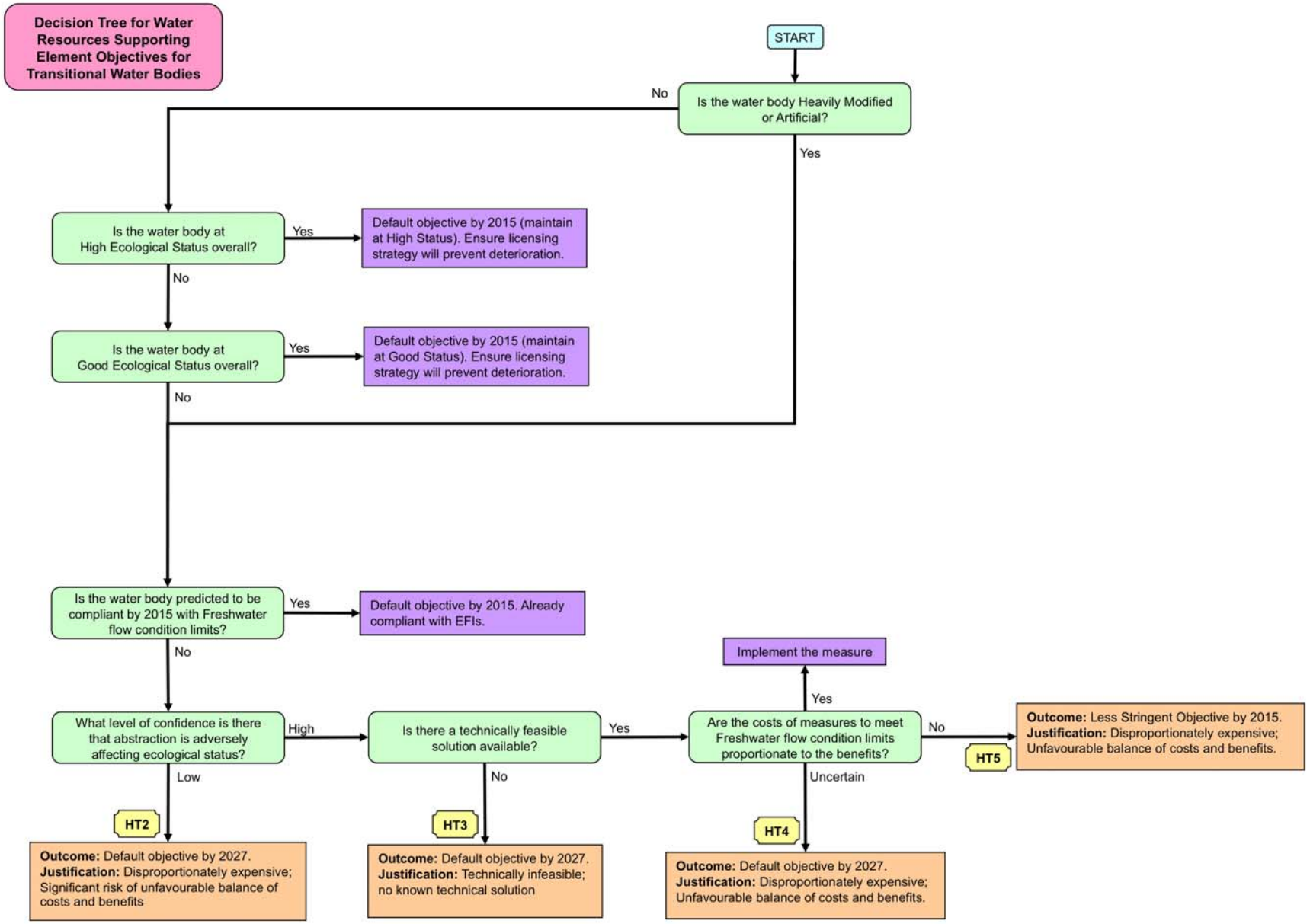
Environment Agency 2008 “Catchment Abstraction Management Strategies” (available on: http://www.environment-agency.gov.uk/research/planning/33372.aspx

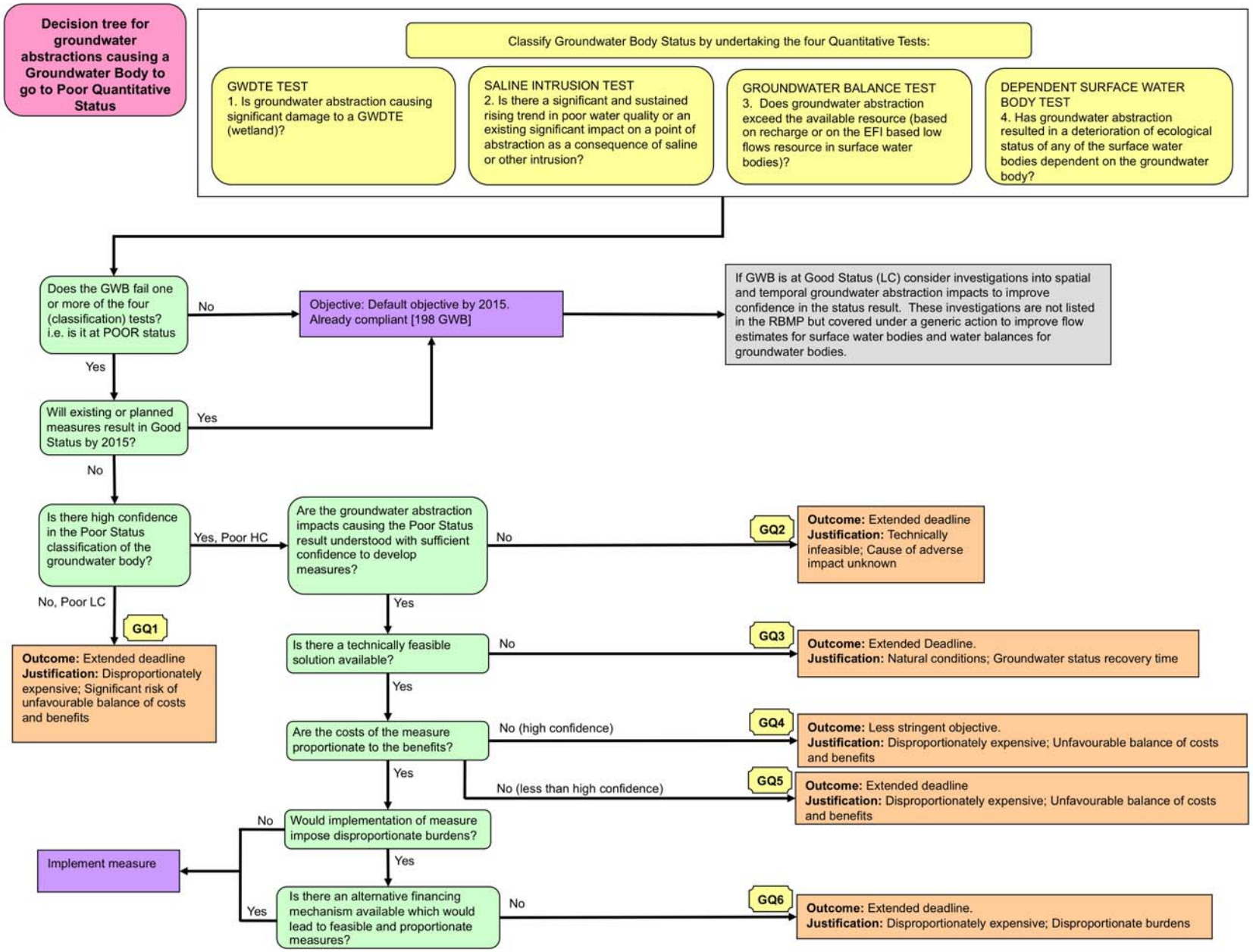
UKTAG 2008 “UK Environmental Standards & Conditions Phase 1” Final Report April 2008 (available on: http://www.wfduk.org/)

Water Resources pCEA 2007 “Preliminary Cost Effectiveness of WFD measures: chapter 4.2 Water Resources” Defra Economics, Collaborative Research Programme (available on: www.wfdcrp.co.uk)


Decision Tree for Water Resources Supporting Element Objectives for River Water Bodies
START
Is the water body Heavily Modified or Artificial?
No
Yes
Is the water body at High Ecological Status overall?
Yes
Default objective by 2015 (maintain at High Status). Ensure licensing strategy will prevent deterioration.
No
Is the water body at Good Ecological Status overall?
Yes
Default objective by 2015 (maintain at Good Status). Ensure licensing strategy will prevent deterioration.
No
Is the HMWB/AWB designation due to Water Resources modifications?
Yes
Is the HMWB/AWB assessed as achieving GEP?
Yes
Default objective by 2015. Mitigation measures already in place.
No
HR1
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
No
Is water body predicted to be compliant by 2015 with the Environmental Flow Indicator?
Yes
Default objective by 2015. Already compliant with EFIs.
No
What level of confidence is there that abstraction is adversely affecting ecological status?
High
Is there a technically feasible solution available?
Yes
Are the costs of measures to meet Environmental Flow Indicator proportionate to the benefits?
Yes
Implement the measure
No
HR5
Outcome: Less Stringent Objective by 2015.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits.
Low
HR2
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
No
HR3
Outcome: Default objective by 2027.
Justification: Technically infeasible; no known technical solution
Uncertain
HR4
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits.


Decision Tree for Water Resources Supporting Element Objectives for Lake Water Bodies
START
Is the water body Heavily Modified or Artificial?
No
Yes
Is the HMWB/AWB designation due to Water Resources modifications?
Yes
No
Is the HMWB/AWB assessed as achieving GEP?
Yes
No
Default objective by 2015. Mitigation measures already in place.
HL1
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Is the water body at High Ecological Status overall?
Yes
Default objective by 2015 (maintain at High Status). Ensure licensing strategy will prevent deterioration.
No
Is the water body at Good Ecological Status overall?
Yes
Default objective by 2015 (maintain at Good Status). Ensure licensing strategy will prevent deterioration.
No
Is the water body an Offline Lake?
Yes
Default objective by 2015. Assume already compliant with EFIs
No
Is water body predicted to be compliant by 2015 with the Environmental Flow Indicator?
Yes
Default objective by 2015. Already compliant with EFIs.
No
What level of confidence is there that abstraction is adversely affecting ecological status?
High
Is there a technically feasible solution available?
Yes
Are the costs of measures to meet Environmental Flow Indicator proportionate to the benefits?
No
HL5
Outcome: Less Stringent Objective by 2015.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits.
Implement the measure
Yes
Uncertain
HL4
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits.
Low
HL2
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
No
HL3
Outcome: Default objective by 2027.
Justification: Technically infeasible; no known technical solution


Decision Tree for Water Resources Supporting Element Objectives for Transitional Water Bodies
START
Is the water body Heavily Modified or Artificial?
No
Yes
Is the water body at High Ecological Status overall?
Yes
Default objective by 2015 (maintain at High Status). Ensure licensing strategy will prevent deterioration.
No
Is the water body at Good Ecological Status overall?
Yes
Default objective by 2015 (maintain at Good Status). Ensure licensing strategy will prevent deterioration.
No
Is the water body predicted to be compliant by 2015 with Freshwater flow condition limits?
Yes
Default objective by 2015. Already compliant with EFIs.
No
What level of confidence is there that abstraction is adversely affecting ecological status?
High
Is there a technically feasible solution available?
Yes
Are the costs of measures to meet Freshwater flow condition limits proportionate to the benefits?
Implement the measure
Yes
No
Outcome: Less Stringent Objective by 2015.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits.
HT5
Low
HT2
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
No
HT3
Outcome: Default objective by 2027.
Justification: Technically infeasible; no known technical solution
Uncertain
HT4
Outcome: Default objective by 2027.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits.


Decision tree for groundwater abstractions causing a Groundwater Body to go to Poor Quantitative Status
Classify Groundwater Body Status by undertaking the four Quantitative Tests:
GWDTE TEST
1. Is groundwater abstraction causing significant damage to a GWDTE (wetland)?
SALINE INTRUSION TEST
2. Is there a significant and sustained rising trend in poor water quality or an existing significant impact on a point of abstraction as a consequence of saline or other intrusion?
GROUNDWATER BALANCE TEST
3. Does groundwater abstraction exceed the available resource (based on recharge or on the EFI based low flows resource in surface water bodies)?
DEPENDENT SURFACE WATER BODY TEST
4. Has groundwater abstraction resulted in a deterioration of ecological status of any of the surface water bodies dependent on the groundwater body?
Does the GWB fail one or more of the four (classification) tests? i.e. is it at POOR status
No
Objective: Default objective by 2015. Already compliant [198 GWB]
If GWB is at Good Status (LC) consider investigations into spatial and temporal groundwater abstraction impacts to improve confidence in the status result. These investigations are not listed in the RBMP but covered under a generic action to improve flow estimates for surface water bodies and water balances for groundwater bodies.
Yes
Will existing or planned measures result in Good Status by 2015?
Yes
No
Is there high confidence in the Poor Status classification of the groundwater body?
Yes, Poor HC
Are the groundwater abstraction impacts causing the Poor Status result understood with sufficient confidence to develop measures?
No
GQ2
Outcome: Extended deadline
Justification: Technically infeasible; Cause of adverse impact unknown
No, Poor LC
GQ1
Outcome: Extended deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Is there a technically feasible solution available?
No
GQ3
Outcome: Extended Deadline.
Justification: Natural conditions; Groundwater status recovery time
Yes
Are the costs of the measure proportionate to the benefits?
No (high confidence)
GQ4
Outcome: Less stringent objective.
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Yes
No (less than high confidence)
GQ5
Outcome: Extended deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
No
Would implementation of measure impose disproportionate burdens?
Implement measure
Yes
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
No
GQ6
Outcome: Extended deadline.
Justification: Disproportionately expensive; Disproportionate burdens

Reference	HR1a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Suspected - Flow Alteration due to Water Regulation
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that flow regulation is adversely affecting ecological potential

It is disproportionately expensive to require changes to the flow regime at this time because the assessment of Good Ecological Potential has considered the presence or absence of potential mitigation measures and we have not established the relationship between mitigation measures and river ecology, therefore do not have the information to assess the ecological benefits of these mitigation measures.

Until this link is sufficiently established for a water body, there is a significant risk that there will be either no or low benefits from implementing mitigation measures.

Changes in flow regime can be costly as they may reduce resources available for drinking water which needs to be replaced from other sources. For the majority of water bodies in this category, there is a significant risk that there will be either no or low benefits from implementing mitigation measures. However there are a few water bodies in this category where need for change in flow regime has been established following specific investigations to meet Habitats Directive requirements. In these cases only, solutions will be implemented within the timescale of the first RBMP.

Investigation type

investigate source of failure

Example of investigation

Investigations in HMWBs or AWBs designated due to Water Resources modifications that are not currently achieving Good Ecological Potential will initially focus on the potential mitigation measures that may be appropriate in individual cases and the benefits that will be delivered by additional mitigation. Investigations will also consider the impact of potential mitigation on the primary economic use for which the water body was designated.

Possible future measures
After investigations, potential mitigation options will be implemented subject to the consideration of the costs and potential benefits of the measures. Mitigation measures are likely to be specific to each water body, however could include changes in management of the flow regime to benefit river ecology.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Fundamental changes in flow regime such as restoring to natural flow regime are likely to be disproportionately expensive because of the high cost of replacement sources of drinking water in the order of £1.5m - £7m per Ml/d.

Reference	HR2a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that abstraction is adversely affecting ecological status

It is disproportionately expensive to require changes to the current abstraction regime at this time because our risk assessment (Environmental Flow Indicator threshold compliance) shows that there is only low confidence that abstraction pressure is adversely affecting ecological status.

The flow regime is a supporting element in classification. Environmental Flow Indicators have been developed as a screening tool to indicate the level of flow below which Good Ecological Status may not be supported. Where we have low confidence that abstraction pressure is adversely affecting ecology, further studies are required to understand the relationship between flow and ecological status before we can attribute the failure in ecological status to abstraction pressures. Until this link is sufficiently established for a water body, there is a significant risk that there will be either no or low benefits from taking remedial action to improve flows.

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where abstractions need to be reduced to improve the flow regime in the environment, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that promote efficient and sustainable water use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation

Monitoring and modelling to assess the impacts of abstraction pressures on ecological status. This work will include investigation of the hydrological impacts of

abstraction and review of the flow requirements to support Good Ecological Status.
Possible future measures
Possible future measures include reduction in abstraction licence quantities, restrictions on abstraction during particular months, and the imposition of conditions on licences, such as Hands-Off flow constraints. The costs and benefits of measures will however need to be considered, and other measures such as river restoration schemes may prove to be a more cost beneficial way of achieving ecological status improvements.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is likely that reduction or ending of abstractions to meet Environmental Flow Indicator thresholds in all water bodies will be disproportionately expensive, due to the potential impacts on public water supply and other water users. The preliminary cost effectiveness analysis undertaken by Defra estimated the cost of achieving EFIs by 2027 as between £3,200 million and £20,000 million for England and £65 million to £980 million for Wales. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	HR4a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Confirmed - Abstraction
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

Likely unfavourable balance of costs and benefits of achieving good ecological status

An extended deadline is required for all water bodies that are failing to achieve Good Ecological Status, do not meet Environmental Flow Indicator thresholds and where there is a high confidence that abstraction pressure is adversely affecting ecological status. In these water bodies, flows are unlikely to support Good Ecological Status and the costs and benefits of possible remedial measures must be considered

At this stage, direct measures to reduce abstraction sufficiently to support Good Ecological Status are considered likely to be disproportionately expensive. Costs to reduce or relocate abstractions are typically high, ranging from £1.5m to £7m per Ml/d of abstraction. This leads to considerable uncertainty in the costs of measures in the light of uncertainty in the scale of flow improvement required to support Good Ecological Status. On the benefits side there is also considerable uncertainty. Low flow is rarely the only cause of failure of ecological status and the benefits of improving flow will depend on whether actions to reduce other pressures are taken.

Further investigation is required to identify proportionately costly solutions.

Investigation type

investigate feasible measures

Example of investigation

Monitoring and modelling to assess the water body specific impacts of abstraction pressures on ecological status. Investigation will be focussed on assessing the costs and potential benefits of measures in order to identify proportionately costly solutions. Part of this will also involve hydroecological investigation to establish the conditions required to support good ecological status and the scale of measures required in order to achieve this.

Possible future measures
Possible future measures include reduction in abstraction licence quantities, restrictions on abstraction during particular months, and the imposition of conditions on licences, such as Hands-Off flow constraints. The costs and benefits will however need to be considered, and other measures such as river restoration schemes may prove to be a more cost beneficial way of achieving ecological status improvements.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is likely that reduction or ending of abstractions to meet Environmental Flow Indicator thresholds in all water bodies will be disproportionately expensive, due to the potential impacts on public water supply and other water users. The preliminary cost effectiveness analysis identified that costs to reduce or relocate abstraction may be in the order of £1.5m - £7m per Ml/d of abstraction. The same analysis estimated the cost of achieving EFIs by 2027 as between £3,200 million and £20,000 million for England and £65 million to £980 million for Wales. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	HL1a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Suspected - Flow Alteration due to Water Regulation
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that flow regulation is adversely affecting ecological potential

It is disproportionately expensive to require changes to the flow regime at this time because the assessment of Good Ecological Potential has considered the presence or absence of potential mitigation measures and we have not established the relationship between mitigation measures and ecology, therefore do not have the information to assess the ecological benefits of these mitigation measures.

Until this link is sufficiently established for a water body, there is a significant risk that there will be either no or low benefits from implementing mitigation measures.

Changes in flow regime can be costly as they may reduce resources available for drinking water which needs to be replaced from other sources. For the majority of water bodies in this category, there is a significant risk that there will be either no or low benefits from implementing mitigation measures. However there are a few water bodies in this category where need for change in flow regime has been established following specific investigations to meet Habitats Directive reguirements. In these cases only, solutions will be implemented within the timescale of the first RBMP.

Investigation type

investigate source of failure

Example of investigation

Investigations in HMWBs or AWBs designated due to Water Resources modifications that are not currently achieving Good Ecological Potential will initially focus on the potential mitigation measures that may be appropriate in individual cases and the benefits that will be delivered by additional mitigation. Investigations will also consider the impact of potential mitigation on the primary economic use of the water body for which it was designated. This will be particularly important for reservoirs designated for public water supply abstraction.

Possible future measures
After investigations, potential mitigation options will be implemented subject to the consideration of the costs and potential benefits of the measures. Mitigation measures are likely to be specific to each water body, however these could include changes in the rate and range of artificial drawdown to maintain aquatic plant and animal life or minor structural changes such as some types of fish passes.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Measures that involve major changes to the structure of the impoundment are likely to be technically infeasible or disproportionately expensive due to the disruption of public drinking water supplies.

Reference	HL2a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that abstraction is adversely affecting ecological status

It is disproportionately expensive to require changes to the current abstraction regime at this time because our risk assessment (Environmental Flow Indicator threshold compliance) shows that there is only low confidence that abstraction pressure is adversely affecting ecological status.

The flow regime is a supporting element in classification. Environmental Flow Indicators have been developed as a threshold to indicate the level of lake outflows below which Good Ecological Status may not be supported. Where we have low confidence that abstraction pressure is adversely affecting ecology, further studies are required to understand the relationship between flow and ecological status before we can attribute the failure in ecological status to abstraction pressures. Until this link is sufficiently established for a water body, there is a significant risk that there will be either no or low benefits from taking remedial action to improve flows.

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where abstractions need to be reduced to improve the flow regime in the environment, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that reduce water demand and promote efficient use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation
Monitoring and modelling to assess the impacts of abstraction pressures on ecological status. This work will include investigation of the hydrological impacts of abstraction and review of the flow requirements to support Good Ecological Status.
Possible future measures
Possible future measures include reduction in abstraction licence quantities, restrictions on abstraction during particular months, and the imposition of conditions on licences, such as Hands-Off flow constraints. The costs and benefits will however need to be considered, and other measures such as habitat restoration schemes may prove to be a more cost beneficial way of achieving ecological status improvements.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is likely that reduction in abstraction to meet Environmental Flow Indicator thresholds in the outflowing river of lake water bodies, or to remove other hydrological impacts on the lake level will be disproportionately expensive due to the potential impacts on public water supply and other water users. The preliminary cost effectiveness analysis identified that costs to reduce or relocate abstraction may be in the order of £1.5m - £7m per Ml/d of abstraction. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	HL4a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Confirmed - Abstraction
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

Likely unfavourable balance of costs and benefits of achieving good ecological status

An extended deadline is required for one lake water body in England (Hardley Flood) that is failing to achieve Good Ecological Status, does not the meet Environmental Flow Indicator thresholds for lake outflows and where there is a high confidence that abstraction pressure is adversely affecting ecological status. In this water body, flows are unlikely to support Good Ecological Status and the costs and benefits of possible remedial measures must be considered

At this stage, direct measures to reduce abstraction sufficiently to support Good Ecological Status are considered likely to be disproportionately expensive. Costs to reduce or relocate abstractions are typically high, ranging from £1.5m to £7m per Ml/d of abstraction. This leads to considerable uncertainty in the costs of measures in the light of uncertainty in the scale of flow improvement required to support Good Ecological Status. On the benefits side there is also uncertainty. Alien species are known to be a primary cause of failure of ecological status (for which no measures are readily available) and the benefits of improving flow in this case will be low .

Investigation type

investigate feasible measures

Example of investigation

Monitoring and modelling to assess the water body specific impacts of abstraction pressures on ecological status. Investigation will be focussed on assessing the costs and potential benefits of measures in order to identify proportionately costly solutions. Part of this will also involve hydroecological investigation to establish the conditions required to support good ecological status (lake outflows and water level regime) and the scale of measures required in order to achieve this.

Possible future measures
Possible future measures include reduction in abstraction licence quantities, restrictions on abstraction during particular months, and the imposition of conditions on licences, such as Hands-Off flow constraints. The costs and benefits will however need to be considered, and other measures such as river restoration schemes may prove to be a more cost beneficial way of achieving ecological status improvements.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is likely that reduction in abstraction to meet Environmental Flow Indicator thresholds will be disproportionately expensive, due to the potential impacts on public water supply and other water users. The preliminary cost effectiveness analysis identified that costs to reduce or relocate abstraction may be in the order of £1.5m - £7m per Ml/d of abstraction. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	HT1a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that abstraction is adversely affecting ecological status

It is disproportionately expensive to require changes to the current abstraction regime at this time because our risk assessment (Environmental Flow Indicator threshold compliance) shows that there is only low confidence that abstraction pressure is adversely affecting ecological status.

The freshwater flow regime is a supporting element in classification. Freshwater flow condition limits have been developed as a screening tool to indicate the level of freshwater inflow below which Good Ecological Status may not be supported. Where we have low confidence that abstraction pressure is adversely affecting ecology, further studies are required to understand the relationship between flow and ecological status before we can attribute the failure in ecological status to abstraction pressures. Until this link is sufficiently established for a water body, there is a significant risk that there will be either no or low benefits from taking remedial action to improve flows.

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where abstractions need to be reduced to improve the flow regime in the environment, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that reduce water demand and promote efficient use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation
Desk studies to review the hydrological condition. Where required, monitoring and modelling to assess the water body specific impacts of abstraction pressures on ecological status. This work will include investigation of the hydrological impacts of abstraction, the flow requirements to support Good Ecological Status and the feasibility of measures to deliver these flow requirements.
Possible future measures
Possible future measures include reduction in abstraction licence quantities, restrictions on abstraction during particular months, and the imposition of conditions on licences, such as Hands-Off flow constraints. The costs and benefits of measures will, however, need to be considered.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is likely that reduction in abstraction to meet flow condition limits in all inflowing water bodies will be disproportionately expensive, due to the potential impacts on public water supply and other water users. The preliminary cost effectiveness analysis identified that costs to reduce or relocate abstraction may be in the order of £1.5m - £7m per Ml/d of abstraction. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	HT3a
Element predicted not to achieve good by 2015	Hydrology
Reason for failure	Suspected - Abstraction
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

Likely unfavourable balance of costs and benefits of achieving good ecological status

An extended deadline is required for three transitional water bodies in England that are failing to achieve Good Ecological Status, do not meet flow condition limits for freshwater inflows and where there is a high confidence that abstraction pressure is adversely affecting ecological status. In these water bodies, flows are unlikely to support Good Ecological Status and the costs and benefits of possible remedial measures must be considered

At this stage, direct measures to reduce abstraction sufficiently to support Good Ecological Status are considered likely to be disproportionately expensive. Costs to reduce or relocate abstractions are typically high, ranging from £1.5m to £7m per Ml/d of abstraction. This leads to considerable uncertainty in the costs of measures in the light of uncertainty in the scale of flow improvement required to support Good Ecological Status. On the benefits side there is also considerable uncertainty. Low flow is not the only cause of failure of ecological status in these water bodies and the benefits of improving flow will depend on whether actions to reduce other pressures are taken.

Further investigation is required to identify proportionately costly solutions.

Investigation type

investigate source of failure

Example of investigation

Monitoring and modelling to assess the water body specific impacts of abstraction pressures on ecological status. Investigation will be focussed on assessing the costs and potential benefits of measures to reduce abstraction on freshwater inflows in order to identify proportionately costly solutions. Part of this will also involve hydroecological investigation to establish the conditions required to support good ecological status and the scale of measures required in order to achieve this.

Possible future measures
Possible future measures include reduction in abstraction licence quantities, restrictions on abstraction during particular months, and the imposition of conditions on licences, such as Hands-Off flow constraints.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is likely that reduction in abstraction to meet flow condition limits in all inflowing water bodies will be disproportionately expensive, due to the potential impacts on public water supply and other water users. The Preliminary Cost Effectiveness Analysis identified that costs to reduce or relocate abstraction may be in the order of £1.5m - £7m per Ml/d of abstraction. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	GQ1a
Element predicted not to achieve good by 2015	Saline Intrusion
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that there is a failure in this element of groundwater status

It is disproportionately expensive to require changes to the current abstraction regime at this time because there is only low confidence that there is a failure of the saline intrusion element of groundwater status as a result of abstraction pressure.

There are a few groundwater bodies where high rates of groundwater abstraction have been associated with the intrusion of poorer quality groundwater - typically close to the coast or estuaries. However the influence of abstraction patterns, climate and sea level variables on continued groundwater quality trends has not yet been characterised with sufficient certainty to define alternative abstraction management interventions.

Until the relationship between abstraction and saline intrusion is sufficiently established for a groundwater body, there is a significant risk that there will be either no or low benefits from taking remedial action to improve flows.

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where abstractions need to be reduced to reduce saline intrusion, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that promote efficient and sustainable water use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation
Investigate the spatial and temporal impacts of groundwater abstraction management regimes, e.g. through groundwater modelling studies or monitoring, possibly associated with signal tests. Also consider the effectiveness of potential abstraction control measures and their associated costs and benefits.
Possible future measures
Change in groundwater abstraction regime – adjust the duration and rate of pumping so as to reduce the impact of saline intrusion.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
The restoration of groundwater quality in aquifers following saline intrusion associated with natural recharge and hydraulic gradients may take 10s, 100s or 1000s of years to achieve. It should be possible in the long term to halt ongoing intrusion through abstraction control measures. However, developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies. Rising sea levels also pose a significant threat to GW quality around the coast which is not specifically related to abstraction and may frustrate attempts to protect a sustainable fresh groundwater resource.

Reference	GQ1b
Element predicted not to achieve good by 2015	Impact On Surface Water Ecological Status
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that there is a failure in this element of groundwater status

It is disproportionately expensive to require changes to the current abstraction regime at this time because there is only low confidence that there is a failure of the surface water ecological status as a result of groundwater abstraction pressure.

For many principal aquifer groundwater bodies (and a few secondary aquifers), high rates of groundwater abstraction are locally or more generally associated with predicted impacts on dependent surface water body flows which are estimated to fall below the Environmental Flow Indicators considered to support Good Ecological Status. However, the spatial and temporal distribution of these flow impacts and their severity are not yet understood with confidence and more work is thereafter required to evaluate the benefits on river ecology of any abstraction reduction.

Until these factors are understood sufficiently for a water body, there is a significant risk that there will be either no or low benefits from taking action to reduce groundwater abstractions.

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where groundwater abstractions need to be reduced to improve the flow regime in dependent rivers, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that promote efficient and sustainable water use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation
In view of the number of groundwater bodies in this category the investigations are likely to be tiered with at least basic level of investigation in the first cycle. Investigations will improve the spatial and temporal characterisation of groundwater abstraction impacts; refine understanding of the likely costs and benefits of abstraction rate reductions in helping to restore flows and thereby achieve ecological status targets; may be integrated alongside consideration of other pollution and habitat pressures to determine the optimum way forward.
Possible future measures
Any future measures need to be based on a better characterised balance between costs and benefits carried out for each water body incorporating all the pressures. Measures may include reductions in abstraction licences, but other measures such as river restoration schemes may prove to be a more cost beneficial way of achieving ecological status improvements.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Large reduction or relocation of groundwater abstractions may be disproportionately expensive because replacement abstractions are very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day. . Even if progressed, some of the higher storage sandstone aquifers respond slowly to changes in abstraction and recovery may not be realised by the desired deadline. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies

Reference	GQ1c
Element predicted not to achieve good by 2015	Water Balance
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that there is a failure in this element of groundwater status

It is disproportionately expensive to require changes to the current abstraction regime at this time because there is only low confidence that there is a failure of the water balance element of groundwater status as a result of groundwater abstraction pressure.

For many principal aquifer groundwater bodies (and a few secondary aquifers), high rates of groundwater abstraction is estimated to reduce the natural outflow from the groundwater body as a whole by more than the aggregated available low flow resource. This resource is estimated from the Environmental Flow Indicators considered to support Good Ecological Status in all the surface water bodies draining each groundwater body. However, an adequate characterisation of the flow impacts has not yet been achieved and more work is thereafter required to evaluate the benefits on river ecology of any abstraction reduction.

Until these factors are understood sufficiently for a water body, there is a significant risk that there will be either no or low benefits from taking action to reduce groundwater abstractions

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where groundwater abstractions need to be reduced to improve the flow regime in dependent rivers, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that promote efficient and sustainable water use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation
In view of the number of groundwater bodies in this category the investigations are likely to be tiered with at least basic level of investigation in the first cycle. Investigations will improve the spatial and temporal characterisation of groundwater abstraction impacts; refine understanding of the likely costs and benefits of abstraction rate reductions in helping to restore flows and thereby achieve ecological status targets; may be integrated alongside consideration of other pollution and habitat pressures to determine the optimum way forward. Any future measures need to be based on a better characterised balance between costs and benefits carried out for each water body incorporating all the pressures.
Possible future measures
Measures may include reductions in groundwater abstraction licences.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Large reductions or relocation of groundwater abstraction may be disproportionately expensive because replacement abstractions are very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day. Even if progressed, some of the higher storage sandstone aquifers respond slowly to changes in abstraction and recovery may not be realised by the desired deadline. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies

Reference	GQ1d
Element predicted not to achieve good by 2015	Groundwater Dependent Terrestrial Ecosystems (Quantitative)
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that there is a failure in this element of groundwater status

It is disproportionately expensive to require changes to the current abstraction regime at this time because there is only low confidence that there is a failure of the dependant terrestrial ecosystem element of groundwater status as a result of groundwater abstraction pressure.

There are three groundwater bodies supporting groundwater dependent terrestrial ecosystems (e.g. wetlands) which may be suffering some damage associated with groundwater abstraction, but where the temporal and spatial distribution of groundwater level and flow impacts is not yet well understood. Monitoring and groundwater modelling studies are ongoing or are still being evaluated to improve the confidence in groundwater abstraction impact prediction. Further work is needed to determine the ecological benefits of reducing groundwater abstraction.

Until these factors are understood sufficiently, there is a significant risk that there will be either no or low benefits from taking action to reduce groundwater abstractions.

In such cases these low expected benefits contrast to potential very high costs of remedial measures. Water is abstracted from the environment to provide drinking water supplies and for use by industry. Where groundwater abstractions need to be reduced to improve the condition of dependant wetlands, alternative abstraction sources need to be developed. Developing new abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day.

The only practicable lower-cost actions to reduce the impact of abstraction are those that promote efficient and sustainable water use. In catchments subject to significant abstraction pressures, these are either already in place or will be put in place under this RBMP.

Investigation type

investigate to confirm failure and/or impacts

Example of investigation
Use groundwater modelling plus monitoring to confirm estimates of groundwater abstraction impacts on shallow water table dependent wetland ecological assemblages. Thereafter consider the combinations of abstractions and site management/drainage which could be damaging the wetland, and consider technical feasibility and benefits of potential abstraction control or other measures and their associated costs. Also need to consider the specific wetland ecologies to weigh the costs of the possible measures up against their potential benefits.
Possible future measures
Measures may include reductions in abstraction licences, and/or water level management plan solutions associated with site management interventions,
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Large reductions in abstraction could be disproportionately expensive and possible also ineffective in improving the shallow water level regime which may be more directly influenced by drainage and site management. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies The condition of the wetlands may be improved by water level management plan measures but not totally restored.

Reference	GQ2a
Element predicted not to achieve good by 2015	Saline Intrusion
Reason for failure	Suspected - Saline Intrusion
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

Insufficient understanding of the impact to enable development of measures to achieve the objective by 2015

It is technically infeasible to apply changes to the flow regime at this time because the adverse impact is not understood with sufficient confidence to allow development of remedial actions.

There are two GW Bodies in England for which this justification applies with respect to the Saline & Other Poor Water Quality Intrusions test: Tame Anker Mease - PT Sandstone Burton and Kent Romney Marsh.

In the Burton Sandstone, poorer quality (high chloride) groundwater exists in the lower parts of the deep confined Permo-Triassic Sandstone aquifer, and almost certainly in the underlying Coal Measures. There is concern that abstraction is resulting in the upwelling of deep saline waters from the deep aquifer. The cause of the salinity problem has been investigated using the groundwater model. Based on the modelling undertaken to date the link between rates of abstraction and associated intrusion has not been adequately established so a definitive solution to mitigating the abstraction pressure has not been identified. An extended deadline is required to consider if a solution is technically feasible by 2027.

Saline intrusion from the sea at Romney Marsh associated with abstraction from the Dungenness shingle aquifer remains a problem, even though some restrictions to the abstraction regime have been made. The cause of these ongoing problems is uncertain & further investigations are required to determine whether a technically feasible solution is possible by 2027.

Investigation type

investigate source of failure

Example of investigation

Investigate the technical feasibility of potential abstraction control measures and their associated costs and benefits

Possible future measures
Change in groundwater abstraction regime
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
The restoration of groundwater quality in sandstone aquifers (eg PT Sandstone Burton) following saline intrusion associated with natural recharge and hydraulic gradients may take 10s, 100s or 1000s of years to achieve. It should be possible in the long term to halt ongoing intrusion through abstraction control measures. However, replacement abstractions are very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies Rising sea levels also pose a significant threat to GW quality around the coast which is not specifically related to abstraction (e.g. at Romney Marsh) and which may frustrate attempts to protect a sustainable fresh groundwater resource.

Reference	GQ2b
Element predicted not to achieve good by 2015	Groundwater Dependent Terrestrial Ecosystems (Quantitative)
Reason for failure	Suspected - Abstraction groundwater
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

Insufficient understanding of the impact to enable development of measures to achieve the objective by 2015

It is technically infeasible to apply changes to the flow regime at this time because the adverse impact is not understood with sufficient confidence to allow development of remedial actions.

There are two GW Bodies in England for which this justification applies with respect to the "Significant Damage to Wetlands" test: The Worcestershire Middle Severn Sandstone, and the Reigate Lower Greensand. In both cases investigations into groundwater abstraction pressures on SSSI sites are still being undertaken. These are considering the combined impacts of many licence holders such that the technical feasibility of any proposed abstraction reduction related solution is not yet understood with confidence.

Abstraction control related measures cannot be planned with confidence and although water level and site management improvements are also being considered, these cannot be confidently predicted to restore the sites from their 'significantly damaged' condition before the extended 2027 deadline.

Investigation type

investigate source of failure

Example of investigation

Use groundwater modelling plus monitoring to investigate the combinations of abstractions and site management/drainage which could be causing the wetland significant damage, and also to consider technical feasibility of potential abstraction control or other measures and their associated costs and benefits. Also need to consider the water needs of the specific wetland habitats to evaluate the benefits of reducing abstraction and/or changing water levels.

Possible future measures
Measures may include reductions in abstraction licences, and/or water level management plan solutions associated with site management interventions e.g. Hurcott Pool
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Large reductions in public water supply abstraction across the groundwater body at a broader scale may be required to realise water table recovery to improve these wetland sites, rather than more localised fixes. However, developing replacement abstractions is very expensive; costing from £1.5m to £7m to provide a single mega-litre of water each day, and such reductions may be disproportionately expensive. The condition of the wetlands may be improved by water level management plan measures but not totally restored.

Reference	GQ3a
Element predicted not to achieve good by 2015	Groundwater Dependent Terrestrial Ecosystems (Quantitative)
Reason for failure	Confirmed - Abstraction groundwater
Alternative objective	Extended deadline
Reason for alternative objective	Natural conditions - ecological recovery time

Justification for alternative objective

Delayed recovery of the ecology in the dependent terrestrial ecosystem (wetland) means that the objective will not be achieved by 2015

It is technically infeasible for this element of groundwater quantitative status to improve to good by 2015 because the plants and animals in the groundwater dependent wetland are unlikely to recover, given the conditions at the site.

There is only one groundwater body in England for which an extended deadline is justified by ecological recovery time, even though the groundwater abstraction cause of the problem has been confirmed. This is the failure of the Groundwater Dependent Terrestrial Ecosystems (wetlands) element at the Kent Romney Marsh groundwater body (Dungeness SAC). Investigations under the Habitats Directive have resulted in the application of restrictive conditions to a public water supply licence when groundwater levels are below a certain threshold. However, the ecology of the wetland will take time to adjust to the new regime and the benefits of the scheme may be difficult to demonstrate because of a paucity of baseline monitoring data, and other unrelated pressures on the wetland from climate change and rising sea levels.

Investigation type

monitor the effectiveness of measures in place

Example of investigation

Monitoring to investigate the link between abstraction pressure and the wetland, including the rate of discernable ecological recovery.

Possible future measures

Measures will be implemented in 1st cycle but it will take time for the benefit to be seen. Other measures may be necessary in the future, subject to review of the monitored effectiveness of those already put into action.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It is possible that efforts to restore the wetland through modified abstraction controls may be frustrated by saline intrusion associated with sea level rise and will prove to be technically infeasible in the long term.

Reference	GQ4a
Element predicted not to achieve good by 2015	Saline Intrusion
Reason for failure	Confirmed - Saline Intrusion
Alternative objective	Less stringent status objective
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The costs of achieving good status for this element are disproportionate to the benefits

In three Permo-Triassic Sandstone groundwater bodies (all in the North West RBD), groundwater abstraction is known to be causing saline intrusion and the impacts are understood with confidence. These groundwater bodies support critical groundwater sources which are essential to the Merseyside economy e.g. for major industry and public water supply.

Costs for locating alternative water sources for such supplies would be in the range of £1.5 to 7 million per megalitre per day and the value of the associated recovery of freshwater aquifer would be both limited (i.e. there would be no ecological benefit) and difficult to realise (because it may take 100s or 1000s of years to flush out the saline water under natural gradients).

Management to prevent further deterioration is being implemented through the Catchment Abstraction Management Strategy. Sustainability Appraisal has been undertaken and the target status of groundwater resources is not an improvement on the current status.

A less stringent objective is therefore justified due to the social and economic cost of reducing abstraction sufficiently to achieve good status, and the limited environmental benefit.

Investigation type

Monitoring to prevent further deterioration

Example of investigation

Ongoing monitoring of groundwater levels and salinity is essential to avoid further deterioration. Groundwater modelling investigation has also been undertaken to test abstraction scenarios to plan more targeted restrictions on abstraction and guidance on approach to new abstraction licences.

Possible future measures
Seek to reduce licence quantities as and when they are no longer needed.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Recovery of saline parts of sandstone groundwater body will not occur within desired timescales. All known measures sufficient to achieve good groundwater status for this element are likely to be technically infeasible or disproportionately expensive

Reference	GQ5a
Element predicted not to achieve good by 2015	Water Balance
Reason for failure	Confirmed - Abstraction groundwater
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

There is likely to be an unfavourable balance of costs and benefits of achieving good status of the water balance element

This alternative objective has been assigned to a number of Chalk and Sandstone groundwater bodies in England where high rates of public water supply groundwater abstraction reduces the natural outflow from the groundwater body as a whole by more than the aggregated available low flow resource. This resource is estimated from the Environmental Flow Indicators considered to support Good Ecological Status in all the surface water bodies draining each groundwater body. These flow impacts are understood with confidence (e.g. in many cases groundwater modelling studies have been undertaken to characterise and confirm them) and a technically feasible solution for restoring flows is available (i.e. reduce abstraction). However, the cost of such measures is known to be high (in the range of £1.5m to £7m per megalitre per day) and their ecological benefits in terms of restoring baseflow within the dependent surface water bodies are undetermined.

Understanding of the most cost beneficial actions to realise ecological improvements needs to be developed further before such action can be planned, so an extended deadline is justified on the basis that achieving good status of this element by 2015 is very likely to be disproportionately expensive.

Investigation type

investigate to confirm abstraction impacts and to refine the balance of costs and benefits

Example of investigation

Investigations to refine understanding of the likely costs and benefits of abstraction rate reductions in helping to restore flows and thereby achieve ecological status targets will be integrated alongside consideration of other pollution and habitat pressures to determine the optimum way forward. Any future measures need to be based on a better characterised balance between costs and benefits carried out for each water body incorporating all the pressures.

Possible future measures
Measures may include reductions in groundwater abstraction licences.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Large reduction or relocation of public water supply abstraction are likely to be disproportionately expensive because replacement abstractions can cost between £1.5m to £7m to provide a single mega-litre of water each day. Even if progressed, some of the higher storage sandstone aquifers respond slowly to changes in abstraction and recovery may not be realised by the desired deadline. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies.

Reference	GQ5b
Element predicted not to achieve good by 2015	Impact On Surface Water Ecological Status
Reason for failure	Confirmed - Abstraction groundwater
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

There is likely to be an unfavourable balance of costs and benefits of achieving good ecological status of the dependent surface waters

This alternative objective has been assigned to a number of Chalk and Sandstone groundwater bodies in England where high rates of groundwater abstraction for public water supply are locally or more generally associated with impacts on dependent surface water body flows causing these flows to fall well below the Environmental Flow Indicators considered to support Good Ecological Status. These flow impacts are understood with confidence (e.g. in many cases groundwater modelling studies have been undertaken to characterise and confirm them) and a technically feasible solution for restoring flows is available (i.e. reduce abstraction). However, the cost of such measures is known to be high (i.e. in the range of £1.5 to 7 million per megalitre per day) and their benefits in terms of improving ecological status are undetermined.

Understanding of the most cost beneficial actions to realise ecological improvements needs to be developed further before such action can be planned, so an extended deadline is justified on the basis that achieving good status of this element by 2015 is very likely to be disproportionately expensive.

Investigation type

investigate to confirm abstraction impacts and to refine the balance of costs and benefits

Example of investigation

Investigations to refine understanding of the likely costs and benefits of abstraction rate reductions in helping to restore flows and thereby achieve ecological status targets will be integrated alongside consideration of other pollution and habitat pressures to determine the optimum way forward. Any future measures need to be based on a better characterised balance between costs and benefits carried out for each water body incorporating all the pressures.

Possible future measures
Measures may include reductions in abstraction licences, but other measures such as river restoration schemes may prove to be a more cost beneficial way of achieving ecological status improvements.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Large reduction or relocation of groundwater abstractions are likely to be disproportionately expensive because replacement abstractions can cost between £1.5m to £7m to provide a single mega-litre of water each day. Even if progressed, some of the higher storage sandstone aquifers respond slowly to changes in abstraction and recovery of dependent surface water flows may not be realised by the desired deadline. In regions where demand for water is high relative to resources, it may not be feasible to locate alternative sources for drinking water without causing deterioration in other water bodies

E4 Ammonia, dissolved oxygen, acidity, nutrients, temperature and faecal pollution in surface waters

We explain in this section how we have assessed what can be achieved in the first cycle of river basin management for the general water quality conditions necessary to support good ecological status. We explain where, for the phased achievement of objectives, deadlines have been extended. These are generally applied where we need to confirm the outcomes of planned actions; or where we need to improve our understanding of current status or causes and effects of pressures to enable us to target appropriate actions.

This section covers nutrients, dissolved oxygen, acidity, temperature and ammonia in surface waters. We explain how we have assessed what can be achieved for other chemical pollutants, sediment and groundwater quality in separate sections.

Development and use of the standards

The water quality conditions necessary to support high and good ecological status, as well as the conditions associated with moderate, poor and bad status, are described by water quality standards. New standards for the Water Framework Directive are developed by the United Kingdom's Technical Advisory Group (UKTAG). The UKTAG is a working group of experts drawn from environment agencies and conservation agencies. The general water quality standards proposed to support healthy communities of aquatic plants and animals are detailed in the phase 1 and phase 2 UKTAG reports[11].

The new physico-chemical standards replace or extend established regimes of standards and the policies by which they are used to take action. Existing standards stem from other European directives, or from national initiatives such as the River Quality Objectives[12]. Table 7 summarises the general elements for which new standards have been developed to meet the needs of the Water Framework Directive. Other directives and requirements will continue to be important in delivering improvements for these elements. Many of the "designations" under the older directives become Protected Areas under the Water Framework Directive (see Annex D).

Standards are used to assess and control the impact of industry and land use, both urban and rural to protect and improve the environment. They are used to assess where action might be needed and the extent of action required. We use mathematical models to calculate what regulatory action is required to protect water quality, for example permit conditions for discharges. We monitor our waters to check the status being achieved. Complying with these water quality standards should ensure the associated biological status is met.

Where possible, the standards have been developed from extensive data on water chemistry and biology, checking where measured changes in biology are linked to measured changes in water chemistry. They have been developed by technical experts based on current scientific understanding of biological response to water quality building on knowledge from pre-existing standards.

For some elements, particularly nutrients, the biological response is less predictably linked to compliance with the chemical standard than, say, for ammonia or dissolved oxygen. This means there is less confidence that failure of the nutrient standard alone is sufficient to judge

[11] The UKTAG Phase 1 and Phase 2 reports on the UK Environmental Standards and Conditions are available from the UKTAG website http://www.wfduk.org/UK_Environmental_Standards/
[12] River Quality Objectives apply to all rivers in England and Wales

the risk to the biology. In such cases confidence about the need to improve status would come from supporting evidence that the biology is at risk from eutrophication. We call this an 'indirect' approach to using standards. As well as confirming whether action is needed, the gathering of further biological data will also help in the development of better standards.

Table 7. **General chemical and physicochemical quality elements for surface waters**

Water category	Quality elements	Indicators for standards proposed by UKTAG	Typology specific
Rivers	1. Thermal conditions	1. Temperature	yes
	2. Oxygenation conditions	2. Dissolved oxygen	yes
	3. Salinity	3. -	
	4. Acidification status	4. pH	no
	5. Nutrient conditions	5. Reactive phosphorus	yes
Lakes	1. Transparency	1. -	
	2. Thermal conditions	2. -	
	3. Oxygenation conditions	3. Dissolved oxygen	yes
	4. Salinity	4. Conductivity	no
	5. Acidification status	5. Acid neutralising capacity	No
	6. Nutrient conditions	6. Total phosphorus	yes (type or site specific)
Estuaries and Coastal Waters	1. Transparency	1. -	
	2. Thermal conditions	2. -	
	3. Oxygenation conditions	3. Dissolved oxygen	yes (salinity dependent)
	4. Nutrient conditions	4. Dissolved inorganic nitrogen	Yes
Fresh waters (Rivers & Lakes)	Ammonia (specific pollutant)	Ammonia	Yes
Saline waters (Estuaries & Coastal)	Unionised Ammonia (specific pollutant)	Unionised Ammonia	No

General approach to directing improvement action

The Water Framework Directive requires us to take action to prevent deterioration of status and where necessary and proportionate, restore waters to good status. Where different options are available the actions taken forward should be those judged to be most cost-effective. The approach is based on risk and on taking action in proportion to what it can achieve (the benefits) and what it will cost. The Water Framework Directive allows "alternative objectives" if the action required is technically infeasible or if achieving good is disproportionately expensive[13].

To justify actions under the Water Framework Directive we assess:

- whether it is technically feasible to achieve good status;
- what the most cost-effective way of doing this is (based on the range of pressure sources needing to be reduced and the technically feasible options available to address these);
- whether the costs of the proposed actions will be in proportion to the benefits,
- whether the costs would impose a disproportionate burdens for particular sectors or parts of society; and if so
- whether there are alternative funding mechanisms available.

[13] And all the other requirements of Article 4.4 or Article 4.5 are met

In assessing this we must consider uncertainty and how confident we are about:

- Current status: whether or not we are actually in good status because of failure to meet the water quality standards
- Future status: what status we expect to achieve after current and agreed future actions are completed
- Reasons for failure: why waters fail to meet good status, in particular, for action to meet water quality standards, the relative importance of different sectors and sources of pollution
- Improvement options: how much the sources of pollution can be reduced, through measures that are judged to be technically feasible and not disproportionately expensive.

Status assessment

We have followed the recommendations and proposals from UKTAG[14] on how waters should be classified and how the information provided through classification should be used in the river basin management planning process. This includes how to manage the risk of misclassifying the status of water bodies and how confidence in status classifications should be taken into account in deciding where action to protect and improve the status of water bodies is targeted. The key points are summarised here.

We use monitoring data to assess current status and compliance with water quality standards. Current failure to meet the required standards and status indicates that action might be required to improve status. But we must also consider how confident we are in this assessment. Our status estimates will always be subject to error because monitoring is not done everywhere and all the time, and because our monitoring techniques will never be perfect. The WFD allows for a risk-based approach to monitoring. We therefore risk making an incorrect judgement about the true status. It is important to understand and manage this risk so that we limit the potential to either fail to act because a water body is wrongly reported as better than it is, or to waste resources improving water bodies that are wrongly classed as worse than they are.

For nutrients, the confidence of being less than good status due to risk of eutrophication is assessed not just by failure of the nutrient standard but also using evidence from biological elements which are sensitive to nutrient pressures. The overall confidence is judged on a weight of evidence basis. This takes account of the extent of relevant biological evidence available and the confidence that these elements are less than good. This is in accordance with recommendations from UKTAG and Ministerial Guidance on River Basin Planning.

For lakes, transitional and coastal waters, the confidence of being less than good status based on weight of evidence across nutrients and the relevant impact indicators is assessed using expert judgement. For rivers, the Environment Agency approach is described in the boxed section below. Further information on the UK approach to assessing eutrophication under EU water policies will be available in 2010 through a proposed UKTAG consultation report. This is being produced by a task group of UKTAG and UK Eutrophication Steering Group members to follow the recent publication of EU guidance[15].

Whilst high confidence of eutrophication is needed for consideration of site specific regulatory measures, this does not preclude lower confidence failures leading to the

[14] UKTAG Recommendations on Surface Water Classification Schemes for the purposes of the Water Framework Directive, http://www.wfduk.org/UKCLASSPUB/

[15] Common Implementation Strategy for the Water Framework Directive: Guidance Document (No. 23) on Eutrophication Assessment in the context of European water policies http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/guidance_document_1/_EN_1.0_&a=d

consideration of other types of measures such as national measures or lower cost 'no regrets' measures.

Where we are confident of phosphate failure and this is indicative of some biological impact, (e.g. in alkaline lowland rivers) we will take action to reduce phosphates by such means as providing education or training, routing people to sources of funding or invoking the England Catchment Sensitive Farming Initiative, without waiting for the full information on diatoms and macrophytes that would be necessary to justify targeted regulatory action to control eutrophication such as the designation of a sensitive area under the Urban Waste Water Treatment Directive or of a Water Protection Zone.

Weight of Evidence rules for combining macrophyte, diatom and phosphate in river classification

A. Weight of Evidence (WoE) – macrophyte and phytobenthos quality element

1. The WoE confidence of being worse than good for the combined macrophyte and phytobenthos quality element is the statistical certainty of the worst of macrophytes and diatoms but subject to the modification that this cannot be greater than the certainty shown in Tables 1 and 2 below. These tables summarise the rules for the maximum overall certainty of being less than good, that have been assigned to the overall quality element.

Table 1 **Certainty of being less than good in low alkalinity upland river systems** (< 50mgCaCO3/l or ≥ 80m altitude)

		Macrophyte Class					
		No data	**High**	**Good**	**Moderate**	**Poor**	**Bad**
Diatom Class	**No data**	U	U	U	Q	V	V
	High	U	U	U	Q	V	V
	Good	U	U	U	Q	V	V
	Moderate	Q	Q	Q	V	V	V
	Poor	V	Q	Q	V	V	V
	Bad	V	Q	Q	V	V	V

Table 2 **Certainty of being less than good in high alkalinity lowland river systems** (≥ 50mgCaCO3/l and < 80m altitude)

		Macrophyte Class					
		No data	**High**	**Good**	**Moderate**	**Poor**	**Bad**
Diatom Class	**No data**	U	U	U	Q	V	V
	High	U	U	U	Q	V	V
	Good	U	U	U	Q	V	V
	Moderate	U	U	U	V	V	V
	Poor	Q	Q	Q	V	V	V
	Bad	Q	Q	Q	V	V	V

B. Weight of Evidence – combined certainty for biology and phosphate

2. The overall certainty to assign to the combination of biology classification with phosphate is given in Table 3.

Table 3: **Combined certainty for biological and phosphate classification in rivers**

Phosphate: Cert not Good	Combined Macrophyte-Phytobenthos QE: V	Q	U
V	V	Q	U
Q	V	Q	U
U	Q	U	U

U – Uncertain, Q – Quite Certain, V – Very Certain

3. At present we do not have sufficient understanding of the relative sensitivity of the diatom and macrophyte classification tools to determine whether macrophyte status for particular water bodies could be inferred from the status of phosphate and diatoms alone in lowland river systems. We will review the position as the technical knowledge base develops in the run-up to the UKTAG review of nutrient standards in 2012.

Despite site specific uncertainties in monitoring results, regional summaries like "30 per cent of the water bodies in a particular country or river basin district are worse than good status" can be very accurate. This is because the individual risks of misclassifying several hundred water bodies average out. On the other hand a list of named water bodies that are classed as worse than good status will include some water bodies which are, in truth, at good status or better.

Certain types of national measures can be justified to address levels of failure expressed on a national scale in which case we do not need high confidence of failure at specific sites. The costs and benefits would similarly be assessed at a national rather than local scale. Benefits might be, for example, that we expect 3 per cent of waters to move into good status nationally, though we are unlikely to be able to specify which waters these would be. These measures cover, for example, product bans, uniform emission standards on discharges, farmers adopting certain management approaches, and general binding rules. These might aim to improve status, provide a step in the right direction, or help prevent deterioration in status. Measures applied in this way do not require site specific confidence of cause and effect and between action and outcome.

As well as uncertainty in current status we will also have uncertainty about future status. Our approaches to estimating the outcomes of the actions are approximate and the prediction of still being less than good may be pessimistic. We would be particularly uncertain of future status where we anticipate improvements within water bodies where we have low confidence that even the current status is less than good. Estimated outcomes could be from measures within or upstream of the water body. Our ability to estimate the relative importance of pollution sources following improvement actions to all or some of them also gives considerable uncertainty about where future measures might need to be targeted.

Where there is uncertainty about predicted status following improvements we would not tend to justify further action. In these cases we have set alternative objectives with an extended deadline on the grounds that imposing further measures could be wasteful due to uncertainty in whether they are needed and the benefits that could be realised. We will review the success of the planned actions before we look to implement any further high cost actions.

For example, we have not looked for further improvements to those sewage treatment works improved in AMP4 to meet the requirements of the Freshwater Fish Directive. £650 million

will be spent in AMP4 to reduce ammonia discharged from these works. We will review the need for further action at these works if future status assessments confirm that we are failing good status.

Sources of status impacts and measures

Where we are certain that the future status will still fall short of that required, we will assess whether we know enough about the pollution sources contributing to the failure and whether there are technically feasible measures that can be targeted to those sources.

The physico-chemical supporting elements will be affected by natural conditions as well as impacts from human activities. We use information from a number of sources to try and understand why the waters are failing. This includes monitoring, modelling, expert judgement and local knowledge. The most important sources influencing the physico-chemical elements are sewage discharges, industrial discharges, urban drainage and runoff from agricultural land use. These can reach the water environment as point or diffuse sources. Their relative importance varies depending on the element and the location. The physical features and flow conditions, including the impact of abstractions can also be important influencing factors, particularly for dissolved oxygen.

In some cases we do not know what is causing the failure (indeed in thousands of assessments there will always be hundreds of spurious failures caused by statistical uncertainties in monitoring[16]).

In some cases we will know the source of the pollution in broad terms but will not yet know enough about the specific sources within this and/or the pathways by which the pollution reaches the water environment to be able to assess detailed actions to address the pollution. This can be the case where pollution is from diffuse sources, such as urban areas or from the agricultural sector, comprising many individually small contributory pollution sources. Their variability spatially and through time also makes them difficult to quantify. This leaves considerable uncertainty about the significance of the various sources and hence the effectiveness of actions to address these. For instance, there can be many sources and pathways for agricultural nutrients to reach water courses to which different options (and feasibility and expense) for reducing nutrient loss could be applied depending on their relative importance.

Where we cannot identify sources, pathways and responsible parties with sufficient confidence we need to undertake further investigations. These will include local investigations as well as national projects, such as those on source apportionment. These ongoing investigations will enable us to assess how best to reduce the sources and quantify the costs and benefits. We have set alternative objectives with an extended deadline on the grounds that it is technically infeasible to apply site specific improvement measures unless we have sufficient knowledge about the sources that need addressing. Applying measures with only weak certainty that they are appropriately targeted would risk wasted investment.

This may apply to all or just some of the sources. Where we have sufficient certainty about some of the sources we will have justified actions to address these even if there is insufficient certainty to address the other sources of pollution. For instance we may have strong enough evidence of site specific impacts from larger sewage works discharges, have calculated what applying nutrient removal technology would deliver and justified that action being taken to reduce the sewage source contribution. If that action is driven purely by the Water Framework Directive the actions and outcomes would have been subject to a disproportionate cost assessment. In some cases the benefits that can be achieved by

[16] And an associated risk of taking action on sites that do not need it.

addressing the known sources are insufficient to justify the costs. In these cases we will use an extended deadline to allow us to improve our understanding of the other sources of pollution to establish whether an improved package of measures to address all sources will be cost-beneficial.

As before national measures (e.g. product bans, uniform emission standards on discharges, farmers adopting certain management approaches) can be justified based on a national scale understanding of the relative importance of different sources without needing detailed location specific knowledge of sources.

The work for the preliminary cost-effectiveness assessment[17], summarised the approaches that are currently feasible and their relative cost-effectiveness.

Actions on Diffuse Pollution

Diffuse pollution has been identified as an issue across England and Wales. It arises from a number of sectors and sources and impacts a variety of water uses including drinking water, bathing, recreation, economically significant species (e.g. shellfish and salmon) and biodiversity, as well as ecological status for the Water Framework Directive.

As discussed above for many of the diffuse sources our knowledge of the detail of sources and pathways is too uncertain to know what measures would be feasible and effective, particularly at a detailed site specific level. For this reason, the measures included in this plan tend to focus on actions planned for other drivers, national measures, and locally targeted actions to control pollution. These measures are also important to help prevent deterioration[18] of the status of water bodies.

Actions include pollution prevention through local education campaigns; voluntary initiatives and the adoption of best practice methodologies; enforcement action and use of anti-pollution works notices; policies on development planning; cross-compliance with Nitrates and Sludge Directives (Nitrate vulnerable zones now cover some 70 per cent of England and 3.6 per cent of Wales); the Silage, Slurry and Agricultural Fuel Oil Regulations; the Groundwater Directive; Existing and enhanced Agri-environment schemes; Codes of Good Agricultural Practice; rectifying misconnections of foul sewer to surface water drains (in some cases delivered through collaborative projects, for example water industry funded initiatives).

Control on the use of phosphates in laundry detergents is a potential future measure that could be implemented in England and Wales. This would contribute to reductions in phosphorus discharged to waters within catchments served by small sewage works (where it is less cost effective to install phosphorus stripping), in catchments that lack mains sewerage, and in catchments with larger works which do not currently have phosphorus removal. By reducing the phosphate reaching sewage works it would also reduce the costs of meeting discharge standards where phosphorus removal is required under the Urban Waste Water Treatment Directive or the Habitats Directive.

In England the Catchment Sensitive Farming Delivery Initiative (ECSFDI) has been an important mechanism to reduce a range of environmental impacts from agriculture. In Phase 2 of the initiative (2008-11) the priority catchments have been expanded from 40 to 50 and have extending the coverage within 7 existing catchments. The ECSFDI will also support 16

[17] Defra and the Welsh Assembly Government carried out this analysis of countrywide measures in England and Wales. It produced an overview of the costs and effectiveness of measures, and the sectors that could be involved in delivering them, ruling out or limiting certain measures as clearly not cost effective at least in the first cycle of river basin management and so focussing effort on the key options. Results are available at http://www.wfdcrp.co.uk/ including a summary of measures included in the pCEA http://www.wfdcrp.co.uk/pdf\WFD%20Ministerial%20Guidance%20MeasuresToolkit.xls

[18] They act as insurance policies against the threat of damage to vital national resources

strategic partnerships outside the priority catchments. The initiative is also undertaking intensive monitoring and evaluation which is accumulating a good knowledge base on the anticipated effectiveness of actions. For example, modelling suggests that phosphorus losses can be reduced by around 5%. This is an average estimate and at a local scale and within sensitive sub-catchments reductions of up to 20% could be achieved.

Revised Water Protection Zones are a mechanism to control agricultural and non-agricultural diffuse pollution in high risk areas. These would enable more stringent pollution control measures to be targeted to all relevant pollution sources. Work is ongoing to trial a methodology for how these zones would be justified and implemented including what types of measures might be applied within them. If similar outcomes can be anticipated through other mechanisms (e.g. voluntary initiatives, pollution prevention, enforcement) escalation of action to Water Protection Zones would only be proposed if status did not improve sufficiently.

Actions by the water industry

Actions requiring investment by the water industry are managed in cycles of planning and investment called Asset Management Plans and are considered as part of the periodic Price Review.

The majority of actions delivered by the water industry are primarily driven by established obligations for water quality, nearly all under other current Directives (M1 and M2 measures). Many of the improvements will also help us achieve Water Framework Directive obligations and are included in the overall outcome estimates to 2015. However, the specific costs and benefits are not subject to further WFD analysis because they are not driven by the Water Framework Directive.

Water industry measures cover actions currently underway in the 4th Asset Management Plan (AMP4) and also those planned for the next investment period from 2010-15. This is the periodic review for 2009 (or PR09[19]). The final list of schemes for new requirements under the Water Framework Directive (M3b measures) will be subject to sign off by Ministers in December 2009 as part of the first river basin management plans.

The schemes driven by the Water Framework Directive which have been recommended for funding are those assessed to be cost-beneficial. This assessment was made using scheme specific capital and operating costs from the water company final business plans, including the cost of carbon. Environmental outcomes were expressed as river lengths improving by a particular status change. Schemes were considered in combination where this was relevant to achieving the environmental outcome. The benefits were calculated using information from the national benefits survey undertaken by the UK Collaborative Research Programme[20], disaggregated for each river basin district. The assessment and recommendations took account of uncertainties in the ability to estimate outcomes and assign monetary benefits.

There are limits on the effluent quality that it is currently technically feasible to achieve (termed BAT or Best Achievable Technology)[21]. This is the accepted minimum level that we could set as a permit limit. Assessment of the need and ability to go beyond BAT would be based on a site specific assessment to judge technical feasibility and, if feasible, whether it could be justified on the grounds of costs, benefits and other impacts. Based on what is typical in terms of dilution of effluent discharges, BAT is generally not a constraint to

[19] Also referred to as AMP5

[20] Final Report to Defra for CRP Project 4b/c The Benefits of Water Framework Directive Programmes of Measures in England and Wales http://www.wfdcrp.co.uk/pdf%5CCRPSG%204bcd%20Final.pdf

[21] This follows the preliminary Cost Effectiveness Analysis. The upper limits are generally 95-percentile standards of 1 mg N/l for ammonia and 5 mg/l for the Biochemical Oxygen Demand and an annual average of 1 mg/l for total phosphorus.

achieving in river standards for ammonia and Biochemical Oxygen Demand but can be for phosphorus. Investigations will continue into technological improvements that would help reduce the sewage contribution to failure of good status standards. Implementation of these could be feasible in future cycles subject to an assessment of the costs, benefits and other impacts.

Schemes driven by the Water Framework Directive to address nutrients were identified where there was sufficient biological evidence to confirm the need for action and where the sewage works was confirmed as a contributory source.

Actions and outcomes

The measures presented in the first river basin management plans are those that we can currently justify. We use models and expert judgement to estimate the outcomes in terms of the future status that we expect these measures to deliver. The predicted outcomes are included in Annex B of this plan. Where we do not think status will reach good by 2015 but we cannot justify any further measures we have set alternative objectives for those elements. We have assigned decision tree codes to explain the reasons as summarised in the decision trees and tables below. These are based on the considerations and sources of uncertainty explained in the previous sections.

The main justifications for setting alternative objectives are:

- Insufficient confidence in the current status or future status to justify the need for improvement action (1a, 1b, 1c, 1d, 1e);
- Confidence of not being good but insufficient confidence in the current or future sources of failure to be able to identify appropriate measures (2a, 2b, 3a, 3b);
- Confidence of not being good, source(s) confirmed, technically feasible measures to address the source(s) but the costs of the measures are not proportionate to the benefits and other impacts (5a, 5b, 5c);

Alternative objectives can be a less stringent objective than good status or an extended deadline in which to seek to achieve good status. Where we have certainty over status and the sources of failure, and justified improvement actions are planned, we may still estimate that status will not reach good. We may also have cases where improvement actions cannot currently be justified on the grounds of disproportionate cost. In these cases we would currently set an extended deadline for achieving good on the grounds that:

- there is uncertainty in our estimates of what can be achieved so an extended deadline allows time to review measured progress and re-evaluate what more might be possible
- methods for assessing effectiveness of measures, outcomes, costs and benefits will continue to improve which will change current judgements about cost-effectiveness and proportionality
- developments in ways of reducing pollution could enable us to achieve more in the future and could also change the balance of costs and benefits

Further work

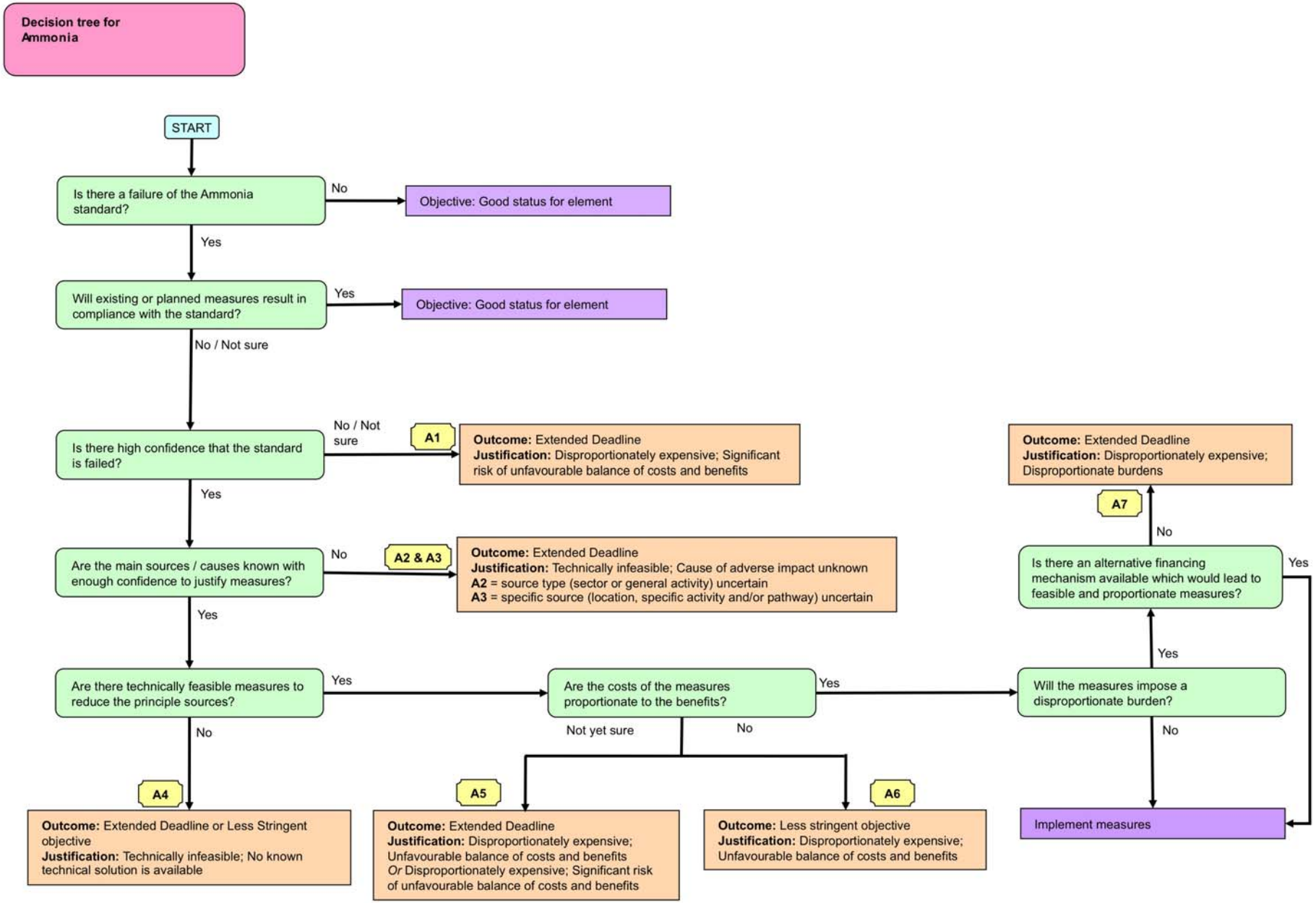
We have tried to predict the status of water bodies up to 2015 as a result of actions planned and in hand in the first cycle. The planning of further improvements will continue through the first cycle of river basin management.

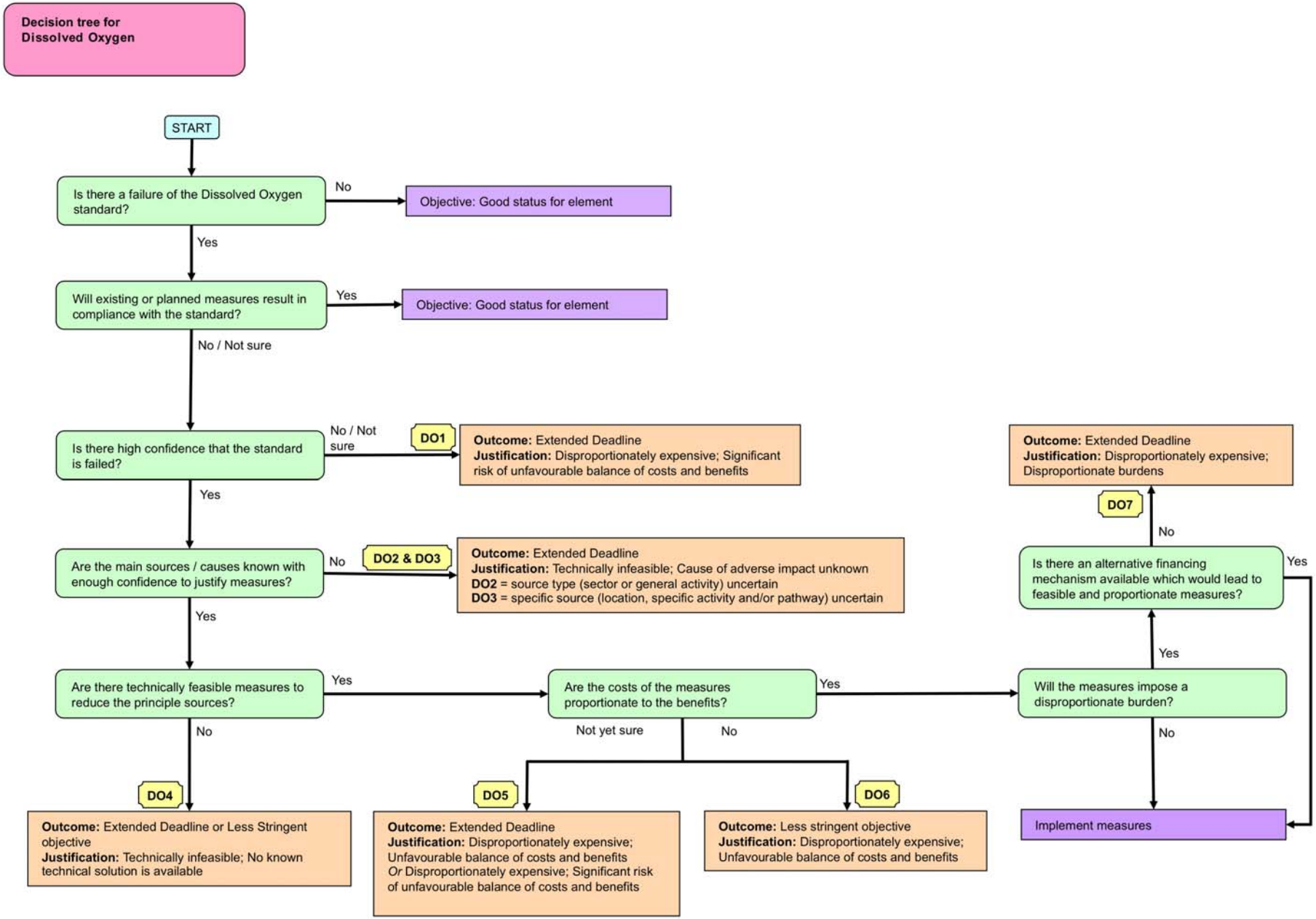
To enable us to identify and justify what further action is needed and quantify the costs and benefits we will be doing work locally and nationally to reduce the uncertainty that remains about:

- Status assessments using new classification tools

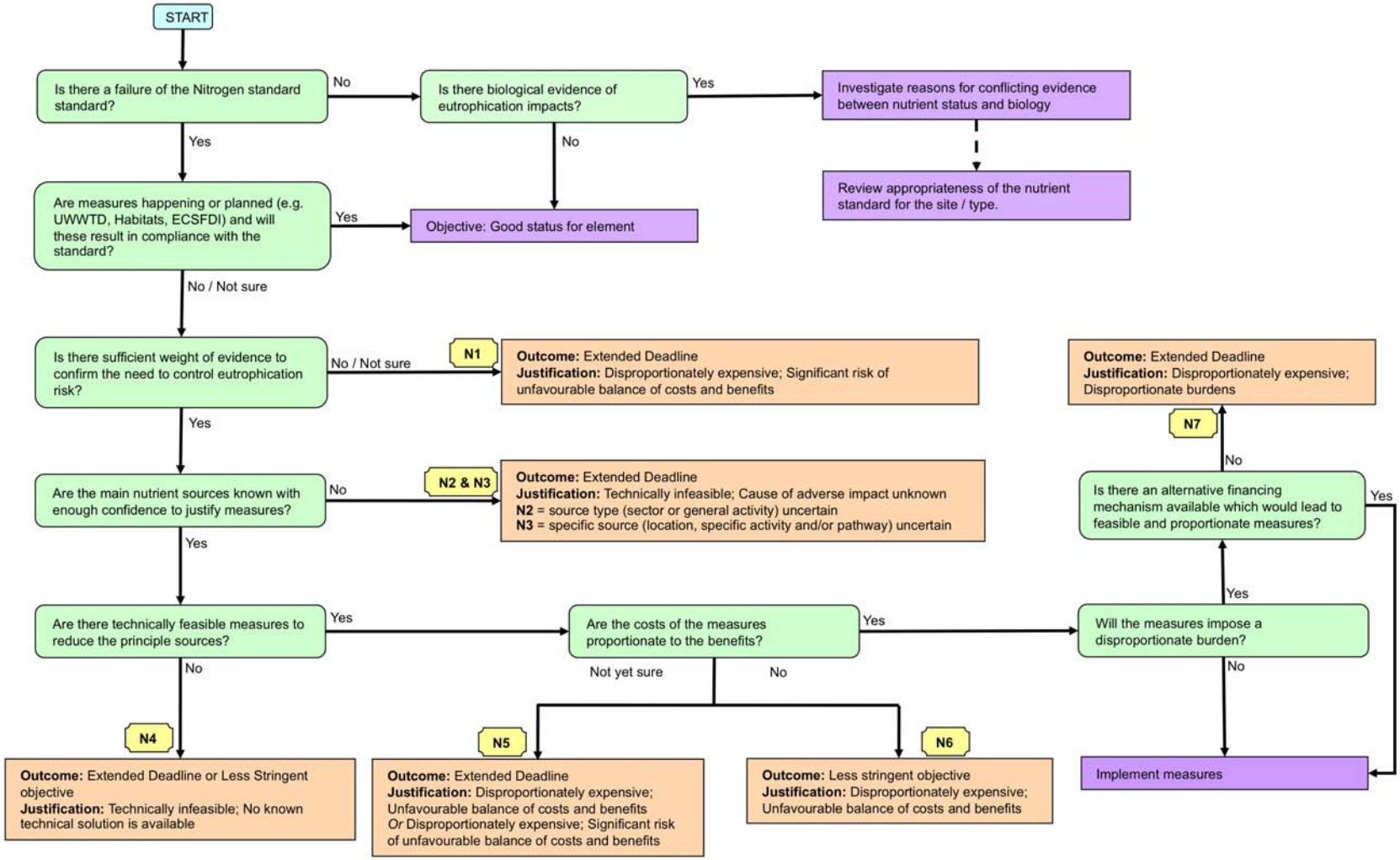
- Whether water bodies are adversely impacted, including adequate biological evidence for sites failing nutrient standards, and the outcome of actions to address Protected Area requirements. This includes monitoring started in 2008 to gather additional biological evidence downstream of sewage treatment works where additional treatment to remove phosphorus would be justified if we were confident there is a risk of damage.
- The reasons waters fail to meet good status, in particular, the relative importance of different sources of pollution
- How much technology and ways of taking action can develop to improve technical capability and cost effectiveness and deliver greater environmental improvement
- Costs and / or benefits and whether improvements to the methodology change the balance of proportionality when appraising measures
- The long-term impacts of climate change
- Whether good status can be achieved with extended deadlines or whether less stringent objectives are required, particularly for nutrients. Currently uncertainty about status due to insufficient biological evidence is the main reason for setting extended deadlines for nutrients. From the monitoring undertaken for this plan it is now clear that there is a link between high levels of phosphate in surface waters and biological failures in the main river type (lowland alkaline rivers). We are already collecting additional biological data in locations where the phosphate standard is exceeded. As a consequence the percentage of water bodies at good or better biological status is likely to reduce from 51 to 46 per cent. We know that it will be very expensive and technically challenging to reduce nutrient levels sufficiently to comply with the nutrient standards. For example, we used our SIMCAT models to estimate the length of river that might improve to good status if phosphate removal to the limit of what is currently judged cost-effective were applied to every sewage works in England and Wales discharging to failing waters. This suggested that compliance might only increase by around 6 per cent. A rough estimate of the cost is £6 billion (based on unit costs provided by the water industry) in total for the 1,800 sewage works (though in practice not all these works would require phosphate removal as certain works would make relatively insignificant contributions to the overall load). By comparison, approximate benefits are estimated to be around £2 billion based on a disaggregated national benefits number, valuing good status at say £30,000 per kilometre per year and assuming no other pressures or elements would place the water in worse than good status.

The further work will be completed in parallel so the future measures can be justified as soon as we have sufficient certainty.

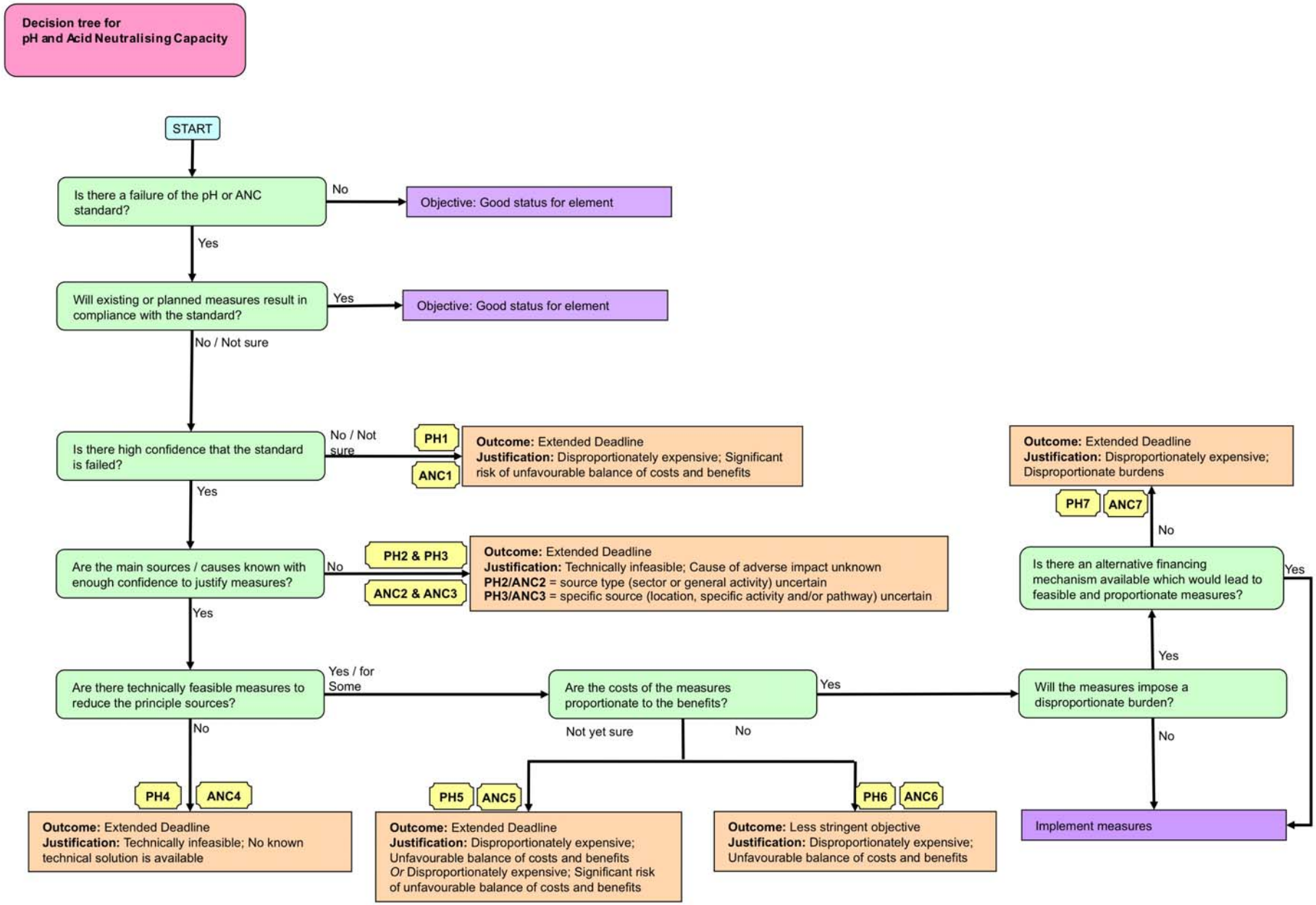

Decision tree for Ammonia
START
Is there a failure of the Ammonia standard?
No
Objective: Good status for element
Yes
Will existing or planned measures result in compliance with the standard?
Yes
Objective: Good status for element
No / Not sure
Is there high confidence that the standard is failed?
No / Not sure
A1
Outcome: Extended Deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Are the main sources / causes known with enough confidence to justify measures?
No
A2 & A3
Outcome: Extended Deadline
Justification: Technically infeasible; Cause of adverse impact unknown
A2 = source type (sector or general activity) uncertain
A3 = specific source (location, specific activity and/or pathway) uncertain
Yes
Are there technically feasible measures to reduce the principle sources?
Yes
Are the costs of the measures proportionate to the benefits?
Yes
Will the measures impose a disproportionate burden?
No
A4
Outcome: Extended Deadline or Less Stringent objective
Justification: Technically infeasible; No known technical solution is available
Not yet sure
A5
Outcome: Extended Deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Or Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
No
A6
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Yes
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
No
A7
Outcome: Extended Deadline
Justification: Disproportionately expensive; Disproportionate burdens
Yes
Implement measures

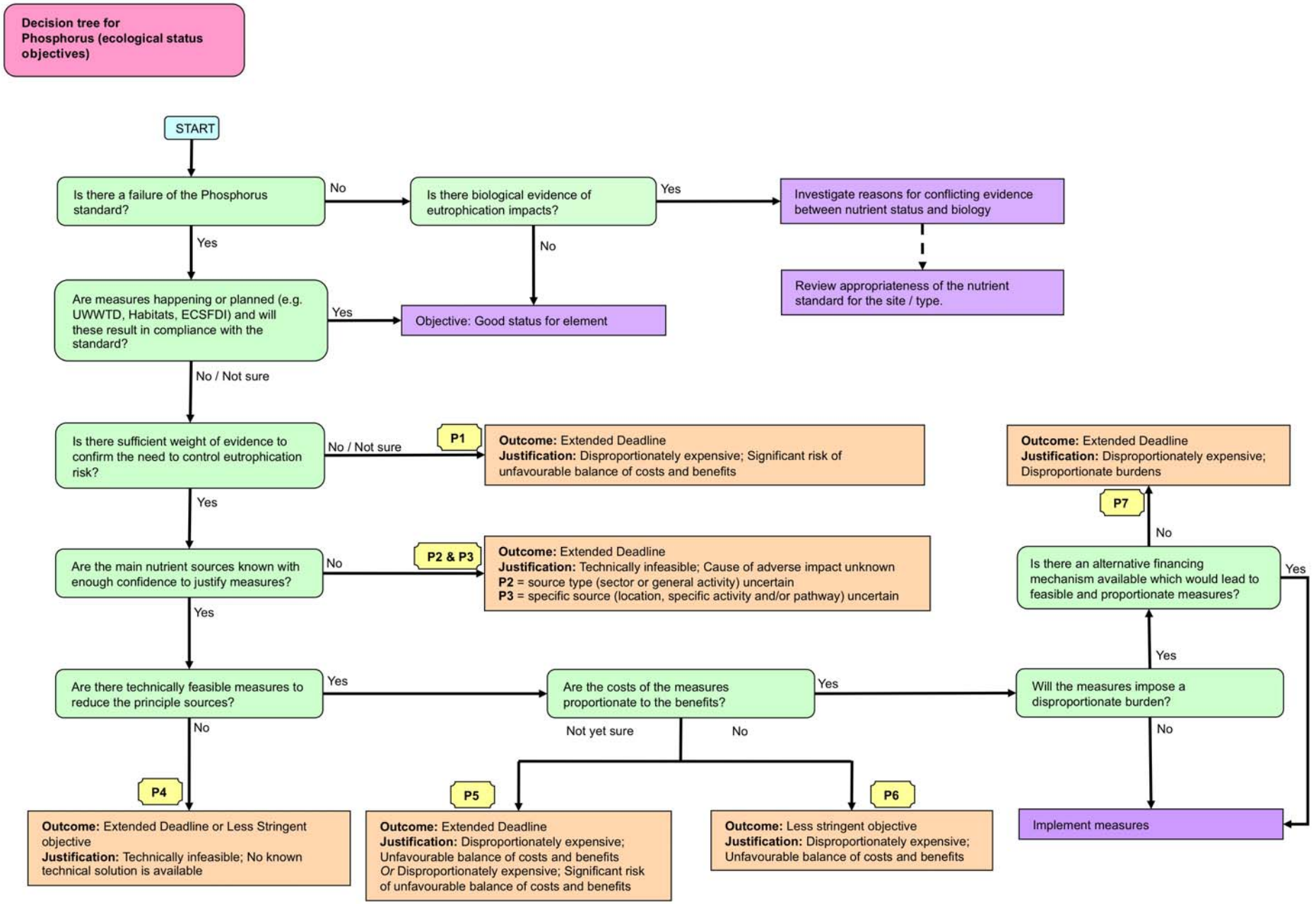

Decision tree for Dissolved Oxygen
START
Is there a failure of the Dissolved Oxygen standard?
No
Objective: Good status for element
Yes
Will existing or planned measures result in compliance with the standard?
Yes
Objective: Good status for element
No / Not sure
Is there high confidence that the standard is failed?
No / Not sure
DO1
Outcome: Extended Deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Are the main sources / causes known with enough confidence to justify measures?
No
DO2 & DO3
Outcome: Extended Deadline
Justification: Technically infeasible; Cause of adverse impact unknown
DO2 = source type (sector or general activity) uncertain
DO3 = specific source (location, specific activity and/or pathway) uncertain
Yes
Are there technically feasible measures to reduce the principle sources?
Yes
Are the costs of the measures proportionate to the benefits?
Yes
Will the measures impose a disproportionate burden?
No
DO4
Outcome: Extended Deadline or Less Stringent objective
Justification: Technically infeasible; No known technical solution is available
Not yet sure
No
DO5
Outcome: Extended Deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Or Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
DO6
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
No
DO7
Outcome: Extended Deadline
Justification: Disproportionately expensive; Disproportionate burdens
Yes
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
Implement measures

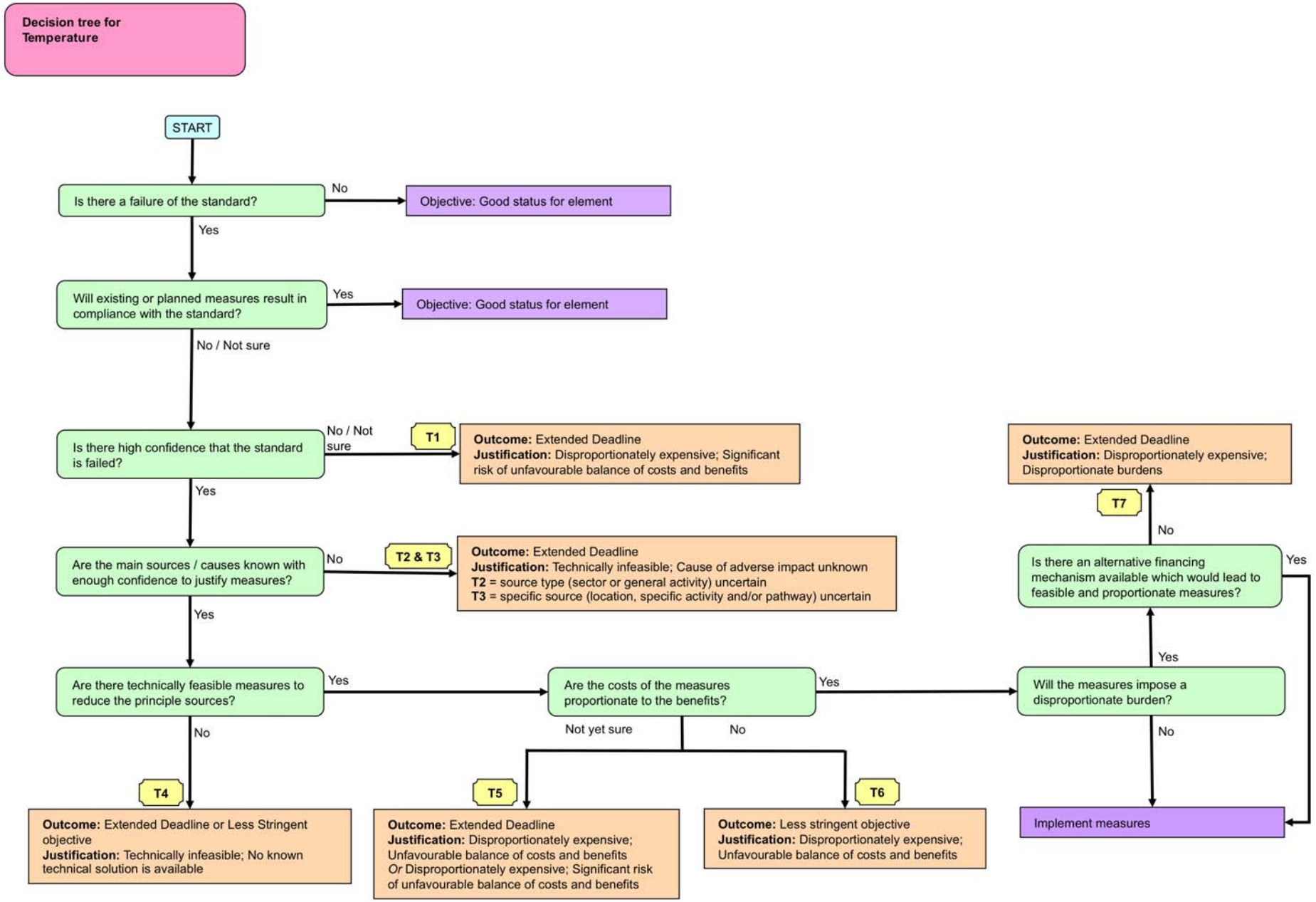
Decision tree for Dissolved Inorganic Nitrogen (ecological status objectives) in Transitional and Coastal Waters[1,2]



[1] A Water Framework Directive standard for nitrate in rivers and lakes has yet to be established
[2] Measures to address nitrate will also be carried out in certain Protected Areas (Nutrient Sensitive Areas designated under the Nitrates and Urban Waste Water Treatment Directives and Natura 2000 sites designated under the Habitats and Birds Directives)


Decision tree for
pH and Acid Neutralising Capacity
START
Is there a failure of the pH or ANC standard?
No
Objective: Good status for element
Yes
Will existing or planned measures result in compliance with the standard?
Yes
Objective: Good status for element
No / Not sure
Is there high confidence that the standard is failed?
No / Not sure
PH1
ANC1
Outcome: Extended Deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Are the main sources / causes known with enough confidence to justify measures?
No
PH2 & PH3
ANC2 & ANC3
Outcome: Extended Deadline
Justification: Technically infeasible; Cause of adverse impact unknown
PH2/ANC2 = source type (sector or general activity) uncertain
PH3/ANC3 = specific source (location, specific activity and/or pathway) uncertain
Yes
Are there technically feasible measures to reduce the principle sources?
Yes / for Some
Are the costs of the measures proportionate to the benefits?
Yes
Will the measures impose a disproportionate burden?
Outcome: Extended Deadline
Justification: Disproportionately expensive; Disproportionate burdens
PH7
ANC7
No
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
Yes
No
PH4
ANC4
Outcome: Extended Deadline
Justification: Technically infeasible; No known technical solution is available
Not yet sure
No
PH5
ANC5
Outcome: Extended Deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Or Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
PH6
ANC6
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
No
Implement measures


Decision tree for Phosphorus (ecological status objectives)
START
Is there a failure of the Phosphorus standard?
No
Is there biological evidence of eutrophication impacts?
Yes
Investigate reasons for conflicting evidence between nutrient status and biology
Review appropriateness of the nutrient standard for the site / type.
No
Yes
Are measures happening or planned (e.g. UWWTD, Habitats, ECSFDI) and will these result in compliance with the standard?
Yes
Objective: Good status for element
No / Not sure
Is there sufficient weight of evidence to confirm the need to control eutrophication risk?
No / Not sure
P1
Outcome: Extended Deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Are the main nutrient sources known with enough confidence to justify measures?
No
P2 & P3
Outcome: Extended Deadline
Justification: Technically infeasible; Cause of adverse impact unknown
P2 = source type (sector or general activity) uncertain
P3 = specific source (location, specific activity and/or pathway) uncertain
Yes
Are there technically feasible measures to reduce the principle sources?
Yes
Are the costs of the measures proportionate to the benefits?
Yes
Will the measures impose a disproportionate burden?
No
Not yet sure
No
P4
Outcome: Extended Deadline or Less Stringent objective
Justification: Technically infeasible; No known technical solution is available
P5
Outcome: Extended Deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Or Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
P6
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Implement measures
Outcome: Extended Deadline
Justification: Disproportionately expensive; Disproportionate burdens
P7
No
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
Yes
No


Decision tree for Temperature
START
Is there a failure of the standard?
No
Objective: Good status for element
Yes
Will existing or planned measures result in compliance with the standard?
Yes
Objective: Good status for element
No / Not sure
Is there high confidence that the standard is failed?
No / Not sure
T1
Outcome: Extended Deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
Yes
Are the main sources / causes known with enough confidence to justify measures?
No
T2 & T3
Outcome: Extended Deadline
Justification: Technically infeasible; Cause of adverse impact unknown
T2 = source type (sector or general activity) uncertain
T3 = specific source (location, specific activity and/or pathway) uncertain
Yes
Are there technically feasible measures to reduce the principle sources?
Yes
Are the costs of the measures proportionate to the benefits?
Yes
Will the measures impose a disproportionate burden?
No
T4
Outcome: Extended Deadline or Less Stringent objective
Justification: Technically infeasible; No known technical solution is available
Not yet sure
T5
Outcome: Extended Deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Or Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
No
T6
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Yes
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
No
T7
Outcome: Extended Deadline
Justification: Disproportionately expensive; Disproportionate burdens
No
Implement measures

Reference	A1a, DO1a, PH1a, T1a
Element predicted not to achieve good by 2015	A1a = Ammonia DO1a = Dissolved Oxygen PH1a = pH T1a = Temperature
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

There is not high confidence that the standard is failed

For these water bodies we do not have the statistical confidence that the standard is failed; the water body may be compliant. Without confidence in a failure we cannot reliably consider sources and measures. To do so would mean a significant risk of wasted investment on measures in already compliant water bodies. In the first cycle we will carry out further investigations to confirm any failure with certainty, identify sources and appraise additional measures. Where possible additional measures will be implemented.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. One of the main sources of ammonia is discharges from municipal sewage treatment works. These works can also discharge significant loads of organic material that can result in a reduction in dissolved oxygen levels in receiving water bodies. Removing ammonia and organic material from sewage is expensive requiring structural changes to the works and ongoing operational costs for energy, maintenance and the disposal of sludge. The preliminary cost effectiveness analysis estimated that to put additional treatment capacity on all sewage treatment works for water bodies at risk of not achieving WFD standards would cost £304 to £848 million/year depending on how much ammonia was removed. Even where the need to control ammonia is confirmed, there is still a significant risk that removing ammonia from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference A5c). Of the 34 cases assessed, 21 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts. Actions are in most instances expensive and need to be justified in terms of addressing real failures.

As part of the recent review of water prices for the water industry (PR09), we looked for cases where, irrespective of compliance with established environmental standards, further improvements to the quality of discharges would deliver local benefits sufficient to justify the costs of improvement. One case was found. This is in the Thames RBD where 5 sewage works will be improved for the benefit of the

Thames Estuary.

There are no ongoing actions in or upstream of the water body that are estimated to bring improvements in the status in this water body.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Additional monitoring to confirm status and the need to take additional action.

Monitoring and modelling work to identify the relative sources of ammonia, dissolved oxygen, pH or temperature in the catchment.

If the need for additional action is confirmed, identification of the most cost effective combination of measures necessary to achieve good ecological status.

Possible future measures

Possible future measures will depend on confirmation of being at less than good status and the identification of sources that contribute to this status. If the need to take additional action and the sources are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented. These measures may include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions).

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

It will be disproportionately expensive to install ammonia removal technology on all municipal sewage treatment works in England and Wales.

It is likely that installing additional ammonia removal technology on many works will be disproportionately expensive. To reduce ammonia to 1 mg/l at all works where this may be necessary would cost £848 million/year across England and Wales.

Reference	A1b
Element predicted not to achieve good by 2015	Ammonia
Reason for failure	Suspected - point source water industry sewage works Suspected - point source water industry storm discharge (incl. CSO)
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Improvement work to sewage discharges is happening or is planned in the water body but the extent of the improvement is uncertain

For these water bodies we currently have the statistical confidence that the standard is currently failed. However, we know there is current or planned work to improve sewage treatment works or storm sewage discharges in the water body. These committed improvements will take place before 2015. We are uncertain of the extent of the improvement and the associated confidence of meeting good status. Further action will not be pursued until the outcome is established through future monitoring. This is because we have low confidence that future quality would fail the standard. Without confidence in a failure we cannot reliably consider further measures. To do so would mean a significant risk of wasted investment on measures in already compliant water bodies. In the first cycle we will carry out further investigations to confirm any failure with certainty, identify sources and appraise additional measures. Where possible additional measures will be implemented.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. Removing ammonia from sewage is expensive requiring structural changes to the works and ongoing operational costs for energy, maintenance and the disposal of sludge. The preliminary cost effectiveness analysis estimated that to put additional treatment capacity on all sewage treatment works for water bodies at risk of not achieving WFD standards would cost £304 to £848 million/year depending on how much ammonia was removed. Even where the need to control ammonia is confirmed, there is still a significant risk that removing ammonia from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference A5c). Of the 34 cases assessed, 21 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts. Actions are in most instances expensive and need to be justified in terms of addressing real failures.

Investigation type
Investigate to confirm failure and/or impact
Example of investigation
Additional monitoring to confirm status following the implementation of planned measures and to confirm the need to take additional action. If necessary, monitoring and modelling work to identify the relative sources of ammonia. If the need for additional action is confirmed, identification of the most cost effective combination of measures necessary to achieve good ecological status.
Possible future measures
Possible future measures will depend on the outcome of planned measures and confirmation of being at less than good status and the identification of sources that contribute to this status. If the need to take additional action and the sources are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented. These measures may include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions).
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It will be disproportionately expensive to install ammonia removal technology on all municipal sewage treatment works in England and Wales. It is likely that installing additional ammonia removal technology on many works will be disproportionately expensive. To reduce ammonia to 1 mg/l at works where this may be necessary would cost £848 million/year across England and Wales.

Reference	A2a, DO2a, PH2a, ANC2a
Element predicted not to achieve good by 2015	A2a = Ammonia DO2a = Dissolved Oxygen PH2a = pH ANC2a = Acid Neutralising Capacity
Reason for failure	Unknown - reasons for failure unknown
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible: cause of adverse impact unknown

Justification for alternative objective

The cause of the failure (sector or general activity) is unknown

Ammonia, substances affecting dissolved oxygen, pH and acid neutralising capacity (ANC) are released into the environment from a wide range of sources including urban and agricultural land use, industry and domestic release to sewers. For water bodies where the sources of the pollution is not known, or not known in sufficient detail to be able to identify and appraise measures (including identification of the person who is responsible for causing the pollution), it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 20 years we have routinely (usually annually) assessed compliance with water quality standards (such those for the freshwater fisheries directive and river quality objectives) and tried to identify the activities releasing the substances and causing the failure of the standards. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections. Despite this, the sources of some of these old failures remains unknown.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for ammonia, dissolved oxygen, pH and ANC. Where these substances did not have standards under the old compliance schemes, or where the standards for the water framework directive are tighter than before, we have identified new failures. In the time available, we have not been able to identify the sources and their relative contributions for each of the new failures.

Investigation type

Investigate reason for failure.

Example of investigation
The significance of locally relevant sources will be assessed through additional monitoring, site visits, desktop studies and modelling (e.g. using SIMCAT models) to identify and apportion causes of failure. The most cost effective combination of measures necessary to achieve good ecological status will be identified. Investigations will include local studies as well as using information and understanding from national source apportionment projects and ongoing work to improve our understanding of the effectiveness of measures. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriate measures to be identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the sources that contribute to the failure. Measures may include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions).
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Uncertain until the sectors or general activities causing the failure is known.

Reference	A2b, DO2b, PH2b, ANC2b
Element predicted not to achieve good by 2015	A2b = Ammonia DO2b = Dissolved Oxygen PH2b = pH ANC2b = Acid Neutralising Capacity
Reason for failure	Suspected - point and/or diffuse source
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible: cause of adverse impact unknown

Justification for alternative objective

The cause of the failure (sector or general activity) is not known with certainty

Ammonia, substances affecting dissolved oxygen, pH and acid neutralising capacity (ANC) are released into the environment from a wide range of sources including urban and agricultural land use, industry and domestic release to sewers. For water bodies where the source of pollution causing the failure is suspected, but we do not have strong enough evidence to confirm it, it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 20 years we have routinely (usually annually) assessed compliance with water quality standards (such those for the freshwater fisheries directive and river quality objectives) and tried to identify the activities releasing the substances and causing the failure of the standards. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections. Despite this, the sources of some of these old failures remain suspected and not confirmed by evidence.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for ammonia, dissolved oxygen, pH and ANC. Where these substances did not have standards under the old compliance schemes, or where the standards for the water framework directive are tighter than before, we have identified new failures. In the time available, we have not been able to confirm the sources and their relative contributions for each of the new failures.

Investigation type

Investigate source of failure.

Example of investigation
The significance of locally relevant sources will be assessed through additional monitoring, site visits, desktop studies and modelling (e.g. using SIMCAT models) to identify and apportion causes of failure. The most cost effective combination of measures necessary to achieve good ecological status will be identified. Investigations will include local studies as well as using information and understanding from national source apportionment projects and ongoing work to improve our understanding of the effectiveness of measures. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriate measures to be identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the sources that contribute to the failure. Measures may include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions**).**
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Uncertain until the sectors or general activities causing the failure is confirmed.

Reference	A3a, DO3a, PH3a
Element predicted not to achieve good by 2015	A3a = Ammonia DO3a = Dissolved Oxygen PH3a = pH
Reason for failure	Confirmed - diffuse source agricultural
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The specific agricultural source (location, specific activity and/or pathway) of the failure is unknown

Although agriculture is known to be causing the problem, until the specific source(s) is known in sufficient detail to be able to identify and appraise measures (including identification of the person who is responsible for causing the pollution), it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 20 years we have routinely (usually annually) assessed compliance with water quality standards (such those for the freshwater fisheries directive and river quality objectives) and tried to identify the activities releasing the substances and causing the failure of the standards. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections. Because of this work we know agriculture is causing the problem but the specific source is yet to be identified.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for ammonia, dissolved oxygen, pH and ANC. Where these substances did not have standards under the old compliance schemes, or where the standards for the water framework directive are tighter than before, we have identified new failures. In the time available, we have been able to identify agriculture as the source but have yet to identify the specific source.

Investigation type

Investigate source of failure.

Example of investigation
The significance of locally relevant agricultural diffuse sources will be assessed through additional monitoring, site visits (including tracing studies), desktop studies and modelling to identify and apportion the sources of failure. The most cost effective combination of measures necessary to achieve good ecological status will be identified. Investigations will include local studies as well as using information and understanding from national source apportionment projects and ongoing work to improve our understanding of the effectiveness of agricultural measures. There are a number of national projects being planned to do further testing and evaluation (including field trials) of feasible and cost effective means of reducing agricultural pollution, including ongoing work within the Catchment Sensitive Farming catchments in England and Demonstration Catchment work in Wales. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriately targeted measures to be identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the more detailed identification of source contributions and investigations into the feasibility and relative effectiveness of measures. Measures might include for example: • More local partnership projects to support farmers to change practice • Increased roll-out (in terms of duration and geographic extent) of Catchment Sensitive Farming advisory initiatives in England, and in Wales expansion of the Environment Agency's Catchment Co-ordinator Initiative • Widen the measures and activities included in agri-environment initiatives (e.g. rural sustainable drainage systems) • Widen the measures and activities that are included in the Common Agricultural Policy funded initiatives (e.g. increase soil resource protection measures in current approach to cross-compliance, or whatever may follow in future) • Establish and or extend existing national partnerships that provide advice and support to land managers to improve practice • Increased Environment Agency-led pollution enforcement campaigns (including use of anti-pollution works notices) • where appropriate designation of Water Protection Zones
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales • Wide scale reversion of agricultural land to woodland over large parts of England and Wales • Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	A3b, DO3b, PH3b
Element predicted not to achieve good by 2015	A3b = Ammonia DO3b – Dissolved Oxygen PH3b = pH
Reason for failure	Confirmed - non-agricultural diffuse source
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The general activity causing the failure is known but the specific source (location, specific activity and/or pathway) is unknown

Although the sector or general activity (for example, contaminated land, urban run-off, industrial estate, housing) causing the problem is known, until the specific source(s) is known in sufficient detail to be able to identify and appraise measures (including identification of the person who is responsible for causing the pollution), it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 20 years we have routinely (usually annually) assessed compliance with water quality standards (such those for the freshwater fisheries directive and river quality objectives) and tried to identify the activities releasing the substances and causing the failure of the standards. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections. Because of this work we know the general activity causing the problem but the specific source is yet to be identified.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for ammonia, dissolved oxygen, pH and ANC. Where these substances did not have standards under the old compliance schemes, or where the standards for the water framework directive are tighter than before, we have identified new failures. In the time available, we have been able to identify the general activity as the source but have yet to identify the specific source.

Investigation type

Investigate source of failure

Example of investigation
The significance of locally relevant non-agricultural diffuse sources will be assessed through additional monitoring, site visits (including tracing studies), desktop studies and modelling to identify and apportion the sources of failure. The most cost effective combination of measures necessary to achieve good ecological status will be identified. Investigations will include local studies as well as using information and understanding from national source apportionment projects and ongoing work to improve our understanding of the effectiveness of measures. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriately targeted measures to be identified for implementation in this or subsequent river basin management planning cycles. There may also be techniques that are under development but have not been proved effective in practice. Further investigations to progress this work (e.g. through controlled laboratory experiments, field trials or pilot plants) may result in feasible measures being identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the more detailed identification of source contributions and investigations into the feasibility and relative effectiveness of measures. Measures might include for example: • More local partnership projects with key partners e.g. Highways Agency, local authorities, Business Groups to change practice and reduce the risk of non-agricultural diffuse pollution. • Establish Urban Catchment Officers in England and Wales to give advice to SMEs, local authorities and those responsible for managing roads to help prevent non-agricultural diffuse pollution (similar to England Catchment Sensitive Farming Delivery Initiative) • Increased pollution enforcement campaigns (including use of anti-pollution works notices). • Increased roll-out of Water Protection Zones • Development of General Binding Rules for particular high risk activities and sectors (e.g. construction sector) • Establish and or extend existing national partnerships that provide advice and support to improve practice (e.g. Amenity Forum pesticide initiative) • Prohibitions on the use of amenity fertilisers • Extend the geographic scale and pace of roll-out of work to correct misconnections of foul sewers to surface water drains • Targeted retro-fitting of Sustainable Urban Drainage systems in all new developments and all re-developments • Targeted land use change e.g. prohibition of development in priority areas

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale land use change e.g. prohibition of development in large parts of England and Wales that are particularly sensitive to non-Agricultural diffuse water pollution • Wide scale remediation of sites contaminated from historic uses

Reference	A5a, DO5a
Element predicted not to achieve good by 2015	A5a = Ammonia DO5a = Dissolved Oxygen
Reason for failure	Confirmed - point source water industry
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

The discharge(s) contributing to the failure is known but it is uncertain if the costs of the measure(s) are proportionate to the benefits

Although the sewage treatment works or storm sewage discharges contributing to the failure are known, until further site specific appraisal is done, it is uncertain if the cost of implementing the improvement measure(s) is proportionate. It is therefore disproportionately expensive to implement further measures at this time and an extended deadline for achieving good ecological status is required.

Removing ammonia and organic material from sewage is expensive requiring structural changes to the works and ongoing operational costs for energy, maintenance and the disposal of sludge. The preliminary cost effectiveness analysis estimated that to put additional treatment capacity on all sewage treatment works for water bodies at risk of not achieving WFD standards would cost £304 to £848 million/year depending on how much ammonia was removed. Even where the need to control ammonia is confirmed, there is still a significant risk that removing ammonia from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference A5c). Of the 34 cases assessed, 21 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts. Actions are in most instances expensive and need to be justified in terms of addressing real failures.

For some water bodies the need for schemes had not been identified within the timescales for PR09 planning. At some sites the earlier classifications did not show the standards were failed with high confidence and so improvement schemes were not identified. The final classifications now show such failures. In the time available, we have been able to identify the sewage discharge(s) contributing to the failure. However, it has not been possible to identify the costs of the required measures and identify potential benefits and other impacts that improving the discharges will deliver.

If this further appraisal confirms that it is disproportionately expensive to achieve good ecological status by 2015, these water bodies will be re-categorised with reference 5c. If measures are shown to be proportionate we will look to progress measures as soon as practicable. These future measures may need to be phased, particularly if they depend on action to address other sources.

Investigation type
Investigate proportionate measures
Example of investigation
Investigations will establish whether it is cost-beneficial to implement measures at the water industry sources. These investigations would also need to confirm the significance of other sources to ensure we identify the most cost-effective combination of measures and that this combination is not disproportionately expensive. This will be assessed mainly through modelling but may require some additional monitoring.
Possible future measures
Possible future measures could include enhanced treatment of sewage discharges, improvements to intermittent discharges, and action to address other sources, depending on their relative significance. Development of new techniques and practices could also provide more effective measures which achieve a better balance of costs, benefits and other impacts..
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Measures that are likely to be technically infeasible or disproportionately expensive will depend on the substance in question and the source of the substance. The preliminary cost effectiveness analysis (pCEA) evaluated the technical feasibility and costs associated with available and potential measures. For example, it is technically feasible to install additional ammonia removal technology on all municipal sewage treatment works in England and Wales. However, it is likely that installing ammonia removal technology on many works will be disproportionately expensive. To reduce ammonia to 1 mg/l at works where this may be necessary would cost £848 million/year across England and Wales.

Reference	A5b, DO5b, PH5b
Element predicted not to achieve good by 2015	A5b = Ammonia DO5b = Dissolved Oxygen PH5b = pH
Reason for failure	Confirmed - point source, non-water industry
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

The discharge contributing to the failure is known but it is uncertain if the cost of the measure is proportionate to the benefit

Although the discharge contributing to the failure is known, until further site specific appraisal is done, it is uncertain if the cost of implementing the improvement measure is proportionate. It is therefore disproportionately expensive to implement further measures at this time and an extended deadline for achieving good ecological status is required.

For some water bodies the earlier classifications did not show the standards were failed with high confidence and so improvement schemes were not identified. The final classifications now show such failures. In the time available, we have been able to identify the sewage discharge(s) contributing to the failure. However, it has not been possible to identify the costs of the required measures and identify potential benefits and other impacts that improving the discharges will deliver.

Investigation type

Investigate proportionate measures

Example of investigation

Investigations will establish whether it is cost-beneficial to implement measures at the sources. These investigations would also need to confirm the significance of other sources to ensure we identify the most cost-effective combination of measures and that this combination is not disproportionately expensive. This will be assessed mainly through modelling but may require some additional monitoring.

If this further appraisal confirms that it is disproportionately expensive these water bodies would be re-categorised (similar to reference 5c). If measures are shown to be proportionate we will look to progress measures as soon as practicable. These future measures may need to be phased, particularly if they depend on action to address other sources.

Possible future measures
Possible future measures could include enhanced treatment of discharges, remediation of contaminated land, and action to address other sources, depending on their relative significance. Development of new techniques and practices could also provide more effective measures which achieve a better balance of costs, benefits and other impacts.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Wide scale, precautionary tightening of discharge consents for ammonia and/or BOD for most point sources through England & Wales

Reference	A5c
Element predicted not to achieve good by 2015	Ammonia
Reason for failure	Confirmed - point source water industry sewage works
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The discharge causing the ammonia failure is known and a site specific appraisal has shown the improvement measure available to be currently disproportionately expensive

Through our PR09 planning work we identified the sewage treatment works causing the ammonia failure. We identified the costs of the required measure and identified potential benefits and other impacts that improving the discharges will deliver. This showed the measure to be currently disproportionately expensive.

These appraisals used:

- site specific costs provided by Ofwat following submission of water company final business plans;
- site specific information on embedded carbon and operating carbon emissions to calculate carbon costs;
- environmental outcomes recorded as length of river improved to meet WFD objectives;
- benefits based on the NERA National Benefits Survey (Collaborative Research Project 4b/c);
- additional local benefits identified after consultation with RBD liaison panels.

Our PR09 appraisal of the costs and benefits of ammonia removal schemes, assessed 34 cases, 21 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts. The 13 schemes that were assessed as having a favourable balance of costs, benefits and other impacts will improve 12 water bodies and 128 kilometres of river.

Technological improvements may make the improvement needed less costly and / or the estimated benefits may change significantly with better information. An extended deadline for achieving good ecological status is therefore required.

Investigation type

Investigate proportionate measures

Example of investigation
At these sites the assessments will be reviewed as further information becomes available that might change the balance of costs, benefits and other impacts. This might come from: an improved understanding of the relative importance of other sources such that combined action becomes cost-beneficial; benefits may be valued more highly; benefits may increase if outcomes become more certain; advancements in treatment technology may reduce the cost of the measures and/or improve the outcome that can be realised. If measures are shown to be proportionate we will look to progress measures as soon as practicable. These future measures may need to be phased, particularly if they depend on action to address other sources.
Possible future measures
Possible future measures could include improvement treatment for sewage discharges as well as action on other source contributions, depend on the relative significance of these (and other) sources. Development of new or novel techniques to reduce pollution for both any or all of the significant sources could also provide more effective measures which achieve a better balance of costs, benefits and other impacts.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Measures that are likely to be technically infeasible or disproportionately expensive will depend on the source of ammonia. The preliminary cost effectiveness analysis (pCEA) evaluated the technical feasibility and costs associated with available and potential measures. For example, it is technically feasible to install ammonia removal technology on all municipal sewage treatment works in England and Wales. However, it is likely that installing ammonia removal technology on many works will be disproportionately expensive. To remove ammonia to 1 mg/l at works where this may be necessary would cost £848 million/year across England and Wales.

Reference	P1a, N1a
Element predicted not to achieve good by 2015	P1a = Phosphate or Total Phosphorus N1a = Dissolved Inorganic Nitrogen
Reason for failure	Unknown and/or uncertain there is a failure/ impact and source not confirmed
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

There is currently insufficient weight of evidence to confirm the need to control eutrophication risk using site specific and potentially expensive regulatory action

Guidance on river basin management planning issued by Defra and Welsh Assembly Government requires that, for failures of nutrient standards, evidence of whether the biology is truly impacted should be taken into account when considering the case for improvement actions. However where we are confident of phosphate failure and this is indicative of some biological impact (e.g. in alkaline lowland rivers) we will take action to reduce phosphates by such means as providing education or training, routing people to sources of funding or invoking the England Catchment Sensitive Farming Initiative, without waiting for the full information on diatoms and macrophytes that would be necessary to justify targeted regulatory action to control eutrophication such as the designation of a sensitive area under the Urban Waste Water Treatment Directive or of a Water Protection Zone.

The Environment Agency has established a programme of gathering additional biological data in locations where the phosphate standard is exceeded including the monitoring of macrophytes and phytobenthos. This includes monitoring to gather additional biological evidence downstream of sewage treatment works where additional treatment to remove phosphorus would be justified if we were confident there is a risk of damage.

For these water bodies the sources of nutrient are not yet confirmed.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. The major source of phosphorus is discharges from municipal sewage treatment works. Removing phosphorus from sewage is expensive (8 to 7408 £/kg of P removed depending on the size of the works and the treatment technology used) requiring structural changes to the works and ongoing operational costs for chemicals, energy and sludge disposal. Even where the need to control the risk of eutrophication is confirmed, there is still a significant risk that removing phosphorus from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see table reference P5c). Of the 51 cases assessed, 15 were assessed as

being not justified because of the unfavourable balance of costs, benefits and other impacts.

As part of the recent review of water prices for the water industry (PR09), we looked for cases where, irrespective of compliance with established environmental standards, further improvements to the quality of discharges would deliver local benefits sufficient to justify the costs of improvement. None were found.

There are no ongoing actions in or upstream of the water body that are estimated to bring improvements in the status in this water body. In 2010 we will report to River Basin Liaison Panels on those water bodies where new knowledge of the links between phosphate and biology has resulted in a change to our assessment and hence the detail of the actions we are taking to improve their status.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Additional biological monitoring (jn particular for macrophytes in rivers and lakes) to understand cause and impact and, where necessary, to confirm status. This has already started. For example, we have already started monitoring downstream of some sewage treatment works to gather additional biological evidence to potentially justify additional treatment to remove phosphorus.

Where required, from 2010 investigative monitoring will be implemented to confirm the significance of all marginal phosphate failures and, where necessary, gather further biological evidence.

Monitoring and modelling work will also be undertaken to identify the relative sources of nutrients in the catchment.

Where the need for additional action is confirmed by, for example, the indication of impacts on macrophyte and phytobenthos (diatoms) in rivers and lakes we will move quickly to the identification of the most cost effective combination of measures necessary to achieve good ecological status.

Through the UK Technical Advisory Group on the WFD, the Environment Agency is working to improve the understanding of the links between phosphate, diatoms and macrophytes in rivers and lakes to inform the future review of nutrient standards, monitoring plans and the level of evidence needed to justify the use of different control mechanisms.

Possible future measures

Restrictions on phosphorus in detergents.

The major sources of nutrients are discharges from sewage treatment works and agricultural activities. If the need to take additional action and the sources of the nutrient are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented.

Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as the England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions), and action to address misconnections.

The Environment Agency is now working with the main farming groups to understand better the main ways in which phosphate from land enters and is transported in water bodies. We will also look at what the advice and incentives available through agri-environment schemes and the England Catchment Sensitive Farming Delivery Initiative can do to reduce phosphate pollution of water and wetlands alongside the industry led campaign for the Farmed Environment.

In parallel with this approach, the Environment Agency will continue to develop work on regulatory measures, such as designating Water Protection Zones (WPZs) if voluntary approaches are shown not to work in a particular area, or where higher environmental standards are needed in for example protected areas, so that we are ready and able to ensure progress is made before 2015. The work to identify the ways in which phosphate enters water bodies and the means of reducing this will inform the measures that might be applied in WPZs which can only be effective if the means of control have been clearly identified.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Sewage treatment works discharges:
It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that between 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed.

It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It will cost between 157-7408 £/kg to remove phosphorus from these smaller works.

Agricultural activities:
• Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales
• Wide scale reversion of agricultural land to woodland over large parts of England and Wales
• Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P1b, N1b
Element predicted not to achieve good by 2015	P1b = Phosphate or Total Phosphorus N1b = Dissolved Inorganic Nitrogen
Reason for failure	Unknown - uncertain there is a failure/ impact and source not confirmed
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

There is currently insufficient weight of evidence to confirm the need to control eutrophication risk using site specific and potentially expensive regulatory action

Guidance on river basin management planning issued by Defra and Welsh Assembly Government requires that, for failures of nutrient standards, evidence of whether the biology is truly impacted should be taken into account when considering the case for improvement actions. However where we are confident of phosphate failure and this is indicative of some biological impact (e.g. in alkaline lowland rivers) we will take action to reduce phosphates by such means as providing education or training, routing people to sources of funding or invoking the England Catchment Sensitive Farming Initiative, without waiting for the full information on diatoms and macrophytes that would be necessary to justify targeted regulatory action to control eutrophication such as the designation of a sensitive area under the Urban Waste Water Treatment Directive or of a Water Protection Zone.

The Environment Agency has established a programme of gathering additional biological data in locations where the phosphate standard is exceeded including the monitoring of macrophytes and phytobenthos. This includes monitoring to gather additional biological evidence downstream of sewage treatment works where additional treatment to remove phosphorus would be justified if we were confident there is a risk of damage.

For these water bodies all or some of the nutrient sources are known.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. The major source of phosphorus is discharges from municipal sewage treatment works. Removing phosphorus from sewage is expensive (8 to 7408 £/kg of P removed depending on the size of the works and the treatment technology used) requiring structural changes to the works and ongoing operational costs for chemicals, energy and sludge disposal. Even where the need to control the risk of eutrophication is confirmed, there is still a significant risk that removing phosphorus from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see table reference P5c). Of the 51 cases assessed, 15 were assessed as being not justified because of the unfavourable balance of costs, benefits and other

impacts.

As part of the recent review of water prices for the water industry (PR09), we looked for cases where, irrespective of compliance with established environmental standards, further improvements to the quality of discharges would deliver local benefits sufficient to justify the costs of improvement. None were found.

There are no ongoing actions in or upstream of the water body that are estimated to bring improvements in the status in this water body. In 2010 we will report to River Basin Liaison Panels on those water bodies where new knowledge of the links between phosphate and biology has resulted in a change to our assessment and hence the detail of the actions we are taking to improve their status.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Additional biological monitoring (jn particular for macrophytes in rivers and lakes) to understand cause and impact and, where necessary, to confirm status. This has already started. For example, we have already started monitoring downstream of some sewage treatment works to gather additional biological evidence to potentially justify additional treatment to remove phosphorus.

Where required, from 2010 investigative monitoring will be implemented to confirm the significance of all marginal phosphate failures and, where necessary, gather further biological evidence.

Monitoring and modelling work will also be undertaken to identify the relative sources of nutrients in the catchment.

Where the need for additional action is confirmed by, for example, the indication of impacts on macrophyte and phytobenthos (diatoms) in rivers and lakes we will move quickly to the identification of the most cost effective combination of measures necessary to achieve good ecological status.

Through the UK Technical Advisory Group on the WFD, the Environment Agency is working to improve the understanding of the links between phosphate, diatoms and macrophytes in rivers and lakes to inform the future review of nutrient standards, monitoring plans and the level of evidence needed to justify the use of different control mechanisms.

Possible future measures

Restrictions on phosphorus in detergents.

The major sources of nutrients are discharges from sewage treatment works and agricultural activities. If the need to take additional action and the sources of the nutrient are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented.

Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as the England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions), and action to address misconnections.

The Environment Agency is now working with the main farming groups to understand better the main ways in which phosphate from land enters and is transported in water bodies. We will also look at what the advice and incentives available through agri-environment schemes and the England Catchment Sensitive Farming Delivery Initiative can do to reduce phosphate pollution of water and wetlands alongside the industry led campaign for the Farmed Environment.

In parallel with this approach, the Environment Agency will continue to develop work on regulatory measures, such as designating Water Protection Zones (WPZs) if voluntary approaches are shown not to work in a particular area, or where higher environmental standards are needed in for example protected areas, so that we are ready and able to ensure progress is made before 2015. The work to identify the ways in which phosphate enters water bodies and the means of reducing this will inform the measures that might be applied in WPZs which can only be effective if the means of control have been clearly identified.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Sewage treatment works discharges:
It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that between 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed.

It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It will cost between 157-7408 £/kg to remove phosphorus from these smaller works.

Agricultural activities:
• Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales
• Wide scale reversion of agricultural land to woodland over large parts of England and Wales
• Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P1c, N1c
Element predicted not to achieve good by 2015	P1c = Phosphate or Total Phosphorus N1c = Dissolved Inorganic Nitrogen
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

There is not sufficient weight of evidence to confirm the need to control eutrophication risk and there are ongoing or planned improvement actions

Guidance on river basin management planning issued by Defra and Welsh Assembly Government requires that for failures of nutrient standards that the biology is truly impacted when considering the case for improvement actions. For these water bodies there is no or insufficient biological data or other evidence to justify taking additional measures to control the risk of eutrophication. From the monitoring undertaken for this plan it is now clear that there is a link between high levels of phosphate in surface waters and biological failures in the main river type (lowland alkaline rivers). We are already collecting additional biological data in locations where the phosphate standard is exceeded. This includes monitoring started in 2008 to gather additional biological evidence downstream of sewage treatment works where additional treatment to remove phosphorus would be justified if we were confident there is a risk of damage.

There are ongoing actions within or upstream of the water body (either at sewage treatment works and / or through actions on agriculture in the catchment). Some of these actions are driven by eutrophic designations under the Urban Waste Water Treatment Directive and / or the Nitrates Directive. The ongoing actions will reduce nutrient levels and lead to some improvement in status. We are uncertain of the extent of the improvement and further action would not be pursued until the outcome was established through future monitoring. This is because we have low confidence that future quality would fail the standard. Without confidence in a failure we cannot reliably consider further measures. To do so would mean a significant risk of wasted investment on measures in already compliant water bodies. Our priority in the first cycle will be to carry out further investigation to confirm any failure with certainty, identify sources and additional potential measures. This will also need to consider biological response times.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. The major source of phosphorus is discharges from municipal sewage treatment works. Removing phosphorus from sewage is expensive (8 to 7408 £/kg of P removed depending on the size of the works and the treatment technology used) requiring

structural changes to the works and ongoing operational costs for chemicals, energy and sludge disposal. Even where the need to control the risk of eutrophication is confirmed, there is still a significant risk that removing phosphorus from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference P5c). Of the 51 cases assessed, 15 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts.

As part of the recent review of water prices for the water industry (PR09), we looked for cases where, irrespective of compliance with established environmental standards, further improvements to the quality of discharges would deliver local benefits sufficient to justify the costs of improvement. None were found.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Additional biological monitoring to confirm status. This has already started. For example, in 2008 we started monitoring downstream of some sewage treatment works to gather additional biological evidence to potentially justify additional treatment to remove phosphorus.

Monitoring and modelling work to review the relative sources of nutrients in the catchment.

If the need for additional action is confirmed, identification of the most cost effective combination of measures necessary to achieve good ecological status.

Possible future measures

Ban on phosphorus in detergents.

The major sources of nutrients are discharges from sewage treatment works and agricultural activities. If the need to take additional action and the sources of the nutrient are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented.

Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions).

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Sewage treatment works discharges:
It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the

works and the treatment technology used it is estimated that 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed.

It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It cost between 157-7408 £/kg to remove phosphorus from these size works.

Agricultural activities:
• Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales
• Wide scale reversion of agricultural land to woodland over large parts of England and Wales
• Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P1d
Element predicted not to achieve good by 2015	Phosphate or Total Phosphorus
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Improvement work is happening or is planned in the water body but the extent of the improvement is uncertain

Guidance on river basin management planning issued by Defra and Welsh Assembly Government requires that for failures of nutrient standards that the biology is truly impacted when considering the case for improvement actions.

For these water bodies there is currently sufficient weight of evidence (including biology classification) to confirm the need to control eutrophication risk. However, we know there is current or planned work within or upstream of the water body at sewage treatment works and /or on agriculture in the catchment. These actions will reduce nutrient levels and lead to some improvement in status. We are uncertain of the extent of the improvement and further action would not be pursued until the outcome was established through future monitoring. This is because we have low confidence that future quality would fail the standard. Without confidence in a failure we cannot reliably consider further measures. To do so would mean a significant risk of wasted investment on measures in already compliant water bodies. Our priority in the first cycle will be to carry out further investigation to confirm any failure with certainty, identify sources and additional potential measures. This will also need to consider biological response times.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. The major source of phosphorus is discharges from municipal sewage treatment works. Removing phosphorus from sewage is expensive (8 to 7408 £/kg of P removed depending on the size of the works and the treatment technology used) requiring structural changes to the works and ongoing operational costs for chemicals, energy and sludge disposal. Even where the need to control the risk of eutrophication is confirmed, there is still a significant risk that removing phosphorus from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference P5c). Of the 51 cases assessed, 15 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts.

Investigation type
Investigate to confirm failure and/or impact
Example of investigation
Additional biological monitoring to confirm. This has already started. For example, in 2008 we started monitoring downstream of some sewage treatment works to gather additional biological evidence to potentially justify additional treatment to remove phosphorus. Monitoring and modelling work to review the relative sources of nutrients in the catchment. If the need for additional action is confirmed, identification of the most cost effective combination of measures necessary to achieve good ecological status.
Possible future measures
Ban on phosphorus in detergents. The major sources of nutrients are discharges from sewage treatment works and agricultural activities. If the need to take additional action and the sources of the nutrient are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented. Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions).
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Sewage treatment works discharges: It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed. It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It cost between 157-7408 £/kg to remove phosphorus from these size works. Agricultural activities: • Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales • Wide scale reversion of agricultural land to woodland over large parts of England

and Wales
• Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P1e, N1e
Element predicted not to achieve good by 2015	P1e = Phosphate or Total Phosphorus N1e = Dissolved Inorganic Nitrogen
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits
Justification for alternative objective	
The water body is within a site currently being investigated as a candidate for designation as a sensitive area eutrophic (and / or in Transitional / Coastal waters a polluted water eutrophic) That review will confirm whether the site is at risk of eutrophication, not at risk, or needs further investigation. If it is at risk basic measures under UWWTD &/or Nitrates Directive would then be applied.	
Investigation type	
Investigate to confirm failure and/or impact	
Example of investigation	
Conclusion of the review as a candidate sensitive area / polluted water, which could require further investigation if evidence is inconclusive. Investigations would also look at whether other measures in combination with the basic measures under UWWTD / Nitrates Directive could be justified in terms of costs, benefits and other impacts. The investigative work would be through a combination of modelling and potentially further monitoring.	
Possible future measures	
Conclusion of the review as a candidate sensitive area / polluted water will confirm if the water body is at risk from eutrophication. If so basic measures required by those designations would then be applied. Progressing measures to address other sources, for example agricultural phosphorus, would depend on their relative contribution and whether these were justified in terms of costs, benefits and other impacts. Into the future developments in technology and our understanding of the effectiveness of measures could provide enhanced measures.	

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Sewage treatment works discharges: It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed. It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It cost between 157-7408 £/kg to remove phosphorus from these size works. Agricultural activities: • Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales • Wide scale reversion of agricultural land to woodland over large parts of England and Wales • Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P1o, N1o
Element predicted not to achieve good by 2015	P1o = Phosphate or Total Phosphorus N1o = Dissolved Inorganic Nitrogen
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

There is not sufficient weight of evidence to confirm the need to control eutrophication risk

Guidance on river basin management planning issued by Defra and Welsh Assembly Government requires that for failures of nutrient standards that the biology is truly impacted when considering the case for improvement actions. For these water bodies biological data for nutrient sensitive elements is suggesting good or better status so there is low certainty that there is a risk of eutrophication even though nutrients are exceeding the standard. Where we are not confident of failing good status we would not use regulatory powers to pursue costly site specific measures on the grounds that we would only anticipate low or uncertain benefits which would not be proportionate to the costs.

It is disproportionately expensive to implement further measures at this time. An extended deadline for achieving good ecological status is therefore required. The major source of phosphorus is discharges from municipal sewage treatment works. Removing phosphorus from sewage is expensive (8 to 7408 £/kg of P removed depending on the size of the works and the treatment technology used) requiring structural changes to the works and ongoing operational costs for chemicals, energy and sludge disposal. Even where the need to control the risk of eutrophication is confirmed, there is still a significant risk that removing phosphorus from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference P5c). Of the 51 cases assessed, 15 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Investigate reasons for conflicting evidence between nutrient status and biology. This could lead to a review of the appropriateness of the nutrient standard for the site

/ type. Site would also be kept under review against risk of deterioration.

Possible future measures

Ban on phosphorus in detergents.

The major sources of nutrients are discharges from sewage treatment works and agricultural activities. If the need to take additional action and the sources of the nutrient are confirmed, further measures (subject to further assessment of cost, benefits and other impacts) will be implemented.

Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions).

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Sewage treatment works discharges:
It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed.

It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It cost between 157-7408 £/kg to remove phosphorus from these size works.

Agricultural activities:
• Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales
• Wide scale reversion of agricultural land to woodland over large parts of England and Wales
• Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P2a
Element predicted not to achieve good by 2015	Phosphate or Total Phosphorus
Reason for failure	Unknown - reasons for failure unknown
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible: cause of adverse impact unknown

Justification for alternative objective

The cause of the failure (sector or general activity) is unknown

Phosphorus is released into the environment from a range of sources including municipal sewage treatment works and agricultural land use. For water bodies where the sources of the nutrients are not known, or not known in sufficient detail to be able to identify and appraise measures (including identification of the person who is responsible for causing the pollution), it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 15 years we have routinely (usually every four years) reviewed water bodies to control eutrophication or the risk of eutrophication where the predominant release of nutrients has been from municipal sewage treatment works. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for phosphorus. We have identified new failures. In the time available, we have not been able to identify the sources and their relative contributions for each of the new failures.

The water body is not predicted to improve as a result of any planned actions upstream.

Investigation type

Investigate reason for failure

Example of investigation

The significance of locally relevant potential point and diffuse sources will be assessed through additional monitoring, site visits, desktop studies and modelling to identify and apportion causes of failure (sources and pathways) and develop a cost-effective combination of measures. These will include local investigations as well as using information and understanding from national source apportionment projects

and ongoing work to improve our understanding of the effectiveness of measures, particularly for agricultural sources. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriate measures to be identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the identification of nutrient source contributions. In general the principle sources are sewage and agriculture so measures could include additional regulatory controls on these sources within the limits of what is currently technically possible, or which becomes possible through developments in technology and our understanding of the effectiveness of measures. Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions). For any future designations under the Urban Waste Water Treatment Directive and/or the Nitrates Directive basic measures as required by those Directives would then be applied. Similarly for any requirements identified to meet Habitats Directive objectives.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Uncertain until the sectors or general activities causing the failure is confirmed.

Reference	P2b
Element predicted not to achieve good by 2015	Phosphate or Total Phosphorus
Reason for failure	Suspected – point and/or diffuse source
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible: cause of adverse impact unknown

Justification for alternative objective

The cause of the failure (sector or general activity) is not known with certainty

Phosphorus is released into the environment from a range of sources including municipal sewage treatment works and agricultural land use. For water bodies where the sources of the nutrients are suspected, but we do not have strong enough evidence to confirm it, it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 15 years we have routinely (usually every four years) reviewed water bodies to control eutrophication or the risk of eutrophication where the predominant release of nutrients has been from municipal sewage treatment works. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for phosphorus. We have identified new failures. In the time available, we have not been able to identify the sources and their relative contributions for each of the new failures.

For a few water bodies the code P5a has also been applied with P2b. This indicates that actions have been completed following designation as a sensitive area eutrophic under the Urban Waste Water Treatment Directive but no further actions are ongoing. Relative sources are now given as suspected, these need to be confirmed to establish whether there are further feasible and cost-beneficial actions that can be taken on the remaining source from sewage discharges and/or that from other sources.

Investigation type

Investigate source of failure

Example of investigation
The significance of locally relevant potential point and diffuses sources will be assessed through additional monitoring, site visits, desktop studies and modelling to identify and apportion causes of failure (sources and pathways) and develop cost-effective combinations of measures. Investigations will include local studies as well as using information and understanding from national source apportionment projects and ongoing work to improve our understanding of the effectiveness of measures, particularly for agricultural sources. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriate measures to be identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the identification of nutrient source contributions. In general the principle sources are sewage and agriculture so measures could include additional regulatory controls on these sources within the limits of what is currently technically possible, or which becomes possible through developments in technology and our understanding of the effectiveness of measures. Examples of such measures include additional regulatory controls on point sources, including sewage treatment works and storm sewage discharges; actions to address diffuse sources, e.g. extension of schemes such as England Catchment Sensitive Farming Delivery Initiative, better targeting of agri-environment schemes, pollution prevention (through the adoption of best practice methodologies, local education campaigns and voluntary initiatives); control at source (e.g. through additional use restrictions). For any future designations under the Urban Waste Water Treatment Directive and/or the Nitrates Directive basic measures as required by those Directives would then be applied. Similarly for any requirements identified to meet Habitats Directive objectives.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Uncertain until the sectors or general activities causing the failure is confirmed.

Reference	P3a
Element predicted not to achieve good by 2015	Phosphate or Total Phosphorus
Reason for failure	Confirmed - diffuse source agricultural
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The specific agricultural source (location, specific activity and/or pathway) of the failure is unknown

Although agriculture is known to be causing the problem, until the specific source(s) is known in sufficient detail to be able to identify and appraise measures (including identification of the person who is responsible for causing the pollution), it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015. An extended deadline for achieving good ecological status is therefore required.

For over 15 years we have routinely (usually every four years) reviewed water bodies to control eutrophication or the risk of eutrophication where the predominant release of nutrients has been from municipal sewage treatment works. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections.

In 2008 and 2009 (as part of the classification work for the draft and first river basin management plans) we assessed compliance with the new standards for phosphorus We have identified new failures. In the time available, we have not been able to identify the sources and their relative contributions for each of the new failures.

WFD biology classification indicates certainty of being less than good from the weight of evidence across nutrient sensitive elements. Nutrient sources include confirmed diffuse agricultural as a broad source. However, further investigation is required to establish the specific agricultural sources and the pathways by which they reach the water environment to establish whether there are feasible measures that can be applied and if these are cost-beneficial. This would enable appropriate targeting of measures alone or in combinations. General measures on agriculture are not expected to deliver much improvement in status. Applying site specific measures without a good understanding of whether these are actually being targeted at the most significant sources risks wasted investment. Lack of knowledge limits our ability to develop the most cost-effective combination of measures, and to ensure costs are proportionate to benefits and other impacts.

Investigation type
Investigate feasible measures
Example of investigation
The significance of locally relevant agricultural diffuse sources will be assessed through additional monitoring, site visits (including tracing studies), desktop studies and modelling to identify and apportion the sources of failure. The most cost effective combination of measures necessary to achieve good ecological status will be identified. Investigations will include local studies as well as using information and understanding from national source apportionment projects and ongoing work to improve our understanding of the effectiveness of agricultural measures. There are a number of national projects being planned to do further testing and evaluation (including field trials) of the most effective means of reducing agricultural nutrient pollution, including ongoing work within the Catchment Sensitive Farming catchments in England and Demonstration Catchment work in Wales. Modelling will also be used to assess the likely outcome from the actions in order to appraise the costs, benefits and other impacts. This will allow appropriately targeted measures to be identified for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the more detailed identification of source contributions and investigations into the feasibility and relative effectiveness of measures. Measures might include for example: • More local partnership projects to support farmers to change practice • Increased roll-out (in terms of duration and geographic extent) of Catchment Sensitive Farming advisory initiatives in England, and in Wales expansion of the Environment Agency's Catchment Co-ordinator Initiative • Widen the measures and activities included in agri-environment initiatives (e.g. rural sustainable drainage systems) • Widen the measures and activities that are included in the Common Agricultural Policy funded initiatives (e.g. increase soil resource protection measures in current approach to cross-compliance, or whatever may follow in future) • Establish and or extend existing national partnerships that provide advice and support to land managers to improve practice • Increased Environment Agency-led pollution enforcement campaigns (including use of anti-pollution works notices) • where appropriate designation of Water Protection Zones
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales • Wide scale reversion of agricultural land to woodland over large parts of England and Wales • Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	P5a
Element predicted not to achieve good by 2015	Phosphate or Total Phosphorus
Reason for failure	Confirmed - point source water industry
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

The discharge(s) contributing to the failure is known but it is uncertain if the costs of the measure(s) are proportionate to the benefits

Although the sewage treatment works or storm sewage discharges contributing to the failure are known, until further site specific appraisal is done, it is uncertain if the cost of implementing the improvement measure(s) is proportionate. It is therefore disproportionately expensive to implement further measures at this time and an extended deadline for achieving good ecological status is required.

Removing phosphorus from sewage is expensive (8 to 7408 £/kg of P removed depending on the size of the works and the treatment technology used) requiring structural changes to the works and ongoing operational costs for chemicals, energy and sludge disposal. Even where the need to control the risk of eutrophication is confirmed, there is still a significant risk that removing phosphorus from sewage treatment works is disproportionately expensive because of the balance of costs and benefits (see tables reference P5c). Of the 51 cases assessed, 15 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts. Actions are in most instances expensive and need to be justified in terms of addressing real failures.

For some water bodies the need for schemes had not been identified within the timescales for PR09 planning. At some sites the earlier classifications did not show the standards were failed with high confidence and so improvement schemes were not identified. The final classifications now show such failures. In the time available, we have been able to identify the sewage discharge(s) contributing to the failure. However, it has not been possible to identify the costs of the required measures and identify potential benefits and other impacts that improving the discharges will deliver.

If this further appraisal confirms that it is disproportionately expensive to achieve good ecological status by 2015, these water bodies will be re-categorised with reference 5c. If measures are shown to be proportionate we will look to progress measures as soon as practicable. These future measures may need to be phased, particularly if they depend on action to address other sources.

Investigation type
Investigate proportionate measures
Example of investigation
Investigations will establish whether it is cost-beneficial to implement measures at the water industry sources to justify inclusion into water industry investment programmes. These investigations would also need to confirm the significance of other sources of phosphorus to establish whether it is feasible to address these and deliver combined action that is cost-beneficial. This will be assessed mainly through modelling but may require some additional monitoring .
Possible future measures
Possible future measures could include further phosphorus removal for sewage discharges as well as action on agricultural sources, depending on the relative significance of these (and other) sources. Development of new techniques and practices for both of these sources could also provide more effective measures which achieve a better balance of costs, benefits and other impacts.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed. It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It cost between 157-7408 £/kg to remove phosphorus from these size works.

Reference	P5c
Element predicted not to achieve good by 2015	Phosphate or Total Phosphorus
Reason for failure	Confirmed - point source water industry sewage works
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The discharge causing the phosphorus failure is known and a site specific appraisal has shown the improvement measure available to be currently disproportionately expensive

Through our PR09 planning work we identified the sewage treatment works causing the phosphorus failure. We identified the costs of the required measure and identified potential benefits and other impacts that improving the discharges will deliver. This showed the measure to be currently disproportionately expensive.

These appraisals used:

- site specific costs provided by Ofwat following submission of water company final business plans;
- site specific information on embedded carbon and operating carbon emissions to calculate carbon costs;
- environmental outcomes recorded as length of river improved to meet WFD objectives;
- benefits based on the NERA National Benefits Survey (Collaborative Research Project 4b/c);
- additional local benefits identified after consultation with RBD liaison panels.

Our PR09 appraisal of the costs and benefits of phosphorus removal schemes assessed 51 cases, of which 15 were assessed as being not justified because of the unfavourable balance of costs, benefits and other impacts. The 36 schemes that were assessed as having a favourable balance of costs, benefits and other impacts will improve 25 water bodies and 268 kilometres of river.

Technological improvements may make the improvement needed less costly and / or the estimated benefits may change significantly with better information. An extended deadline for achieving good ecological status is therefore required.

Investigation type

Investigate proportionate measures

Example of investigation
At these sites the assessments will be reviewed as further information becomes available that might change the balance of costs, benefits and other impacts. This might come from: an improved understanding of the relative importance of other sources such that combined action becomes cost-beneficial; benefits may be valued more highly; benefits may increase if outcomes become more certain; advancements in treatment technology may reduce the cost of the measures and/or improve the outcome that can be realised. If measures are shown to be proportionate we will look to progress measures as soon as practicable. These future measures may need to be phased, particularly if they depend on action to address other sources.
Possible future measures
Possible future measures could include further phosphorus removal for sewage discharges as well as action on agricultural sources, depending on the relative significance of these (and other) sources. Development of new techniques and practices for both of these sources could also provide more effective measures which achieve a better balance of costs, benefits and other impacts.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
It will be disproportionately expensive to install phosphorus removal technology on all municipal sewage treatment works in England and Wales. To do so would cost up to £6billion and result in benefits of approximately £2billion. Removing phosphorus requires more energy and so has a carbon impact. Depending on the size of the works and the treatment technology used it is estimated that 16-1426 tonnes of additional carbon are produced per tonne of phosphorus removed. It is likely that installing phosphorus removal technology on many of the works serving less than 250 people will be disproportionately expensive. It cost between 157-7408 £/kg to remove phosphorus from these size works.

E5 Groundwater quality

Pressures affecting groundwater quality

The main pressures affecting groundwater quality are significant point sources of pollution (from a wide range of chemicals) and diffuse pollution from nutrients, mines and minewaters, pesticides, and urban sources. There are also abstraction pressures which can cause saline intrusion.

The most important and overarching groundwater quality objective is pollution prevention (the prevent or limit objective - see below). In this case, measures are not driven solely by failures, but also by pressures. Because of the large size of most groundwater bodies and the scale of status assessment it is possible to have pockets of polluted groundwater within a good status body. The prevent or limit objective aims to avoid such local pollution and prevent deterioration. Thus an important target for measures is good quality groundwater that is subject to significant risks (i.e. pressures) even though it may not yet be at poor status.

Environmental objectives for groundwater quality

The WFD contains the following environmental objectives for groundwater quality:

Prevent or limit objective
This applies to all groundwater, not just groundwater bodies, and applies at the point of discharge to groundwater. Comprehensive measures to meet the prevent or limit objective (PoL) will in time result in achievement of all other environmental objectives for groundwater. Note: the old Groundwater Directive (80/68/EEC) adopted a similar approach to groundwater protection but its scope was limited in terms of dealing with diffuse sources of pollution. The WFD and the new Groundwater Directive (2006/118/EC) seek to remedy this situation.
For deliberate discharges of pollutants to groundwater, we meet the PoL objective through the use of regulatory regimes. Pollution prevention measures for non-deliberate inputs of pollutants to groundwater are wider ranging, including both direct and indirect regulation, and the provision of advice to operators. Our approach to implementing all these measures is described in Groundwater Protection: Policy and Practice (GP3) (http://www.environment-agency.gov.uk/research/library/publications/40741.aspx) .

No deterioration in status
This will be achieved through effective implementation of PoL measures. Upward trends in pollutant concentrations could lead to deterioration in status. We will identify these trends where they are significant, and implement measures to reverse them. Good status groundwater bodies, where there is a significant deterioration in quality that could eventually lead to poor status, are a high priority for action (see below).

If PoL measures are effective, then good status will be maintained. However, in many aquifers there will be a significant time lag between a change in activities on the land surface and a corresponding change in groundwater quality, due to the time taken for water to percolate to the water table. For this reason, it is possible that groundwater status could deteriorate temporarily before any improvement measures become fully effective.

Achieve good chemical status
Where a groundwater body is at poor chemical status, effective PoL measures should eventually restore the body to good chemical status. However, where historical (often unregulated) activities have resulted in land contamination and have affected groundwater, it may not be possible to meet this objective by the 2015 deadline and therefore alternative

objectives will be set. Where PoL measures are not being effective our action would be to review the measures, and tighten existing controls as necessary and where feasible. Unless historic land contamination is widespread or affects a particularly important receptor it is unlikely to affect status. Where it does, it may be feasible to remediate contaminated land and groundwater using a combination of the existing planning and land contamination regulatory regimes. However, in many cases complete remediation may not be technically feasible or cost effective and we may have to rely on natural processes of degradation to take their course over many years and, where necessary, set alternative objectives for groundwater bodies in the medium term.

Trends

A significant and sustained upward trend in pollutant concentrations is one which is statistically and environmentally significant. For a trend to be environmentally significant it must be one that, if not reversed, could lead to a failure of one or more environmental objectives within 12 years (two river basin management planning cycles). There is no fixed period for achieving trend reversal as this will depend on local environmental conditions. The trend objective is failed when measures are not put in place to achieve trend reversal. We will use PoL measures to achieve reversal of trends, but this reversal may not be immediate due to the delayed response in groundwater. Wherever possible, measures must be implemented in time to avoid any future failure of environmental objectives.

Protected Areas

There are two Protected Areas of particular concern for groundwater quality:

1. Drinking Water Protected Areas (DrWPA) – the measures needed to deliver this objective are subject to specific assessment for the plan, described below.
2. Nitrate Vulnerable Zones (NVZs) – the action plans that apply are basic measures for this plan, and have therefore not been subject to any specific further assessment.

Achieving the objectives for DrWPAs is also a requirement for meeting good chemical status for groundwater bodies. Another is that there shall be no significant damage to Groundwater Dependent Terrestrial Ecosystems (GWDTE). Some, but not all GWDTEs are Protected Areas designated under other community legislation.

Priority of objectives

There is an inherent priority in the groundwater quality objectives based on the timescales for implementation, spatial scale of application and the ability to use alternate objectives/exemptions. This determines their significance for protecting groundwater quality, and therefore our priorities for meeting them. A prioritised list of our groundwater quality objectives is set out in Table 9, with our highest priority objective first.

Table 9. **Prioritised list of groundwater quality objectives**

Groundwater Objectives	Alternatives available	Time scale for achieving	Spatial scale for action
1. Prevent or limit	None, but some exemptions	Short	Local (all groundwater)
2. Protected Area Objectives	Possible time extensions where not set by other Directives	Other directives - Short DWPA – Medium	Medium - the protected area
3. No deterioration in status	None	Medium	Large (groundwater bodies)
4. Trend reversal	None – Measures must be implemented and working by 2015	Long	Medium
5. Achieve good status by 2015	Time extensions, Less stringent objectives	Medium	Large (groundwater bodies)

Current compliance with the status objective

We assessed the status of the 304 groundwater bodies in England and Wales using the five chemical status tests. The methodology for assessing chemical status can be found on the UKTAG website[22]. Each test addresses one of the quality elements that defines good groundwater chemical status. The results below show the number of groundwater bodies that are at poor status for each of the tests:

- Saline Intrusion = 11
- Surface Water Ecological Status = 54
- General Chemical Assessment = 48
- Drinking Water Protected Area = 53
- Groundwater Dependent Terrestrial Ecosystem = 2

After combining these results on a 'one out all out' basis, 124 groundwater bodies (41%) are at poor chemical status. Because of the way chemical status is assessed under the Directives, it is not feasible to give an overall statistical confidence in the status assessments.

We also found that 81 groundwater bodies (27%) had a statistically (at the 90% confidence level) and environmentally significant upward trend in pollutant concentrations.

Development of measures

As described above, the current (pre implementation of WFD and new Groundwater Directive) approaches to protection and improvement of groundwater quality have been laid out in our Groundwater Protection Policy (GP3). For deliberate discharges we use all existing permitting and other relevant regimes that are applicable to groundwater. The main examples are Water Resources Act consents, Environmental Permitting Regulations permits and Groundwater Regulations authorisations.

For non-deliberate inputs of pollutants to groundwater the controls are both regulatory and advisory, the main measures being Groundwater Regulations notices, Anti-pollution Works notices, Nitrate Vulnerable Zones, Local Authority land use planning, codes of practice, guidance notes, memoranda of understanding/operating agreements, Voluntary Initiative (for pesticides), England Catchment Sensitive Farming Delivery Initiative and day to day site specific advice. These are all targeted using a risk-based approach that will be supported by groundwater quality monitoring. This monitoring will assess the effectiveness of measures.

In this section we do not go into further detail regarding the development of specific measures, apart from those that particularly apply to groundwater quality (i.e. Drinking Water Protected Areas, Source Protection Zones, Safeguard Zones, and Water Protection Zones).

Measures appraisal process

As a general guide, the measures that are prioritised should address the objectives and priorities noted in the objectives table above. Whilst measures should be considered to address poor status, it is equally a priority to consider measures in groundwater bodies that are currently good but which are deteriorating in quality. Such deterioration will compromise both the no deterioration in status and trend reversal objectives and may be an indication

[22] See Paper 11b(i) from the *UK Technical Advisory Group on the Water Framework Directive* titled 'Groundwater Chemical Classification for the purposes of the Water Framework Directive and the Groundwater Daughter Directive' 2007 .http://www.wfduk.org/stakeholder_reviews/stakeholder_review_1-2007/stakeholder_reviews/stakeholder_review_1-2007/sr1-2007-gwreports/

that existing prevent or limit measures are ineffective and need to be tightened up. We will therefore develop measures to address deterioration in groundwater quality.
Groundwater occurs under all of the land surface and groundwater bodies have been designated for around 90% of the land surface in England & Wales (85% in England and 99% in Wales). Many measures designed to deal with surface water issues will also have an impact on groundwater. Many of the "new" measures required to meet the groundwater objectives of the WFD involve more widespread or more intensive application of existing measures (for example, pollution prevention inspections and remedial action).

As noted above, prevent or limit measures are effectively the first and most important line of defence in protecting groundwater quality but they will also make a substantial contribution to meeting some surface water objectives. We already implement PoL measures but these are often less effective for diffuse sources of pollution. New WFD measures for groundwater quality therefore will tend to focus on diffuse sources.

The first step in our measures appraisal process was to centrally collate a list of existing and planned national measures. Local hydrogeologists then considered the effectiveness of these national measures as part of the appraisal process. They then considered what additional local measures could be put in place to meet the environmental objectives in each groundwater body. This was done using an expert judgement approach. Any measures that were considered to be disproportionately expensive were not included in the plan. All measures were then reviewed nationally to ensure consistency across river basin districts.

Development of predicted outcomes

We have identified predicted outcomes for the first three cycles of river basin management planning for each groundwater body. This was done by local expert hydrogeologists following the process set out in the Groundwater Quality Decision Tree (included at the end of this groundwater section). As part of this process they took into account the effectiveness of existing and planned local and national measures, and the recovery time of each groundwater body.

Status in future river basin management planning cycles

We anticipate that of the 124 groundwater bodies (112 in England and 12 in Wales) at poor chemical status nationally, 2 will recover to good status by 2015, a further 4 will recover to good status by 2021 and a further 113 (including all those in Wales) will recover to good by 2027. Because groundwater generally has a long residency time (the time water spends underground) groundwater bodies take a long time to respond to measures and return to good status.

There are 5 groundwater bodies that we anticipate will take longer than 2027 to recover. This is because there is currently no known technical solution to deal with the problem. Wherever we are unsure how long recovery will take we have initially assumed that the body will be good by 2027. In the second RBMP we will be able to provide a more robust assessment of likely recovery time as we will have more monitoring data and more knowledge on the effectiveness of our measures. It is possible therefore that in the next river basin management plan we will predict that more groundwater bodies will take longer than 2027 to recover to good status.

Justification of alternative objectives

Our assessment predicted that it was disproportionately expensive to get many poor status groundwater bodies to good status by 2015. The justification we used was 'disproportionately expensive – unfavourable balance of costs and benefits'. This justification was used to justify time extensions to 2021 or 2027 on groundwater bodies that had been impacted by a wide range of pressures, including high nitrate concentrations. A key driver

behind this assessment is that, as noted earlier, groundwater quality responds very slowly to most measures in most groundwater bodies, particularly with respect to diffuse pollutant sources. Although technically feasible, measures to directly remediate groundwater quality are normally disproportionately expensive or have other undesirable environmental outcomes. By extending the deadline to 2021 or 2027, less costly measures can be used that utilise land use change in place of direct groundwater remediation schemes.(e.g. pump and treat schemes). Therefore over a longer time period the cost of meeting good status is much lower, and therefore the benefits are likely to outweigh the costs in many groundwater bodies. Specific examples of where this justification was used can be found in supporting tables for GC4a, GC4c and GC4d, at the end of this section.

There were also a significant number of groundwater bodies where it was technically infeasible to get to good status by 2015. This was particularly the case for groundwater bodies where further investigations were needed. In these cases we used the justification technically infeasible - cause of adverse impact unknown. For example, we used this justification where elevated phosphate concentrations had caused a groundwater body to go to poor status, but we need further investigation to improve our understanding of the Source-Pathway-Receptor conceptual model. Specific examples of where this justification has been used can be found in the supporting table for GC1a.

We also used the technically infeasible - no known technical solution is available justification on a small number groundwater bodies that had gone to poor status. Specific examples of where this justification has been used can be found in the tables for GC2a, GC2b, and GC3a.

The natural conditions - groundwater status recovery time justification was used on a small number of groundwater bodies that could not get to good by 2015. Specific examples of where this justification has been used can be found in tables GC6a and GC6b.

Finally the 'disproportionately expensive – disproportionate burdens' justification was used on a small number of groundwater bodies that could not get to good by 2015. This justification was only used where a phased Coal Authority scheme was being implemented. An example of where this justification has been used can be found in table GC5a.

Drinking Water Protected Areas (DrWPA)

All groundwater bodies in England & Wales meet the criteria for DrWPAs and have been so designated.

We propose a tiered risk-based approach to the protection of drinking water abstractions and for compliance with Article 7 of the Water Framework Directive (see table 10 below).

At Tier 1 we would continue to apply to the existing protection measures under our Groundwater Protection Policy.

At Tier 2A we would seek to use additional voluntary measures in non-statutory Safeguard Zones.

At Tier 2B we propose to use Water Protection Zones (WPZs).

If all existing voluntary measures have been tried and exhausted, or we can show they will not work, a WPZ would be proposed. Voluntary measures include CSF, VI and agri-environment schemes.

A WPZ is a legislative mechanism to deliver statutory measures to control water pollution over and above existing statutory powers. The use of WPZs is enabled under section 93 of Water Resources Act, 1991. Defra is undertaking amendments to the Act to improve the order-making process to make it more transparent, and these changes are planned to come into force by December 2009. A Water Protection Zone Order defines both the area and the specific measures designed to deal with identified water quality problems within it. We will put forward a proposed WPZ designation which will be subject to consultation (including an Impact Assessment), with a decision being taken by Defra's Secretary of State before the Order, if approved, is laid before parliament.

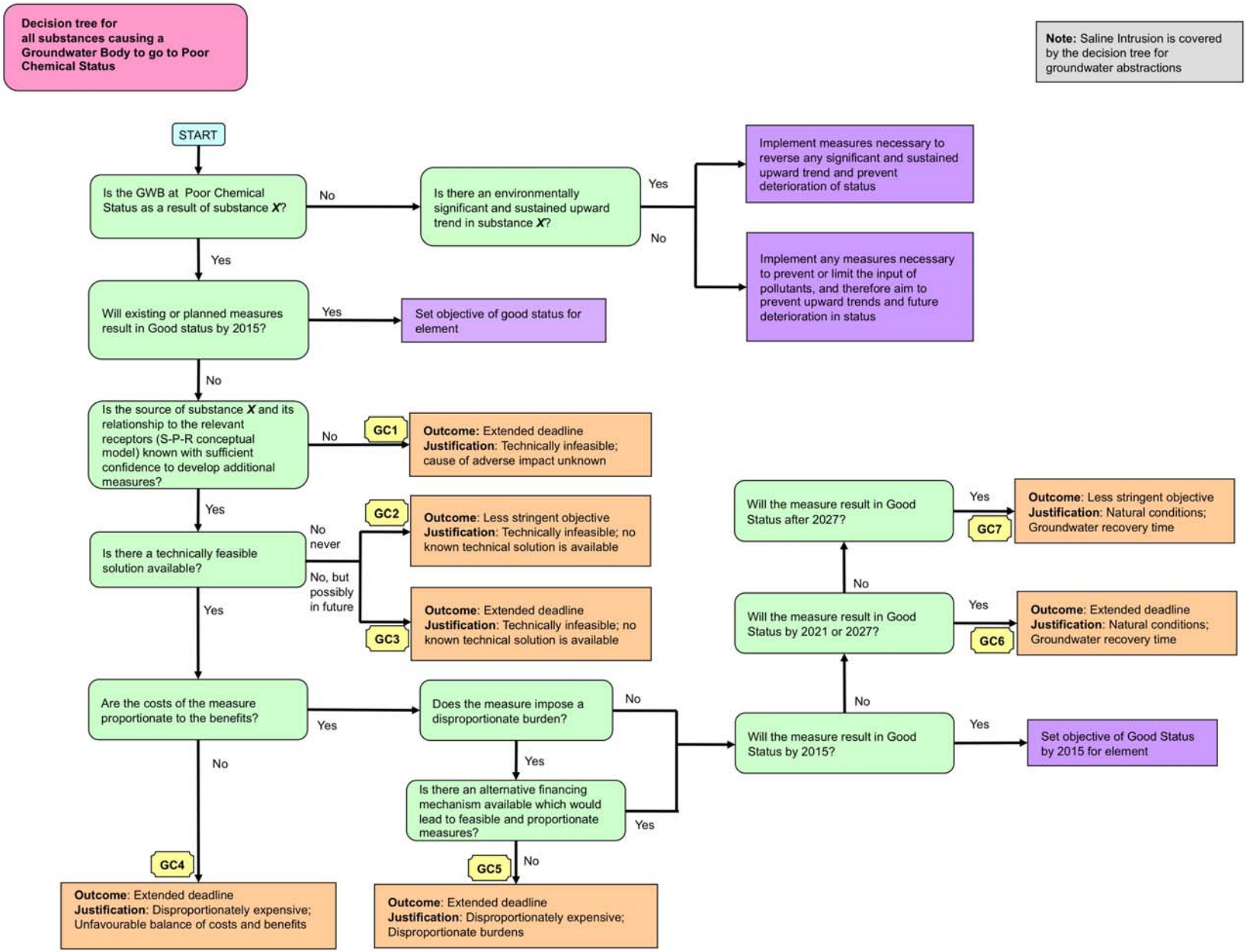
WPZs can be applied as areas within the catchments of abstraction sources for drinking water to deal with specific point or diffuse source problems. In this instance they would be based on existing groundwater Source Protection Zones.

In all cases the assessment of which tier of protection is appropriate will be preceded by a review of Environment Agency and water company data, including monitoring data, data used for characterisation under the Water Framework Directive, and the results of the water company risk assessments under the amended Water Quality (Water Supply) Regulations – "Water Safety Plans".

Table 10. **Tiered risk-based approach to the protection of drinking water abstractions and for compliance with Article 7 of the Water Framework Directive**

Tier	Description	Controls
1	General protection of the DrWPA (i.e. the whole groundwater body)	We will continue to apply the policies in accordance with our Groundwater Protection Policy (GP3). Existing groundwater Source Protection Zones[23] would remain as a non-legislative tool to influence external stakeholders and focus our policies.
2A	Specific non-statutory protection (Safeguard Zones)	Our assessments indicate that certain abstractions are likely to require additional measures to avoid failing the Article 7.3 objective, but that there may be low confidence in the assessment, or we consider that non-statutory measures are sufficient. This may include targeted enforcement action to reinforce the GP3, voluntary agreements or campaigns. Non-statutory Safeguard Zones would be based upon existing groundwater Source Protection Zones, modified locally as necessary.
2B	Water Protection Zone designation	Would be considered where an abstraction is failing to meet Article 7.3 [or likely to if current trends continue] with a high degree of confidence and all existing voluntary measures have been tried and exhausted, or we can show they will not work. In such cases we may seek a Water Protection Zone Order if we can show that applying additional statutory measures is likely to work and will provide a cost effective solution. In this case, a separate application will be made and a public consultation carried out for each one. A more detailed investigation will be made of the causes of failure within the catchment and the remedial options.

[23] We define SPZs for each groundwater abstraction for human consumption. Zone 1 (SPZ1) is the area closest to the abstraction, representing the highest risk to the source. Zones 2 and 3 are progressively larger. Risk-based Policies to prevent pollution are applied within these zones.


Decision tree for all substances causing a Groundwater Body to go to Poor Chemical Status
Note: Saline Intrusion is covered by the decision tree for groundwater abstractions
START
Is the GWB at Poor Chemical Status as a result of substance X?
No
Is there an environmentally significant and sustained upward trend in substance X?
Yes
Implement measures necessary to reverse any significant and sustained upward trend and prevent deterioration of status
No
Implement any measures necessary to prevent or limit the input of pollutants, and therefore aim to prevent upward trends and future deterioration in status
Yes
Will existing or planned measures result in Good status by 2015?
Yes
Set objective of good status for element
No
Is the source of substance X and its relationship to the relevant receptors (S-P-R conceptual model) known with sufficient confidence to develop additional measures?
No
GC1
Outcome: Extended deadline
Justification: Technically infeasible; cause of adverse impact unknown
Yes
Is there a technically feasible solution available?
No never
GC2
Outcome: Less stringent objective
Justification: Technically infeasible; no known technical solution is available
No, but possibly in future
GC3
Outcome: Extended deadline
Justification: Technically infeasible; no known technical solution is available
Yes
Are the costs of the measure proportionate to the benefits?
Yes
Does the measure impose a disproportionate burden?
No
Yes
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
No
GC5
Outcome: Extended deadline
Justification: Disproportionately expensive; Disproportionate burdens
No
GC4
Outcome: Extended deadline
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Will the measure result in Good Status by 2015?
Yes
Set objective of Good Status by 2015 for element
No
Will the measure result in Good Status by 2021 or 2027?
Yes
GC6
Outcome: Extended deadline
Justification: Natural conditions; Groundwater recovery time
No
Will the measure result in Good Status after 2027?
Yes
GC7
Outcome: Less stringent objective
Justification: Natural conditions; Groundwater recovery time

Reference	GC1a
Element predicted not to achieve good by 2015	Drinking Water Protected Area General Chemical Assessment Impacts on wetlands Impacts on surface water
Reason for failure	Suspected - point and diffuse sources from agriculture, land contamination and disused mines The failures are caused by various substances including phosphate, pesticides, chlorinated solvents, metals, ammonia, nitrate and bromate
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The source of the substance and its relationship to the relevant receptors is understood with insufficient confidence to develop measures to meet good chemical status by 2015

Suspected sources (sectors and general activities) causing the failure of good chemical status have been identified. However, until the sources have been confirmed and the relationship to the relevant receptors (using a conceptual source-pathway-receptor model) better understood, the identification and application of measures (including who needs to implement them) to reduce the pollution is not possible. It is therefore not technically feasible to achieve good status by 2015. An extended deadline for achieving good chemical status is therefore required.

A phased investigation programme will be implemented which will enable us to develop a robust Source-Pathway-Receptor conceptual model. This will help to indicate whether measures can be implemented to enable the groundwater body to get to good status.

Investigation type

Investigate source of failure

Example of investigation

Develop a robust Source-Pathway-Receptor conceptual model, which includes a detailed assessment of the source of the pollution. Assess possible future measures to get the body to good status. Undertake an options appraisal on these measures, including an assessment of disproportionate cost. Develop a pollution action plan at the latest by 2012.

Possible future measures
It is not yet clear what future measures are needed.
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
It is not yet clear what future measures would be required to achieve 100% good chemical status by 2027.

Reference	GC2a
Element predicted not to achieve good by 2015	General Chemical Assessment
Reason for failure	Confirmed - diffuse source contaminated land The failures are caused by chlorinated solvents
Alternative objective	Less stringent status objective
Reason for alternative objective	Technically infeasible: no known technical solution

Justification for alternative objective

No known technically feasible solution is available

The failure is caused by chlorinated solvents (TCE and DCE) resulting from the long history of industrial activity affecting a number of locations in the groundwater body. Because of the extensive nature of the pollution and the fact that it has penetrated to great depths there is currently no technical solution that can be applied to effectively clean up the groundwater and return the groundwater body to good status before 2027.

Future entry of these pollutants will be prevented or limited so that no further deterioration will take place. This will be achieved through a range of measures including pollution prevention campaigns, environmental permitting and application of industry codes of practice (for solvents). The measures will ensure that there will be the least possible deviation from good status in the future and any adverse trends in pollutant concentrations reversed.

Investigation type

No further investigations are planned.

Example of investigation

No further investigations are planned.

Possible future measures

All necessary measures are in place. However, additional measures will be explored if our monitoring shows that the groundwater body is not recovering as expected.

Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
No technically feasible measures are available.

Reference	GC2b
Element predicted not to achieve good by 2015	Impacts on surface water General Chemical Assessment
Reason for failure	Confirmed - Disused mines point and/or diffuse source The failure is caused by metals (e.g. Iron, Zinc, Lead, Cadmium, Copper)
/Alternative objective	Less stringent status objective
Reason for alternative objective	Technically infeasible: no known technical solution
Justification for alternative objective	
No known technically feasible solution is available In these groundwater bodies the reason for not achieving good status is because the groundwater has become polluted as a result of the extensive long-term coal and/or metal mining activity in the area. Because the source of pollution is widespread and below ground, there is currently no technical solution that can be applied to return the groundwater body to good status before 2027. Measures are being put in place to treat the polluted mine water discharges at the point of entry to the failing surface water bodies. This will reduce the pollution, and risk of failure, of associated surface water bodies. It will ensure that there will be the least possible deviation from good groundwater status in the future and any adverse trends in pollutant concentrations reversed.	
Investigation type	
Investigate technically feasible solutions.	
Example of investigation	
Further investigations will take place into these discharges from abandoned metal and coal mines. The objective will be to determine the most cost-effective remedial options.	
Possible future measures	
Minewater remediation schemes on discharges that have been identified as being a high priority. These will prevent or limit further inputs of pollutants to the water body or impacts on receptors. The measures will ensure that there will be the least	

possible deviation from good status and adverse trends in pollutant concentrations will be reversed.
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
Implementation of minewater remediation schemes for all discharges.

Reference	GC3a
Element predicted not to achieve good by 2015	Drinking Water Protected Area
Reason for failure	Confirmed - agricultural source The failure is caused by the pesticide bentazone
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: no known technical solution

Justification for alternative objective

No known technically feasible solution is available

Extensive investigations into the pesticide (bentazone) pollution have been carried out over many years. Monitoring has shown that the concentrations of bentazone in the groundwater are decreasing. Even though all surface inputs have stopped, the rate of decline is not sufficient to achieve good status by 2015. A detailed review of all possible remedial options was carried out in 2008/9. This study has shown that it is not possible to remediate the bentazone pollution. This is mainly because a clearly defined source of the bentazone pollution could not be found, even though extensive investigations have been carried out. In situ remediation of bentazone pollution that is distributed throughout the aquifer is not technically feasible. There is therefore no known technical solution to meet good status by 2015. Groundwater monitoring will be carried out to ensure that the groundwater body meets good status by 2027.

The abstracted drinking water is currently treated to remove bentazone to ensure that drinking water standards are achieved

Investigation type

Monitoring

Example of investigation

Groundwater monitoring to confirm falling trend in bentazone concentrations and improve the conceptual understanding of the source-pathway-receptor linkages.

Possible future measures

We propose continual monitoring of the abstraction to confirm a falling trend in bentazone, combined with pollution prevention measures in the catchment.

Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
We anticipate that good status will be reached by 2027. No new measures beyond those listed above are required.

Reference	GC4a
Element predicted not to achieve good by 2015	Drinking Water Protected Area General Chemical Assessment Impacts on wetlands
Reason for failure	Confirmed - diffuse source agricultural Failures are caused by nitrate and/or ammonia
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The costs of the measures required to achieve good status are not proportionate to the benefits

In order to meet the objective of good status by 2015 groundwater remediation schemes would probably be required. Although technically feasible, measures to directly remediate groundwater quality are normally disproportionately expensive as they are likely to cost hundreds of millions of pounds per groundwater body. They may also have other undesirable environmental outcomes, such as exacerbating climate change. The main benefit of such remediation would be the reduction in the nitrate removal treatment costs for water abstracted for drinking water supplies.

The typical installation costs for nitrate treatment are £4m (plus significant on-going operational cost). Even where there are several individual abstractions requiring treatment the benefits of a remediation scheme for the whole groundwater body cannot be justified on the basis of the significant (orders of magnitude) difference between benefits and costs. It is therefore disproportionately expensive to meet good status by 2015.

Measures are in place (e.g. Nitrate Vulnerable Zone action programme, agri-environment measures, cross-compliance e.g. soil protection reviews, Code of Good Agricultural Practice or England Catchment Sensitive Farming Delivery Initiative) that will reduce nitrate levels. However, at a catchment scale the level of reduction in relation to the objective is uncertain and additional measures may prove necessary in some catchments. Because of the variable and often long recovery time associated with these aquifers (from several years to many decades) the full benefit of measures may not be seen for some time.

As the deadline is extended to 2027, less costly measures can be used to achieve good status. These include Nitrate Vulnerable Zone action programmes, England Catchment Sensitive Farming Delivery Initiative, water company lead catchment management schemes, Safeguard Zones, Water Protection Zones, targeted set-aside and targeted measures with agri-environment schemes. The benefits of these

schemes are likely will outweigh the costs over a longer time horizon.
Investigation type
Investigate feasible measures and monitor impacts of existing measures
Example of investigation
Review the impact of recent land management changes using the latest groundwater monitoring data and potentially specialist models where appropriate. Undertake further research into potential future measures.
Possible future measures
Preparation of pollution action plan to guide further pollution prevention activities, Nitrate Vulnerable Zone action plans, England Catchment Sensitive Farming Delivery Initiative, water company lead catchment management schemes, Safeguard Zones, Water Protection Zones, targeted set-aside, targeted measures with agri-environment schemes.
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
Widespread move to a low nitrogen input land management system (e.g. forestry or low N input grassland). In certain aquifers with a slow response it is likely that groundwater remediation would also be needed.

Reference	GC4b
Element predicted not to achieve good by 2015	Impacts on surface water General Chemical Assessment
Reason for failure	Confirmed - Disused mines point and/or diffuse source The failures were mainly caused by metals (e.g. Lead, Copper, Zinc, Cadmium)
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The costs of the measures required to achieve good status are not proportionate to the benefits

Remediation of all non-coal mines in this groundwater body by 2015 would rely on established technologies such as those employed at Wheal Jane in Cornwall. These technologies, whilst proven, consist of chemical dosing which is costly, energy intensive and unsustainable in the long-term. The treatment system at Wheal Jane cost over £5m to construct (almost double this in options appraisal, feasibility and design) and about £1m per year to operate. Many such schemes may be needed in each groundwater body. It is therefore likely to be disproportionately expensive to employ this treatment technology on the scale needed to meet good status by 2015. However, recent trials of innovative technologies have indicated that passive treatment may be viable and the benefits are likely to outweigh the costs. We are planning to carry out further studies to pilot these technologies in the first planning cycle.

To meet good status by 2015 established technologies would have to be used. Therefore it is currently disproportionately expensive to meet this objective.

Investigation type

Investigate feasible measures

Example of investigation

Investigate the use of innovative passive treatment technologies and their suitability for application at different sites (technology transfer)

Possible future measures
Possible use of innovative passive treatment technologies. Recent trials of these technologies have indicated that passive treatment may be viable and cost effective. We will carry out studies to pilot these technologies in the first river basin management cycle.
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
Implementation of minewater remediation schemes for all discharges.

Reference	GC4c
Element predicted not to achieve good by 2015	Impacts on surface water
Reason for failure	Confirmed - point source land contamination The failures were due to chlorinated solvents
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The costs of the measures required to achieve good status are not proportionate to the benefits

Although the clean-up of the pollution sources is expected to be completed by 2015, natural flushing of the groundwater pathway to the affected watercourse is expected to take several more years. In order to meet good status by 2015 extensive groundwater remediation would be needed. This could be done for example through installing pump and treat systems. Such systems are likely to cost over £1m to install and operate. These systems will also increase CO_2 emissions through additional energy consumption. In this case the additional benefits of such systems are low as the additional benefits would only accrue for a few years. It will not be disproportionately expensive to meet good status by 2021 as this can be done using lower cost conventional technologies, without resorting to a pump and treat groundwater remediation scheme.

Therefore there an extended deadline for achieving good status of 2021 is required.

Investigation type

Monitoring

Example of investigation

Groundwater monitoring to confirm that the measures are working.

Possible future measures

Clean-up of the source. This is expected to be complete by 2013.

Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
None

Reference	GC5a
Element predicted not to achieve good by 2015	Surface water test General quality test
Reason for failure	Confirmed - Disused mines point and/or diffuse source The failures were mainly caused by metals (e.g. Iron)
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: disproportionate burdens

Justification for alternative objective

The costs of the measures are proportionate to the benefits but would impose a disproportionate burden if implemented by 2015

A phased Coal Authority scheme is being implemented in this groundwater body to restore the body to good status. Treasury has agreed that the funding for these schemes will be phased over three river basin management planning cycles to 2027 due to affordability issues. To bring forward the implementation date of all these minewater remediation schemes would also cause considerable practical difficulties, for example gaining permission for, and undertaking the necessary works. This phased approach will allow time to investigate and implement the most cost effective solution in each case, and it will also allow learning to take place. Our PCEA study has shown that a phased approach is likely to significantly reduce the overall cost of the whole programme. It would therefore impose a disproportionately burden to meet good status by 2015. Achieving good status by 2027, with the highest priority sites tackled by 2015, is a proportionate and cost effective response to the problem.

Affordability is one area where there is limited guidance available at a European level and hence additional care must be taken in justifying exemptions to ensure that they follow the spirit of the Directive and its objectives. Although the adoption of the WFD entails obligations for member states to make available the necessary means for implementation, this needs to be moderated by the option available to member states to phase the implementation (through extended deadlines) of measures to spread the costs of implementation (while taking clear and demonstrable action in the first cycle).

To apply a time extension on grounds of affordability consideration should be given to the availability of alternative financing mechanisms, the consequences of non-action and steps taken to resolve affordability in the future. We have considered all of these factors as part of justifying this alternative objective.

Investigation type
Further investigate feasible measures and their applicability at individual sites
Example of investigation
Investigation and prioritisation of minewater remediation schemes to achieve maximum environmental benefit.
Possible future measures
Minewater remediation schemes
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive
Immediate implementation of minewater remediation schemes for all discharges.

Reference	GC6a
Element predicted not to achieve good by 2015	Drinking Water Protected Area General Chemical Assessment
Reason for failure	Suspected - point and diffuse sources from agriculture and amenity use The failure was caused by the pesticides atrazine and simazine
Alternative objective	Extended deadline
Reason for alternative objective	Natural conditions - groundwater status recovery time
Justification for alternative objective	
The measures will not result in good status by 2015 but will by 2027 The pesticides causing these failures (atrazine and simazine) are now banned. These pesticides have historically been extensively used for both agriculture and amenity use. Despite the ban the groundwater body will still take a number of years to recover because of the long residence time of water within these aquifers.	
Investigation type	
Monitoring	
Example of investigation	
Groundwater monitoring to confirm that the measures are working.	
Possible future measures	
Continued monitoring. No additional measures are required.	
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive	
None.	

Reference	GC6b
Element predicted not to achieve good by 2015	General Chemical Assessment
Reason for failure	Groundwater status recovery time The failure has been caused by ammonia and sulphate
Alternative objective	Extended deadline
Reason for alternative objective	Natural conditions - groundwater status recovery time
Justification for alternative objective	
The measures will not result in good status by 2015 but will by 2027 These failures have been mainly caused through over abstraction. This over abstraction has pulled deep connate water containing ammonia and sulphate into the aquifer. As several large abstractions have now ceased, we anticipate that this groundwater body will recover naturally by 2027.	
Investigation type	
Monitoring	
Example of investigation	
Groundwater monitoring to confirm that the measures are working.	
Possible future measures	
None, other than monitoring.	
Measures required to achieve 100% Good Chemical Status by 2027 that are likely to be technically infeasible or disproportionately expensive	
None.	

E6 Biological pressures (biota removal and fish stocking)

Fish removal and stocking

Fish removal for recreational, personal consumption or commercial purposes may have the potential to affect fish stocks' achieving 'Good Ecological status' (GES). Equally, sustainable cropping may be entirely compatible with GES, or an alternative objective may be appropriate where a high economic benefit is being sustained by the fish removal activities.

In most recreational fisheries it has become popular to either practice catch and release or to re-stock to maintain the fish population. Byelaws and orders can be introduced to enable the Environment Agency, or Sea Fisheries Committees, to limit fish removal and our policies are being set to ensure the Water Framework Directive (WFD) objectives are supported by this means. Many fish species have a great capacity to reproduce and support significant cropping as a sustainable catch. This capacity may often be reduced as increasing environmental pressures come to bear and thereby reduce population resilience.

Our prime commercial freshwater fisheries where fish are removed, are for salmon, sea trout and for eels and these are subject to detailed Species Action and Management Plans to sustain the stocks. 'No deterioration' can be achieved by not exceeding sustainable cropping levels. Our Salmon Action Plans and Eel Management Plans are based on these accepted principles and are designed to deliver the WFD standards.

Defra and Welsh Assembly Government have recently reviewed who should take the lead role for managing fisheries in estuarine and coastal water bodies and other marine waters. In Wales, Welsh Assembly Government will be responsible for managing sea fisheries but is likely that the Environment Agency will be asked to manage estuarine waters. In England, new inshore fisheries and conservation authorities will be set up. The Environment Agency will sit on these committees.

Sustainable fishing practices and application of controls by the Sea Fisheries Committees could ensure sustainable cropping is not exceeded, helping to achieve 'Good ecological status'. However, the near-shore waters and estuaries have been found to be important juvenile production areas for many species and their sensitivity in this context is only now becoming clearer as new science emerges.

Weed removal

Weed cutting on rivers is practised primarily for flood risk management, recreational fishery or navigation reasons. It is a common feature of chalk streams where macrophyte growth is usually very strong. Loss of channel capacity and the associated rise in water levels can pose a significant flood risk if not managed. The chalk based regions of the South and East of England are mainly where this takes place. Sustainable cropping regimes are mostly instituted to ensure the overall ecology is not harmed in what are often Protected Areas. When applied correctly the practice can enhance the resilience of the plants to flood flows and other environmental pressures. Where this is the case, alternative objectives would not be expected.

Weed removal is also widely practised in the slow flowing, often nutrient rich drainage channels common across many of our low-lying wetlands and drained areas. Their characteristics can often lead to prolific macrophyte growth, threatening both their prime purpose of drainage or wetland, but also their recreational and amenity value for fishing and navigation. In most cases drainage channels are designated as artificial water bodies, with their principal use being the drainage of water. Where macrophyte growth is affecting this

principal use, weed removal may continue within the context of achieving Good Ecological Potential; where not, then alternative objectives will be required to allow it to continue to prevent economic loss from flooding.

Weed removal is partially regulated by Water Quality regulations. Consents will be set to ensure WFD standards are achieved. Consultation with Natural England will be sought due to the SSSI and SAC designations often applying to such waters.

Weed removal in still waters is not currently regulated other than where herbicide application is consented or an impact would affect another owner or site downstream.

Determining outcomes

The impacts of biota removal and fish stocking are most likely to be noticed as changes in those elements of the biological classification that are directly affected i.e. macrophytes and fish. Excessive stocking of some species of cyprinids in lakes, might lead to a characteristic switching in community type from a clear water, macrophyte dominated community to a "muddy" water, phytoplankton dominated community. We therefore need to diagnose the effect of these pressures through symptomatic changes in biology. .

We have collated information on the 'Reasons for Failure' linked to the observed impacts in biological populations, as seen through the WFD classification tools. From this analysis there is little evidence that biota removal or fish stocking have a significant adverse effect. However, there is evidence of an impact of fish stocking at a few N2K sites where action will be taken.

Where we do not know why a fish or macrophyte classification is less than good, we will undertake investigative monitoring to determine the cause of the impact. If in time, we find that biota removal and fish stocking are affecting the achievement of good status we will undertake an appraisal of the costs, benefits and other impacts of the fishery or weed removal activity to determine whether an alternative objective for that water body is justified, or whether additional measures are required to achieve good status.

Priorities for Action

Statutory Measures which will happen irrespective of WFD (M2)

Fish removal:
- Salmon Action Planning (SAPs)
- ILFA (Import of Live Fish Act) consents and controls
- NLO's (net limitation orders) on commercial salmonid nets
- National 'season' and methods Byelaws
- European Eel Fishery Regulations

Weed removal:
- Discharge Consents on weed cutting and herbicides
- National Alien Species Strategy
- Natural England consents for most relevant waters due to SSSI designations

Other measures likely to be required (M3a, M3b and M4)

Fish removal:
- Implement SAPs stock management actions – M3a
- Consent Enforcement and NLO applications – M3a

- National Byelaw on Coarse fish removal – M3a
- Resource to implement European Eel Fishery Regulations – M3b
- National Spring Salmon Byelaws – M3a
- Signal Crayfish management Plan – M3b
- Regional Exploitation control Byelaws where required – M3b
- Marine Bill for NLO procedure improvement, privileged fixed engine regulation, emergency byelaw powers, Byelaw consents for fish removal - M3a

Weed removal:

- Resources to implement Alien Species Strategy and prompt species eradication programmes – M3b
- Weed cutting standards to be a required element of consents – M4

E7 Invasive non-native (or alien) species pressures

Introduction

Invasive non-native (or "alien") species are not specifically mentioned in the Water Framework Directive. However, the directive requires us to assess other "significant anthropogenic impacts on the status of surface waters". The presence of most invasive species is the result of human activity and it is widely recognised that their presence may affect ecological status. There are on-going discussions at the EU level on how best to deal with invasive non-native species within the Water Framework Directive (WFD).

In this section we explain how we have assessed what can be achieved for surface waters under the first cycle of river basin management; we also explain what can't be achieved and why.

Invasive non-native species are one of the biggest threats to the ecology of our water bodies and, even if action is taken, they may prevent us from meeting the objectives of no deterioration and good ecological status in many water bodies.

The impact from non-native species will increase over coming years as established species continue to spread. Increased trade and travel has already led to a dramatic increase in the arrival of new species into Europe, and we can expect some of these to arrive in England and Wales. Climate change may favour the spread and increase the impact of non-native species. For example, if average temperatures rise, invasive non-native species may migrate northwards from Europe. At the same time, species that are already here but presently benign, may become invasive. If native species are put under increasing pressure by climate change, then the relative impact of invasive non-native species on them might increase.

Highly invasive species are likely to become established and cause problems in any habitat in which they appear. Their propensity to spread rapidly means that prevention is generally the only effective way of dealing with problems, as once they are established, control is likely to be prohibitively expensive or technically infeasible and unsuccessful. Managing non-native plants, particularly in the early stages of establishment is more likely to be effective, but only if legislation continues to permit herbicide use in or near water. Identifying those "environmentally liable" is almost impossible. In some cases, action to control invasive non-native species through chemical, biological or physical means could cause environmental damage itself.

As an example of the invasive non-native species problem, the North American signal crayfish, *Pacifastacus leniusculus*, is established in many water bodies in England and Wales and has caused the widespread extinction of native crayfish populations. In some parts of the Thames, these crayfish have almost eliminated many larger invertebrate species and thereby have had a direct impact on ecological status. There is currently little prospect of eliminating this species. The key measure is to prevent its spread into new areas. Alternative objectives may be required for some water bodies where serious infestations already exist on the basis of both technical feasibility (no known technical solution is available) and disproportionate cost (unfavourable balance of costs and benefits).

Apart from the cost in biodiversity terms, invasive non-native species can also create a huge economic cost to a wide range of sectors, probably of the order of several billion pounds annually in Britain. For example, it is expected to cost £70 million to deal with invasive weeds such as Japanese knotweed on land destined to host the infrastructure of the 2012 London Olympics. Invasive non-native species pose a particular threat to flood risk management; invasive non-native plants may block channels and the Chinese mitten crab burrows into

flood and coastal defence works causing extensive damage. Many organisations (e.g. Highways Agency, rail authorities, local authorities, agencies, British Waterways, Rivers Trusts and others) spend millions of pounds per year attempting to control a few key species. The Environment Agency alone spends around £2 m per annum. The general public is engaged through their concern for the impacts on their fisheries and conservation interests, through its wide coverage in the media and, to a lesser extent, by becoming involved in control measures through voluntary organisations (e.g. BTCV and Wildlife Trusts).

Given that invasive non-native species have such a broad economic impact, it is particularly important that we assess the wider economic benefits that would be achieved by any invasive non-native species measures considered for river basin management plans.

The importance of this issue is reflected by the development of the "Invasive Non-Native Species Framework Strategy for Great Britain" (May 2008) by the Government (www.nonnativespecies.org). While we will ensure that this strategy will deliver WFD objectives, its scope is much broader; it covers terrestrial ecosystems and deals with the economic, conservation and health impacts of invasive non-native species.

The risk of invasive non-native species to WFD objectives

There is no environmental standard for invasive non-native species. While the presence of certain invasive non-native species is known to have an impact on ecology, their impact on ecological status as we measure it is generally unknown and unclear.

However, for a few species we do know, or can deduce, that they have an impact on ecological status and we know that the further spread of those species is likely to adversely affect ecological status. A formal assessment of the ecological impact of each invasive non-native species of concern and an assessment of the cost-effective measures for their control is a key measure that has started as part of the action plan for the "Invasive non-native species framework strategy for Great Britain".

A summary of the WFD Article 5 risk assessment for alien species is given in Table 11 and is based on the best available data on the distribution of the ten species of particular concern. The risk assessment is a significant under-estimate of the pressure because the list of species of concern is now greater (see below) and the available data on the distribution of those species is poor.

Table 11. **Summary of the Risk Assessment for Alien (Invasive Non-Native) Species**

Number of water bodies at risk from alien (invasive non-native) species				
Risk Category	**Lakes**	**Rivers**	**Transitional**	**Coastal**
Number of water bodies	763	6114	135	93
At Risk	0	0	0	0
Probably at Risk	39	1205	50	43
Probably Not at Risk	380	4509	73	48
Not at Risk	0	0	0	0
Not assessed	344	400	12	2

To deal with the different levels of uncertainty identified above UK WFD Technical Advisory Group (UKTAG) have put relevant species into three groups:

- **high impact** (invasive non-native species known to be invasive and documented as causing harm);

- **low impact** (a low probability of becoming invasive and field observations over many years have indicated low impact)
- **unknown impact** (probability of becoming invasive is unknown and a full risk assessment is required).

A summary of the outcome of this process is given in table 12.

Table 12. **Summary of UKTAG high, low and unknown impact taxa.**

Impact group	Number of plant species	Number of animal species	Total
High	14	14	28
Low	9	15	24
Unknown	22	48	70
Total	45	77	122

("Revised classification of alien species according to their level of impact", UKTAG, June 2009).

This system of grouping invasive non-native species according to their risk is used to influence the classification of water bodies as follows:

"A water body will be classed as worse than high status if there is evidence that one or more species of high impact has become established over a significant spatial extent of the water body.

A water body will be classed as worse than good status if there is evidence that an alien species on the high impact list is causing the biological quality elements to deviate more than slightly from their reference conditions. The evidence used to assess whether the impacts of listed alien species are incompatible with good status will be obtained from biological quality element monitoring results where suitable data are available. Where those data are unavailable (e.g. because of the limitations of the biological classification tools), the evidence may be derived from risk analyses. In the latter case, if the risk analyses indicate that status is worse than good, the status assigned on the basis of the alien species assessment will be moderate."

We have applied this assessment using available information on the distribution of invasive non-native species. However, the result will underestimate the impact of invasive non-native species as the available data is poor in the extent of its coverage and does not consider projected risks resulting from new invasive species and changing patterns of current invasive species (e.g. further spreading etc). The availability of reliable information on the current and changing distribution of invasive non-native species would improve our confidence when we determine the reasons for failure in ecological status at a particular water body. Developing a central data repository for invasive non-native species is therefore a key measure that we have begun.

What can be achieved in the first cycle?

Early action to prevent invasive non-native species becoming established is much more cost-effective and sustainable than the long-term control of a well-established species because eradication is generally technically infeasible and/or disproportionately expensive.

By the end of the first cycle of river basin management (2015) our aim is that through concerted actions there has been no deterioration in the ecological status of water bodies due to pressure from invasive non-native species.

Therefore our planning assumptions are:

- A default objective of no deterioration.
- For Natura 2000 sites an objective of favourable conservation status by 2015 (Further details of invasive non-native species measure appraisal for these sites is located at Annex D).
- For all sites at risk of not achieving good status due to invasive non-native species we are generally setting alternative objectives (lower objectives) on the basis of technical feasibility (no known technical solution is available) or disproportionate cost (measure not worthwhile).
- Ongoing work may identify that it is possible to act on some species to improve status in some water bodies. Therefore alternative objectives (lower objectives) will be reviewed such that good status or extended deadlines are set in future cycles of river basin management.
- The main concerted effort to tackle this pressure will come through the 'Invasive Non-Native Species Framework Strategy and Action Plan for Great Britain' (May 2008). Our activity will be within the scope of this framework.
- We commit to the concerted actions under the Invasive Non-native Species Framework action plan that we are certain will benefit the ecology of aquatic ecosystems.

Outline measures

Given the nature of the invasive non-native species, actions taken in isolation at a water body scale are unlikely to work (due to re-invasion from elsewhere) unless they are part of a concerted national effort. So all of the measures for invasive non-native species in river basin management plans (including M4 measures) sit within the Invasive non-native species action plan for Great Britain and many of the measures below will be delivered by that action plan.

Measures

- The GB Programme Board will commission standard risk assessments to identify the highest impact species (published at http://www.nonnativespecies.org/) and identify priority invasive species for mitigation and control action at GB and/or national levels
- Through the use of working groups or lead bodies draw up Individual Species Action Plans for species identified as presenting particular risk levels, to minimise the risks associated with them
- Make appropriate use of existing legislative powers, for example, to prohibit the sale of species which present the highest risk. (other examples: Salmon and freshwater fish act (S30); Import of live fish act; Environment Agency Fisheries byelaws; Convention on biological diversity; NERC Act; Habitats Directive; IMO convention on ballast water)
- Establish a central repository for holding data on invasive non-native species distribution and ensure that data flows on to it.
- Draw together a database of projects to facilitate better information sharing and to make the best of opportunities for partnership working and other resource synergies
- Contribute to the development of any EU level initiatives to improve legislation and controls relating to the threat posed by invasive non-native species
- Set up and maintain a website on invasive non-native species issues which links to agencies, NGOs and others working on invasive non-native species. This will form a key source of information on governmental action and progress, and on other programmes and initiatives taking place within GB
- Increase awareness of the importance of the 'preventative approach' in addressing the threats posed by invasive non-native species
- Continue to raise awareness with the public of the risk of transferring non-native species accidentally

- Establish National Invasive Non-Native Species Forums to plan, prioritise and coordinate action.
- Develop a national early warning system with contingencies for rapid response control measures to eradicate new invasions
- Integrate invasive non-native species control measures across all policy areas
- Provide advice and training on identification, control and disposal of invasive non-native species to all relevant groups
- Develop and implement codes of practice to reduce the spread of invasive non-native species caused incidentally by the practice of all relevant sectors (e.g. Code of practice for the management of Japanese Knotweed on development sites)
- Reduction of extent of invasive non-native species by operations (e.g. FRM maintenance programme; other direct works either alone or in partnership with others; reduction in N and P by water quality programme; PSA targets; UKBAP)
- Seek sustainable and cost-effective methods for managing established invasions, such as biological control.
- Support established local fora by providing advice and guidance

Additional measures for 2009

Additional measures have been funded for the period June 2009 to March 2010 as follows:

- Research into novel control methods
- Eradication and control at selected SSSIs and Natura 2000 sites
- Control and eradication of topmouth gudgeon (*Pseudorasbora parva*), the African clawed-toad (Xenopus laevis), fathead minnow (Pimephales promelas) and water primrose (*Ludwigia grandiflora*) at selected sites
- Local trials to control floating pennywort (Hydrocotyle ranunculoides)
- Work to raise awareness of the issue amongst the public and target groups
- Control actions by selected local fora

Measures excluded.

Once established, it is not technically feasible or it is disproportionately expensive to control some invasive non-native species in the wider environment (although intensive and expensive measures may be considered to be feasible and not disproportionately expensive at protected areas where the benefits are greater).

For example, using existing methods it is technically infeasible (no known technical solution is available) to control signal crayfish at sites where they are established.

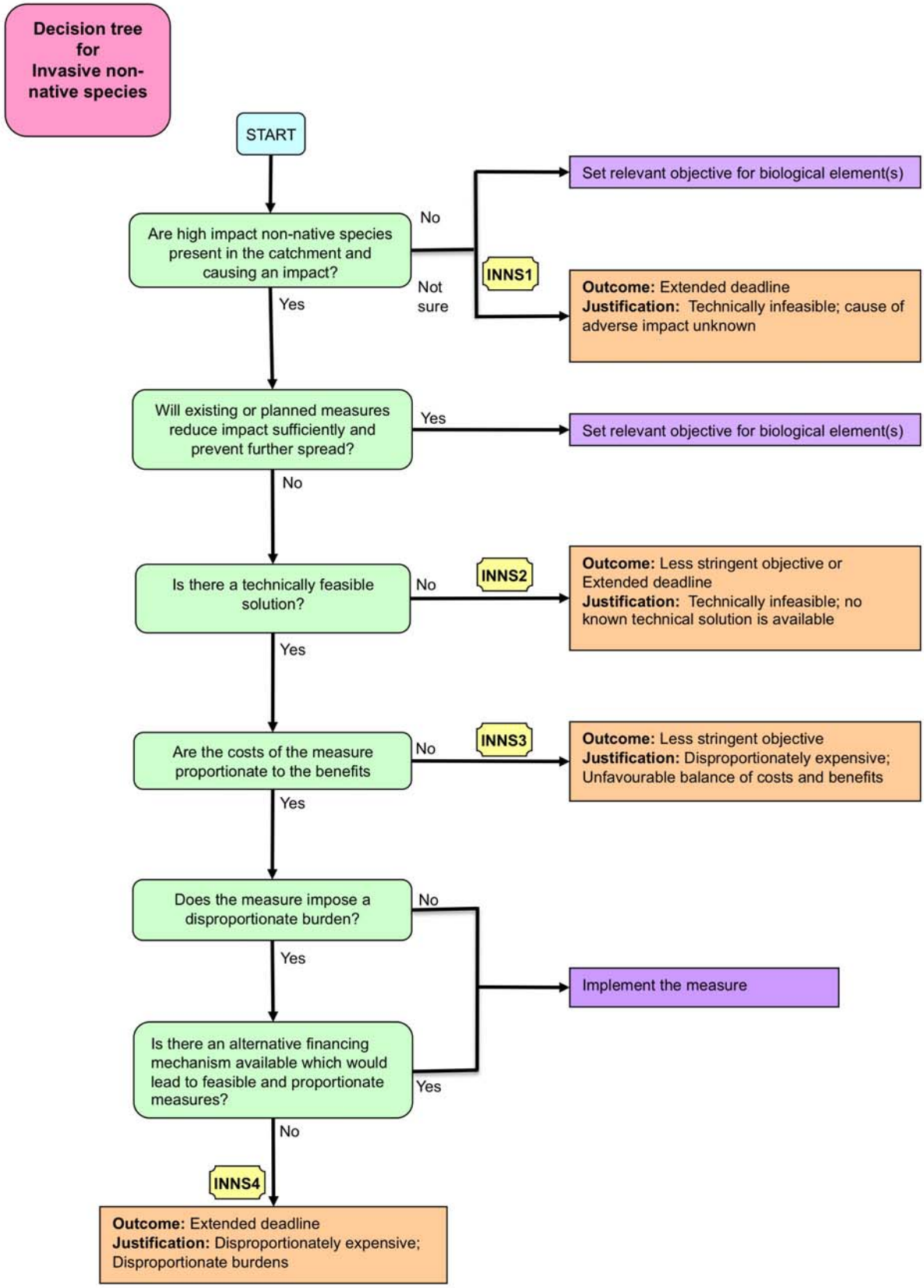
Research has estimated that in Wales alone, it will cost £76 million for an eradication programme for Japanese knotweed using existing methods. There is a high risk that the programme would have been unsuccessful and the benefits in terms of delivering good ecological status are unclear. So this is considered disproportionately expensive (unfavourable balance of costs and benefits).
However, we will seek opportunities to encourage, or support, collaborative research into novel control methods (such as biological control agents).

Setting objectives for individual water bodies

The measures outlined above are, with few exceptions, strategic actions at the national or regional scale as this is the only efficient and effective way to deal with this pressure. However, objectives have to be set at the water body scale.

The decision tree below outlines how we will make decisions on what objective to set for individual water bodies, where we have information on invasive non-native species.

The starting point is an initial assessment of the species present and the impact they are causing on ecological status. Currently, we have this information available for very few water bodies. This is because, until we had undertaken the risk assessment and other work in preparation for the WFD, we had not appreciated the nature of the pressure and its likely impact on ecological status. Therefore, it will be a priority to improve the information base over the first cycle of the river basin management plan; improved information on the distribution of species will come from our own monitoring and data collected by the GB Strategy data repository; improved information on the impact will come from an analysis of our own biological data and that has begun.


Decision tree for Invasive non-native species
START
Are high impact non-native species present in the catchment and causing an impact?
No
Not sure
Yes
INNS1
Set relevant objective for biological element(s)
Outcome: Extended deadline
Justification: Technically infeasible; cause of adverse impact unknown
Will existing or planned measures reduce impact sufficiently and prevent further spread?
Yes
Set relevant objective for biological element(s)
No
Is there a technically feasible solution?
No
INNS2
Outcome: Less stringent objective or Extended deadline
Justification: Technically infeasible; no known technical solution is available
Yes
Are the costs of the measure proportionate to the benefits
No
INNS3
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
Yes
Does the measure impose a disproportionate burden?
No
Yes
Implement the measure
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
No
INNS4
Outcome: Extended deadline
Justification: Disproportionately expensive; Disproportionate burdens

Reference	INNS1a
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Suspected – Alien Species
Alternative objective	Extended Deadline
Reason for alternative objective	Technically infeasible – cause of adverse impact unknown

Justification for alternative objective

Low confidence that the high impact invasive non-native species present in the catchment are causing an impact

High impact invasive non-native species are present in the catchment, but it is not known whether or to what degree they are having an impact and causing the biological element(s) to be at less than good status.

Until the impact of the invasive non-native species can be confirmed, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

The biological tools to assess good ecological status have only just been developed. Our understanding of how and to what degree the presence of invasive non-native species in a catchment impact on the biological elements of ecological status is not yet well developed. We have already started R&D work to improve our understanding and diagnosis techniques (see below).

An extended deadline for achieving good ecological status is therefore required. This will to allow time to undertake investigations to confirm that established invasive non-native species are causing the observed impact and to identify and implement measures.

Investigation type

Investigate to confirm the cause of the impact

Example of investigation

Initially, we will undertake R&D to develop a method of using data from existing monitoring programmes to characterise the impacts of high-risk invasive non-native species; if successful this will allow better diagnosis of the problem at a local level. We have demonstrated the impact of the Signal Crayfish on the River Kennet taking this approach.

If this approach is unsuccessful, we will undertake scientific monitoring designed specifically to detect the impact of particular species; this may include field experiments involving manipulation of the densities of invasive non-native species or their exclusion.

Possible future measures

There are only a few technically feasible methods for removing established populations of most of the invasive non-native species. These include application of biocides, mechanical removal and biological control agents. Many of these techniques have limited effectiveness, and in some cases will not be cost beneficial because of the negative impact they have on other species, or their use is not acceptable to interested stakeholders.

Research is being undertaken into more cost effective control techniques including the identification and testing of biological control agents (e.g. for Himalayan balsam and giant hogweed) and trials of the mechanical removal of floating pennywort.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Uncertain until we understand the cause of the adverse impact.

Reference	INNS2a
Element predicted not to achieve good by 2015	Biological elements
Reason for failure	Confirmed – Alien Species
Alternative objective	Extended Deadline
Reason for alternative objective	Technically infeasible – no known technical solution is available

Justification for alternative objective

There is no effective method of control or eradication available for some established non-native species.

Established invasive non-native species are likely to be causing the biological element(s) to be at less than good status but no known technical solution is available. Because no technical solution is available it is not technically feasible to achieve good status by 2015.

As an example, Signal crayfish *Pacifastacus leniusculus*, is established in many water bodies in England and Wales and has been shown to drastically reduce the abundance of many larger invertebrate species and thereby has had a direct impact on ecological status. Intensive trapping of Signal crayfish in rivers has been shown to be ineffective or even harmful; biocide may be effective in eradicating new populations locally to limit their spread but its application is restricted due to site-specific issues such as drinking water supplies and livestock watering; R&D indicates that the use of crayfish pheromones does not make trapping a more effective control method.

Investigation type

Investigate technically feasible solutions

Example of investigation

R&D to seek sustainable and cost-effective methods for managing established invasions. This type of research generally has a high to moderate risk of failure. Recent research has identified a host-specific biocontrol agent for *(the bug Aphalara itadori)* Japanese knotweed (*Fallopia japonica)* that, subject to Government approval for its release, could reduce the impact of Japanese knotweed.

Research is being undertaken to identify and test further biological control agents (e.g. for Himalayan balsam *(Impatiens glandulifera)* and giant hogweed (*Heracleum mantegazzianum)*) and to trial the mechanical removal of floating pennywort *(Hydrocotyle ranunculoides)*.

Possible future measures
Sustainable and cost-effective methods for managing established invasions.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
No known solution is currently available.

E8 Morphology pressure

Introduction

Hydromorphology is a term used in the Directive to describe, in combination, the hydrologic and geomorphological processes and attributes of rivers, lakes, estuaries and coastal waters. For rivers, hydromorphology considers not only the form and function of the channel but also its connectivity, which defines its ability to allow upstream and downstream migration of aquatic organisms and maintain natural continuity of sediment transport through the fluvial system. The Directive requires surface waters to be managed in such a way as to safeguard their hydrology and geomorphology so that ecology is protected. In doing so, the Directive recognises the key role water resources and habitats play in supporting healthy aquatic ecosystems.

This section deals with the morphology and continuity (or connectivity) aspects of hydromorphology. Details of the methods and standards used to risk assess morphological pressures and to designate and classify water bodies as artificial or heavily modified can be found in Annexes G, I and A are also available on the UKTAG website (http://www.wfduk.org/)

The purpose of the section is to detail the approach we have taken to the identification and planning of morphological improvement measures and subsequent objective setting process for surface water bodies.

Current data quality and availability

Water bodies have been risk assessed for pressures on morphology and subsequently designated as artificial and heavily modified using nationally available datasets. These datasets provide information on both direct modifications to water bodies (i.e. presence of modifications for flood protection purposes using the Environment Agency's national flood and coastal defence database, NFCDD) and on wider catchment scale pressures (i.e. areas of intense urbanisation derived from wider land use datasets).

The designation process, detailed in Annex I, looks at all modifications that affect the water body. Considering the scale and number of water bodies and available data it is not at present possible to provide detail of individual modifications to each water body.

For the river basin management plans, all designations and classifications have been reviewed by local Environment Agency staff who are familiar with each water body. Where possible, they have been discussed with other bodies for example, Internal Drainage Boards, the Ports and Inland Navigation Sector and Water Companies.

Currently, data on hydromorphological quality and associated pressures and impacts can be found in a number of Environment Agency national and regional datasets. A common attribute of most of these databases is that the data is not arranged in a manner that is sympathetic to WFD requirements. This makes assessing the status of a water body difficult particularly from the hydromorphological perspective.

There is also a range of data that is held outside of the Environment Agency. For example a number of operators such as local authorities, Internal Drainage Boards, British Waterways and Water Companies hold data on engineering assets managed for flood risk management, navigation or water supply/storage purposes. The coverage and availability of such data varies across from organisation to organisation and where possible we utilised such data when undertaking water body assessments.

We have already initiated a project to develop a centralised and fully supported database for all morphological data for delivery within the first cycle of river basin management.

Evidence base for morphology

The Environment Agency has reviewed the scientific evidence for linking specific hydromorphological pressures to ecological impacts for rivers, lakes and transitional and coastal waters

These reviews reveal some difficulties in attributing ecological impacts to particular hydromorphological changes. The impacts of a change are often complex and depend not just on the nature of the modification but also on the aquatic environment – so the same modification in different sites is likely to result in different ecological impacts. In addition, impacts might be felt a considerable distance from the site of the modification, and/or some time after the modification takes place, and the cumulative effects of different impacts are not always clear and are unlikely to be simply additive.

The risk assessment and designation process are based on the spatial extent of modification within a water body or adjacent land, and assumes a direct link between pressure and risk of failure. However there is uncertainty, resulting from limited scientific evidence, about the specific impacts that morphological pressures have on biology. This results in uncertainty in the extent to which these pressures (and associated measures) are relevant in terms of achieving Water Framework Directive objectives.

The Environment Agency has already started to work with stakeholders to improve the evidence base in the first river basin management cycle and are developing a number of catchment trials and pilots to:

- trial the effectiveness of restoration and mitigation measures
- collect additional data to determine cause and effect relationships between pressures and impacts on biology
- develop mechanisms to plan and deliver measures through catchment based partnerships.
- investigate the benefits and other impacts of mitigation measures

These investigations, details of which are provided under the programmes of measures in Annex C, will enable us to focus those measures where we have high confidence that they will deliver improvements to ecological status or potential.

Whilst this is a long term activity it is expected that significant progress will have been made in time to support morphological assessments and programmes of measures for the second cycle of river basin management planning.

Designation of artificial & heavily modified waters

In some cases where the hydromorphology of a water body has been physically altered it may be difficult for the water body to meet good ecological status. If, in order to achieve good status, it would require changes to a water body's hydromorphology that would have significant adverse effects on the water body 'use' i.e. the social or economic activity responsible for those modifications, then it can be designated as artificial or heavily modified (UKTAG, 2008). The WFD also requires that the current 'use' cannot be provided by a significantly better environmental option.

Relevant 'uses' and human activities are defined as navigation (including port facilities, or recreation), activities for the purposes of which water is stored (such as drinking-water supply, power generation or irrigation), water regulation, urbanisation, flood protection, land

drainage, the wider environment (e.g. sites designated for conservation), and other important sustainable human development activities.

In England and Wales a two-stage approach has developed to apply the Article 4(3) tests to those water bodies provisionally identified as artificial water body or heavily modified. The two stage process followed the principles outlined in the Common Implementation Strategy guidance document no.4 (European Commission, 2003). The process comprised of a rapid designation of 'obvious' artificial and heavily modified water bodies and a further detailed assessment of those water bodies that could not be designated in the rapid designation stage. Full details of the methods used to designate water bodies as artificial or heavily modified can be found in Annex I.

A core part of the designation process involved assessing if restoration to good ecological status would impact on water body use and whether water body modifications associated with the use represent the best environmental option. Such assessments were undertaken within the constraints of the available data and evidence. Given these data and evidence limitations a number of principles were adopted:

1) Designation has been based where possible on existing asset data. For example, for flood risk management activities, the Environment Agency's National Flood and Coastal Defence Database has been used. The assumption is that all assets contained within this dataset provide a current 'use' i.e. they contribute to flood protection.

2) During the designation process, where modifications were extensive and deemed significant then it was assumed that restoring the water body to GES would have a significant adverse impact on the use and benefits provided by these modifications. In many cases the exact ecological benefit/s of whole scale removal or alteration of modifications are uncertain and the costs of undertaking such activities are likely to be disproportionately costly.

3) Assets built in more recent times which were subject to requirements to assess environmental implications generally provide the 'best environmental option'. For example all flood and coastal risk management (FCRM) schemes are subject to assessment under the Environmental Impact Assessment (EIA) Regulations therefore ensuring that the best environmental option is promoted. Work is being undertaken to update EIA regulations and FCRM project appraisal guidance to take account of new WFD requirements to ensure all future activities take full account of water body status and objectives identified in the river basin management plans.

4) Through a programme of trials and data collection the hydromorphological evidence base is being developed. As results emerge, action will be taken to implement measures which are shown to have ecological benefits and which are not disproportionately costly. This investigation work will further ensure that limitations are addressed in time for the review of artificial and heavily modified water body designations required for the second cycle of river basin management.

Identification of good ecological potential for artificial & heavily modified waters

To determine the ecological potential of artificial and heavily modified water bodies the Environment Agency has applied the methodology[24] recommended by UKTAG[25].

[24] http://www.wfduk.org/tag_guidance/Article%20_11/POMEnvStds/gep_guidance_final

[25] The UK Technical Advisory Group on the Water Framework Directive established by the UK government administrations and comprising representatives from SEPA, the Environment Agency, the Northern Ireland Environment Agency, SNH, Natural England, Countryside Council for Wales and the Department for the Environment & Local Government in the Republic of Ireland.

The methodology is based on an approach known as the 'alternative approach' by UKTAG[26]. This approach was agreed between Member States and the European Commission under the Common Implementation Strategy for the Water Framework Directive[27]. More details on the method can be found in Annex A and the supporting document at http://www.wfduk.org/UKCLASSPUB/.

It has not been possible to differentiate between water bodies whose hydromorphological characteristics are consistent with good ecological potential and those whose characteristics are consistent with maximum ecological potential. Consequently, the hydromorphological characteristics of such bodies are identified as being consistent with 'good or maximum' ecological potential collectively. The Directive does not require these classes to be differentiated for reporting purposes.

This 'alternative approach' will be reviewed and updated for each river basin management planning cycle as methods and understanding improve. The reviews will take account of experience of applying the guidance, information from environmental monitoring programmes, research projects on the impacts resulting from physical modifications, and information on the effectiveness and practicability of different mitigation measures.

The decision on where measures are applied within water bodies is not part of the classification process; this is addressed as part of the programme of measures and the wider river basin management planning process.

Identification and development of measures

A review has been undertaken of the range of restoration and mitigation measures to address hydromorphological pressures. This includes both catchment and water body or sub-water body scale measures. Relevant measures have been incorporated into a morphology measures toolkit containing information on the range of measures options available and details of estimated scale of effect, ecological benefits, & cost- effectiveness. This toolkit has assisted with the prioritisation of measures for promotion in the first river basin management cycle (up to 2015) and will be employed in future river basin management.

The toolkit has three components:

- Pressures: This contains a list of hydromorphological pressures, and the measures that are likely to help mitigate the impacts of these pressures.
- Measures: This worksheet contains a list of specific measures, each of which is accompanied by a brief description. Measures are grouped into 11 broad categories, see table below.
- Evaluation tool: This worksheet contains a detailed description of each measure and an assessment of their effectiveness in delivering hydromorphological improvements.

Details of broad measures categories and specific measures and potential measure categories (M1 – M4) are provided in table 13.

[26] This is an alternative to that identified in CIS guidance. The alternative approach is considered less uncertain and more pragmatic then the more theoretical CIS approach

[27] http://circa.europa.eu/Members/irc/env/wfd/library?l=/framework_directive/thematic_documents/hydromorphology/technical_reportpdf/_EN_1.0_&a=d (please note you will be asked to create an account when you first access this site)

Table 13: **Broad measures categories and specific measures for addressing hydromorphological pressures (from Environment Agency Morphology measures toolkit)**

Measure type	Specific measure	Description [inc. measure category, M1, M2, M3, M4]
Working with Physical Form and Function	Removal of hard engineering structures (e.g. naturalisation)	Remove existing hard structures (e.g. concrete bank protection, concrete beds, sea walls) to allow natural processes to re-establish [M3a, M4]
	Managed Realignment of flood defences	Breach, remove or set back existing flood defences and allow previously defended areas to become inundated, recreating coastal and estuarine flood zones and/or restoring connectivity with floodplain [M3a]
	Managed Retreat	Allow the coastline to erode naturally (applies to defended and undefended coastline) [M3b]
	Recreate a sinuous river channel (re-meandering)	Recreate a sinuous channel in artificially straightened river reaches to provide an approximation of a natural planform [M3b]
	Narrow over-wide channels	Instigate narrowing of over-wide channels using structures and/or vegetation to encourage sedimentation along channel margins [M3b]
	Create low flow (2-stage) channels in over-widened/over-deepened channels (increase morphological diversity)	Create low-flow channel in over widened channel (could be meandering, through use of deflectors) [M3b]
	Reconnect and restore historic aquatic habitats	Reconnect cut off meanders and abandoned secondary channels to increase water conveyance and habitat quality, and restore backwater habitats by removing encroaching vegetation [M3b]
	Recreation of gravel bars and riffles using permanent and/or temporary bed structures (increase morphological diversity)	Install structures to encourage sediment accretion and localised diversity in channel bedforms [M3b]
	Bank reprofiling (rehabilitation)	Reduce bank slopes to reduce erosion, encourage stabilisation and improve marginal habitat [M3a, M3b, M4]
	Cliff reprofiling	Reduce angle of cliff slope to reduce erosion, encourage stabilisation and improve marginal habitat [M3b]
	Beach reprofiling	Modify profile of beach [M3b]
	River bed raising or lowering (regrading)	Regrade bed to raise levels in over-deepened channels of lower levels in over-widened channels [M3b]
	Beach Recharge	Introduce sediment (e.g. from dredging) to areas where erosion is a problem [M3b]
	Replenishment of mobile sediments	Introduce sediment from the mobile load (fine sediments, gravel), e.g. to recreate bars and riffles [M3b]
	Adopt strategic options and policies promoting natural recovery	Apply policies to encourage natural recovery of water bodies (e.g. promote removal of unnecessary structures) [M3a]

Measure type	Specific measure	Description [inc. measure category, M1, M2, M3, M4]
	Use of engineering techniques to assist natural recovery	Assist natural recovery of water body with use of sympathetic engineering techniques (e.g. replacement of hard defences) [M3a, M3b]
Structural Modification	Replace existing structures with new structural designs to minimise impact hydromorphological impact (avoid like for like)	Use improved design when replacing structures (e.g. use clear-span bridges instead of piered structures) [M3a]
	Replace hard defence with soft engineering	Replace existing hard structures with soft / bioengineered solutions [M3a, M3b, M4]
	Modify existing structures	Modify existing structures to reduce pressure (e.g. add culvert, reverse sluice, lower defence, alter dimensions, change orientation or profile) and/or to allow free passage of wildlife [M3b, M4]
	Construct breach or spillways	Install structures that allow controlled release of water through existing defences [M3b]
	Implement Tidal Exchange Systems	Insertion of pipes in sea defences to allow controlled exchange of tidal water with the purpose of increasing elevation of land behind defences [M3b]
	Reinstate natural outfall level	Allow release from impounding structures once water reaches natural level of outfall [M3b]
	Install fish pass	Install fish pass to allow free passage around structure [M3b]
	Use soft engineering techniques	Use soft engineering techniques instead of hard engineering (e.g. timber piling, coir matting, willow mattresses, fibre rolls, grassed composites, fabric cell revetments with pockets for vegetation establishment, and open cell lattice revetments with gaps for planting) [M3b]
Operations and Maintenance	Cessation of maintenance	Cease maintenance of structures to allow natural conditions to develop [M3b]
	Develop/review appropriate dredging strategy (timing, selective dredging, phasing, extent, technique)	Develop dredging strategy that minimises hydromorphological damage [M3a]
	Develop/review appropriate vegetation management plans	Develop vegetation management strategy that minimises hydromorphological damage [M3a}
	Change technique to manage and minimise disturbance to morphology (access and operation)	Minimise damage by adopting controlled management procedures for all works on water body (e.g. limited access points, working from one bank only, use of floating pontoons whilst recharging sediment, use of silt curtains and low turbidity suction dredgers whilst dredging, and use low-impact vegetation management techniques such as hand picking, selective cutting, boat-mounted apparatus, and long-reach excavators) [M3a]
	Retain marginal vegetation	Retain habitats in marginal zones to reduce erosion and maintain bank stability [M3b, M4]

Measure type	Specific measure	Description [inc. measure category, M1, M2, M3, M4]
	Control or eradicate invasive species causing hydromorphological impact	Remove non-native invasive species that can cause hydromorphological as well as ecological damage (e.g. signal crayfish and Japanese knotweed cause structural damage; Himalayan balsam and giant hogweed enhance winter erosion). Allow natural recovery, or assist natural recovery, e.g. by spraying seed mix on cleared areas [M3a]
	Install silt, sand or gravel traps	Remove excess sediments through use of suitable sediment traps [M3a, M3b, M4]
	Strategic placement of dredged material (e.g. creation of shallow water zones or gravel bars)	Use dredged materials to improve hydromorphological quality (e.g. creation of shallow water zones or gravel bars) [M3b, M4]
	Phased dewatering of navigation channels whilst maintenance takes place	Drain non-adjacent sections prior to undertaking maintenance works to minimise morphological and ecological impacts (phased dewatering) [M3b]
	Change operational regime of weirs and locks	Restore more natural discharge regime (natural variations to rainfall rather than controlled variations), e.g. by opening locks and weirs [M4]
Land management	Removal of stock	Remove livestock from areas of concern - use of a carefully chosen 'sacrifice field' where damage will have the least impact [M3b, M4]
	Reduce stocking densities	Reduce numbers of livestock in areas of concern or during wet conditions to limit damage to soil structure and reduce sediment yield [M3a]
	Reduce grazing time (daily and/or over the season)	Limit grazing time in areas where erosion or soil compaction may be a problem [M4]
	Introduction of stock-proof fencing (reduce bank side erosion)	Reduce bank erosion by restricting livestock access [M3b]
	Improve river crossings for livestock and farm access	Reduce damage to water body by installing bridges for livestock and farm machinery [M4]
	Establish/relocate feed and water troughs to reduce erosion	Create drinking ponds to provide livestock with water and reduce trampling of river and lake banks [M4]
	Cultivate land for crop establishment in spring rather than autumn	Cultivate land early to minimise erosion and establish ground cover in winter [M3a]
	Adopt minimal cultivation systems	Establish crops which require minimal cultivation, to minimise soil erosion, runoff generation and compaction by farm machinery [M3b]
	Cultivate and drill across slope	Cultivate in line with contours to reduce channelling of runoff [M4]
	Leave autumn seedbeds rough	Leave rough vegetation to protect seedbeds which are vulnerable to erosion [M4]
	Avoid tramlines over winter	Avoid use of tramlines in arable fields to minimise erosion during the winter, e.g. by cultivating winter cereals without the use of tramlines or by establishing paths for spraying once the crops have become established [M4]
	Loosen compacted soil layers	Break up compacted soil to increase infiltration and reduce surface runoff and sediment yield [M4]

Measure type	Specific measure	Description [inc. measure category, M1, M2, M3, M4]
	Establish in-field sediment buffer strips	Leave uncropped areas (grass or natural vegetation) as a barrier to surface water and sediment runoff [M3b]
	Cease maintenance of field drainage systems	Allow sediment and vegetation to build up in field drainage systems to reduce conveyance to water bodies [M3a]
	Re-site gateways away from high-risk areas	Move gateways away from areas where soils erosion, compaction and runoff are problems [M4]
	Re-route informal vehicle and livestock access ways across slope	Move pathways across slope to minimise erosion through creation of downslope flow pathways [M4]
Water Management	Introduce minimum flow limits	Prevent flows falling below a specified level (below which hydromorphological quality may be impaired) [M4]
	Introduce compensatory flows (not just at low flow levels)	Maintain flow levels by introducing flow from other water bodies [M3a]
	Regulate abstraction and discharge	Regulate abstraction and discharge to maintain flow regimes and avoid unnecessary high or low flows [M3a]
	Reduce abstraction	Encourage use of efficient sustainable irrigation systems and raw water storage areas [M1]
	Implementation of SUDS	Implement Sustainable Urban Drainage Systems - permeable rather than impermeable surfaces, buffer strips to manage runoff, etc. [M3a, M3b, M4]
	Establish and maintain artificial (constructed) wetlands for use as sediment traps	Create areas of wetland vegetation in suitable areas to help retain sediment and associated contaminants (grants available for farmers) [M3a]
	Water efficiency planning (domestic, business, industry, agriculture)	Improve efficiency of water usage - limit abstraction and maintain river flows [M3a]
Habitat Creation	Introduce riparian vegetation/green corridors	Introduce riparian vegetation to reduce water and sediment in wash, provide shade, introduce organic material and provide habitat [M3b]
	Introduce lakeside vegetation	Introduce lakeside vegetation to reduce water and sediment inwash, provide shade, introduce organic material and provide habitat [M3b]
	Encourage saltmarsh recovery	Encourage recovery of saltmarsh vegetation to protect coast from erosion [M3b]
	Create reed fringes	Create reed fringes around water body to dissipate wave energy and reduce erosion [M4]
	Create compensation habitats	Create habitats to replace those that are lost or damaged, e.g. aquatic, riparian, offline pond (with no direct connections to other water bodies) [M3b]
	Create shallow margin in front of hard defence	Create shallow margin habitats in front of existing defences using soft engineering techniques/double row piling to encourage vegetation in slow flow areas [M3b]

Measure type	Specific measure	Description [inc. measure category, M1, M2, M3, M4]
Development Control and Planning	Update policy and process guidance to take account of morphology	Ensure that existing guidance and instructions are updated in order to avoid or minimise hydromorphological impacts [M3a]
	Limit further development of the bank and/or near-shore zone	Limit new development in areas adjacent to a water body, to minimise hydromorphological pressures and impacts [M3b]
	Avoid or limit development in the floodplain	Prevent unnecessary floodplain development to minimise hydromorphological pressures and impacts [M1]
	Regulation of in-channel structures	Regulate construction, maintenance and operation of in-channel structures, to minimise hydromorphological pressures and impacts [M1]
	Regulation of development in the marine environment	Regulate development in the coastal and marine environment to minimise hydromorphological pressures and impacts [M1]
	Develop and apply a set of General Binding Rules for riparian/lakeside landowners	Develop and apply General Binding Rules, covering best practices for all riparian agricultural activities (livestock and agriculture) [M3a]
Navigation	Encourage reduction of boat wash impacts through traffic management in sensitive areas	Restrict access in sensitive areas or at sensitive times, e.g. by setting annual movement limits
	Limit number of mooring permits available	Employ limits to reduce no of vessels mooring to reduce pressure
	Restrict speed	Introduce speed limits to reduce morphological damage, e.g. from boat wash. Should be 3mph in most constricted and sensitive areas
	Lateral zoning to concentrate boats within a central channel	Confine boats to centre of channel to reduce boat wash effects on banks, e.g. through use of marker posts or buoys
	Avoid or prevent mooring in sensitive areas	Careful planning of mooring facilities to avoid and/or prevent sensitive sites [M4]
	Design moorings for ecological benefit	Employ design to promote ecological benefit and reduce impacts of scour [M3b]
	Encourage use of environmentally friendly vessel design	Introduce shallow draft vessels with shrouded props, modified hulls and speedometers to reduce the hydromorphological impacts of boat movement [M4]
Science	Improve understanding of responses to hydromorphological pressures	Undertake research into the hydromorphological responses resulting from land management pressures [M3a]
	Trial existing mitigation measures	Undertake trials and pilot studies of suitable mitigation measures and monitor effectiveness [M3a, M4]
	Develop and trial new mitigation measures	Use research to inform the development of mitigation measures [M3a, M4]
Monitoring and Appraisal	Hydrological Monitoring	Monitor flow characteristics in rivers, lakes, estuaries and coasts, to identify trends and improve modelling capabilities [M3a, M4]
	Morphological Monitoring	Monitor water levels in rivers, lakes, estuaries and coasts, to identify trends and improve modelling capabilities [M3a, M4]
	Hydrological Appraisal	Monitor changes in shoreline patterns [M3a, M4]
	Morphological Appraisal	Monitor sediment composition - particle size distribution, sources, etc. [M3a, M4]

Measure type	Specific measure	Description [inc. measure category, M1, M2, M3, M4]
Education	Education on use of guidance	Training for regulators and developers on correct use of guidance notes [M3a, M4]
	Education on identifying opportunities for delivering mitigation measures	Training for regulators on identification of opportunities for hydromorphological improvement within new developments [M3a, M4]
	Educate landowners on sensitive management practices	Educate landowners on hydromorphologically-sensitive management practices, possibly with reference to existing guidance (Environment Agency 2003 *Best Farming Practices: Profiting from a good environment* Defra 2005 *Controlling soil erosion*) [M3a]
	Education and awareness raising of impacts of navigation	Information to raise awareness of impacts of bankside, shoreline, offshore activities to water body users [M3b]

Planning and delivery of measures

The Environment Agency and other organisations already undertake a range of activities that contribute to the delivery hydromorphological improvement measures. Examples include current flood risk and coastal management activities, water resources management and involvement in a wide range of catchment and local habitat restoration activities.

Mitigation measures that would contribute to delivery of good ecological status or potential have been identified and prioritised in current Environment Agency capital programmes.

The Environment Agency`s Medium Term Plan (MTP) identifies actual and projected spending on Flooding and Coastal erosion Risk Management (FCRM) projects over a rolling five-year period. The MTP provides a means of identifying funded projects that will incorporate mitigation measures into the project design and final construction phase. Information about the schemes identified in the MTP was used to identify where water bodies may benefit from these mitigation measures and where ecological classification may be improved.

This 'mitigation measures' alignment exercise focuses on:

- River, coastal, estuarine and lakes water bodies that were designated as either heavily modified or artificial and were failing good ecological potential due to mitigation measures not being in place.
- MTP (schemes with funding allocation for years 2009 to 2012).
- MTP schemes that will provide the mitigation measures identified in the classification process as currently 'not in place'.
- Schemes involving the replacement or enhancement of existing assets, rather than new schemes.

This process has identified over 400 mitigation measures, within 67 water bodies that will be in place as a direct result of FCRM funded schemes over the next three or so years. These schemes will help improve the ecological quality of water bodies currently classified as Moderate Ecological Potential (ModEP) or poorer and progress the objective of achieving Good Ecological Potential (GEP).

It is the intention that these planning mechanisms will be fully aligned with the river basin management planning process from cycle 2 onwards.

The Environment Agency has also worked with other organisations, for example the Association of Rivers Trusts (ART) to identify relevant improvement measures that are being undertaken by others to ensure these contribute to the delivery of water body improvements. We will continue to work with partners to identify and align these measures during the first cycle of river basin management.

It is not always possible to identify who should take action to achieve the objective of good ecological status or potential. For example, where we have historic structures or activity where it is no longer clear who was involved and/or who was legally responsible. This is especially difficult where the structures were put there legally under a different legal and regulatory regime, perhaps even required by Government; and/or where the ownership or use of the structure has changed over time. As many past damaging activities were delivered and funded through legally compliant schemes, and as it is difficult to identify responsible parties, it is unlikely that reliance on the 'polluter pays' principle will deliver the extent of restoration works necessary to comply with the requirements of the Directive.

The Environment Agency is currently working with Defra & Welsh Assembly Government to address any “gaps” in existing legislation which were identified during the Defra & Welsh Assembly Government consultation ‘Mechanisms to deliver Water Framework Directive requirements on hydromorphology’, (December 2007). These include proposals for a power to restore the morphology condition of surface water bodies.

Objective setting

The following assumptions have been made when setting objectives for morphology:

1. Where a water body is currently classified at good ecological status or potential then it will have a predicted outcome of good ecological status or potential by 2015.
2. Where a water body is currently classified at moderate ecological status/potential or below and measures have been identified from the above activities and programmes that are planned and funded and assessed as taking the water body to good ecological status/potential, then these have been given objectives of good ecological status or potential by 2015.
3. Where a water body is currently classified at moderate ecological status/potential or below and no measures have been identified from the above activities OR those that have been assessed as not enough to achieve good ecological status/potential by 2015, then these have been given an objective of good status/potential by 2027, the justification for this extended deadline is outlined below.

The decision tree below provides details of the decisions made for determining water body objectives for morphology. It explains how the extended deadlines to reach good ecological status or potential have been assigned to water bodies and the justification behind these decisions. This applies to all water bodies including those that are artificial or heavily modified. The decisions are based on identified reasons for failure; these reasons are related to the pressures which are preventing the water body from reaching good. As hydromorphology is often controlled by a complex set of interrelating pressures some water bodies have more than one reason for failure.

In some cases it will not be possible to achieve good ecological status or potential even if all morphological improvement measures and/or mitigation measures identified are in place. For example other pressures such a diffuse pollution may be preventing achievement of the required ecological status. And without action to address these other pressures, good ecological status/potential will not be achieved. Actions will be taken to tackle the other pressures such as diffuse pollution.

The evidence base for hydromorphology needs to be improved and therefore uncertainty plays a key role in justification of measures, examples can include uncertainty over:

- the exact ecological impact of the particular pressure
- the source of the morphological pressure
- the effectiveness of the measure

In these cases further investigation will be required to reduce this uncertainty so that we can improve our confidence in some measures in time for the second cycle of river basin management.

Setting objectives on the basis of an extended deadline allows improvements to be prioritised over successive planning cycles whilst not imposing disproportionate burdens on those who have to pay for them. Further investigation during the first cycle of river basin management will provide more information on the cost end benefit of measures. Improving the evidence base will also give us greater confidence in the applicability and effectiveness (technical feasibility) of improvement measures.

The implementation of morphological measures will be based on the consideration of:

1. the confidence of the classification
2. the spatial extent of adverse impacts
3. the scale of improvements and mitigation required and hence the costs and the extent of technical planning and preparation required
4. planned asset refurbishment or replacement schedules
5. consideration of other pressures acting on the water body

Measures that are less likely to be disproportionately expensive are:

- Measures to reduce uncertainty – these include measures to improve understanding of the pressure and the relationship between pressure and impact.
- Measures delivering significant improvements - at no or low cost e.g. making barriers to migration passable to migratory species, and reducing maintenance where this allows a degree of natural recovery and does not jeopardise the use.
- Win-wins - such as measures which have economic as well as environmental benefits (for example, beneficial use of dredged material).
- Measures which will deliver improvements for other pressures - as well as for morphology for example, some of the measures for morphology based on agricultural land will also help tackle water resources, sediment and nutrients pressures.

Table 14 below provides examples of measures likely to be considered not disproportionately costly and those likely to be considered disproportionately costly in the first cycle of river basin management planning.

Table 14. **Hydromorphological measures and disproportionate cost**

Hydromorphological improvement measures considered	
Likely not to be disproportionately costly	**Likely to be disproportionately costly**
Measures to reduce uncertainty – improving pressure data, science on pressure/impact relationship and testing/piloting measures.	Wholesale restoration or removal of flood and coastal defences, and other engineered or reinforced channels.
Making barriers to migration passable.	Removal of major infrastructure, bridges and culverts under buildings.
Reducing maintenance to allow natural recovery.	Some sediment management for the ports and navigation sector.
Protection of the riparian zone e.g. anti-livestock fencing to allow natural recovery from overgrazing.	Hull design or other modifications to vessels.
Developing or amending dredging / disposal strategies for maritime navigation.	
Blocking grips and drains to restore upland wetland source areas	

Further investigation during the first cycle of river basin management will provide more information on the cost and benefit of measures. Where a water body is currently classified at moderate ecological status/potential or below and all the measures identified are disproportionately costly when compared to the benefits realised, then a revised less stringent objective may be set for that water body for the second cycle of river basin

management onwards. The option to set a less stringent objective will only be used where a reasonable alternative cannot be found (as illustrated in decision tree below).

The effectiveness of morphological improvement measures is dependent on the existence of other pressures. It is rare that a water body will be subject only to morphological pressures – typically other pressures such as diffuse pollution from agriculture or towns, or point source pollution will also be acting to limit ecological status or potential. In cases where morphology is not the only limiting pressure, measures for morphological improvement would not necessarily see a corresponding improvement to the overall water body quality until further measures are implemented to improve the other pressures. Phasing morphological measures to reflect the implementation of measures to deal with other pressures will allow the maximum environmental improvement and a more efficient use of resources.

Managing future modifications

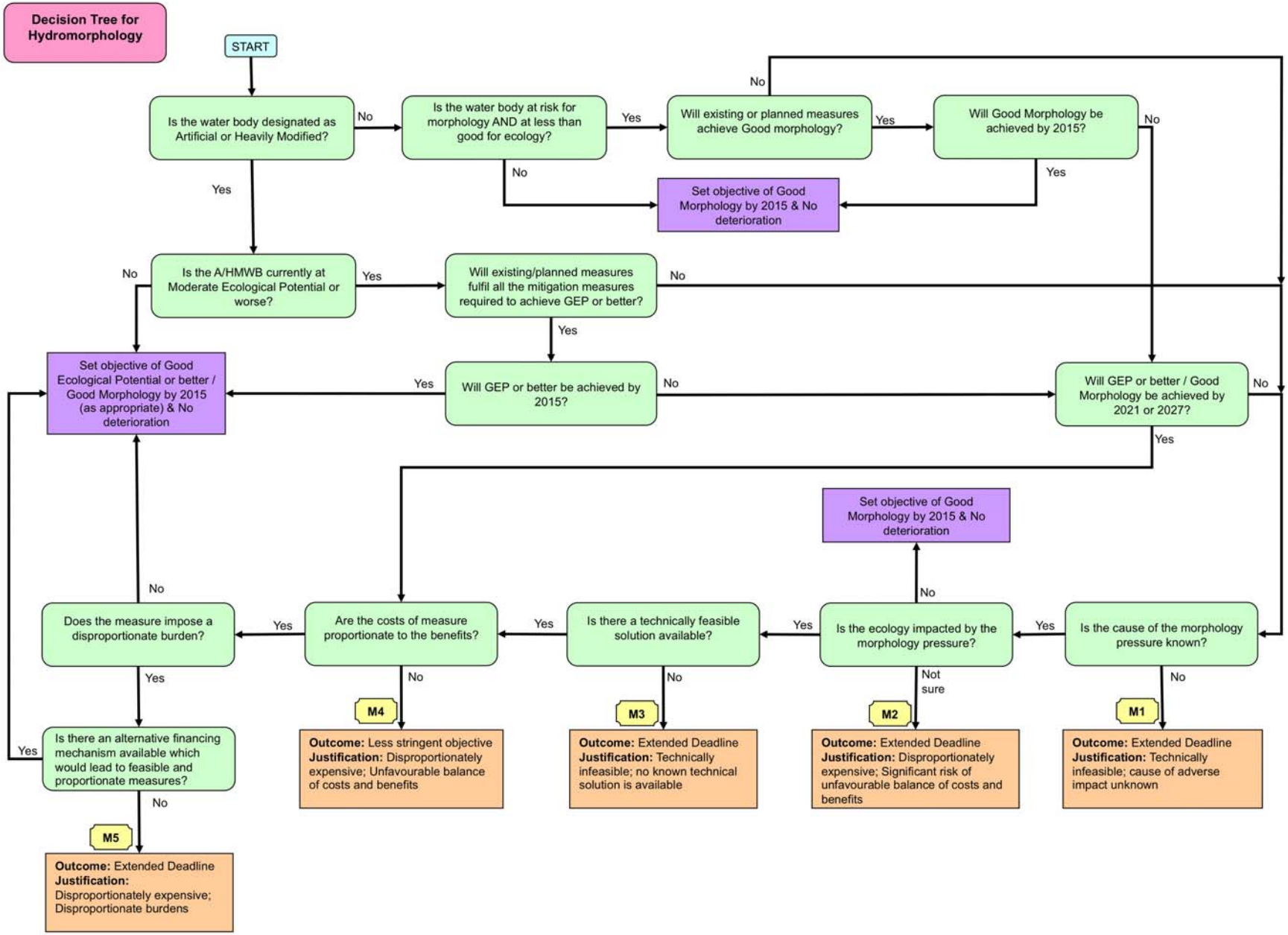
The Water Framework Directive requires an assessment of all new physical modifications to ensure they do not cause deterioration in the status or potential of a water body or prevent a water body from meeting its ecological objective.

Article 4.7 of the Directive sets out the circumstances under which a deterioration in water body status or failure to meet ecological objectives as a result of a new physical modification is permitted. Deterioration in status or failure to meet ecological objectives as a result of a new physical modification will only be permitted where the following conditions are met:

a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
b) the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years;
c) the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the water body
d) ecological objectives are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and
e) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.

All new physical modifications will be assessed in terms of their impact on the overall status of a water body and ability of that water body to meet its ecological objective. The baseline status of each water body against which deterioration will be assessed is set out as the classified status in this river basin management plan (see Annex B).

Article 4.7 assessment has been a requirement since December 2006. All new physical modifications occurring in water bodies between December 2006 and March 2009 that were likely to have caused a deterioration in status or prevented a water body from meeting its water body objectives are reported in Annex B of this plan.


Decision Tree for Hydromorphology
START
Is the water body designated as Artificial or Heavily Modified?
No
Is the water body at risk for morphology AND at less than good for ecology?
Yes
Will existing or planned measures achieve Good morphology?
Yes
Will Good Morphology be achieved by 2015?
No
Yes
No
Set objective of Good Morphology by 2015 & No deterioration
Yes
No
Is the A/HMWB currently at Moderate Ecological Potential or worse?
Yes
Will existing/planned measures fulfil all the mitigation measures required to achieve GEP or better?
No
Yes
Set objective of Good Ecological Potential or better / Good Morphology by 2015 (as appropriate) & No deterioration
Yes
Will GEP or better be achieved by 2015?
No
Will GEP or better / Good Morphology be achieved by 2021 or 2027?
No
Yes
Set objective of Good Morphology by 2015 & No deterioration
No
Does the measure impose a disproportionate burden?
Yes
Are the costs of measure proportionate to the benefits?
Yes
Is there a technically feasible solution available?
Yes
Is the ecology impacted by the morphology pressure?
Yes
Is the cause of the morphology pressure known?
Yes
No
No
Not sure
No
Yes
Is there an alternative financing mechanism available which would lead to feasible and proportionate measures?
Yes
No
M4
Outcome: Less stringent objective
Justification: Disproportionately expensive; Unfavourable balance of costs and benefits
M3
Outcome: Extended Deadline
Justification: Technically infeasible; no known technical solution is available
M2
Outcome: Extended Deadline
Justification: Disproportionately expensive; Significant risk of unfavourable balance of costs and benefits
M1
Outcome: Extended Deadline
Justification: Technically infeasible; cause of adverse impact unknown
M5
Outcome: Extended Deadline
Justification:
Disproportionately expensive; Disproportionate burdens

Reference	M1a to M1k
Element predicted not to achieve good by 2015	Morphology
Reason for failure	M1a = Suspected - physical modification flood protection M1b = Suspected - physical modification land drainage M1c = Suspected - physical modification urbanisation M1d = Suspected - physical modification barriers to fish migration M1e = Suspected - physical modification flood and coastal erosion protection M1f = Suspected - physical modification water storage and supply (including for power generation) M1g = Suspected - physical modification wider environment M1h = Suspected - physical modification inland navigation M1i = Suspected - physical modification recreation M1j = Suspected - physical modification other sustainable human use M1k = Unknown - reasons for failure unknown
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The cause of the morphological pressure is unknown

We suspect that the reason for failure is caused by one or more morphological pressures but we lack enough evidence to confirm this is true.

Morphological pressures may derive from a complex combination of multiple physical modifications and/or management activities each of which may have a different impact on water body biology. It is not always immediately possible to identify the specific source of the pressure and so the cause of the adverse impact on biology remains unknown. It is not technically feasible to implement appropriate morphological improvement measures until the cause of the adverse impact has been determined.

Where the source of the morphological pressure remains unknown, further investigation is required to confirm the nature and extent of the pressure. Work is underway in the Environment Agency to develop a comprehensive, up to date database on morphological pressures to help identify sources of impact.

Once the source of the pressure is identified, we will need to assess whether designation as an artificial or heavily modified water body is required.

An extended deadline for achieving water body objectives is therefore required to allow time to undertake investigations to confirm the source of the morphological pressure and to enable identification and implementation of appropriate measures.

Investigation type

Investigate source of failure

Example of investigation

Where the source of the morphological pressure remains unknown, further investigation is required to confirm the nature and extent of the pressure. Desk based studies will gather further information on the water body, morphological modification and management activities. The Environment Agency is developing a comprehensive database on morphological pressures to help this process. Appraisal of this information will determine what the morphological pressures are. Where there is low confidence that the pressures have been correctly identified or a lack of adequate data, further detailed field study is required.

Field studies to characterise the morphological pressures could include, amongst others:

- River Habitat Survey/Habitat mapping
- Catchment sediment dynamics survey
- Biological surveys
- Hydrological/hydraulic modelling
- Cross sectional surveys
- Depth, Velocity, Substrate surveys

Possible future measures

Once we are able to identify the specific source of the pressure within the water body, we will then be able to choose an appropriate morphological improvement measure. The following list provides examples of possible improvement measures that could be employed once investigations have confirmed the pressure source:

- Remove barriers to fish passage
- Enhancement/Restoration schemes
- Restoration of natural flows through habitat management & removal of impediments to flow
- Revised sediment management strategies
- More widespread use of Sustainable Urban Drainage Systems
- Codes of Practice / General Binding Rules for operational activities/boat traffic
- Management of the physical impacts of commercial inshore fisheries
- Increased habitat enhancement via flood risk and coastal management capital and maintenance activities

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wholesale restoration or removal of flood and coastal defences, and other engineered or reinforced channels. • Removal of major infrastructure, bridges and culverts under buildings. • Hull design or other modifications to vessels. • Removal of all barriers to migration

Reference	M2a and M2b
Element predicted not to achieve good by 2015	Morphology
Reason for failure	M2a = Suspected - physical modification commercial fin fisheries M2b = Suspected - physical modification commercial shell fisheries
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that morphological pressures are adversely affecting biology

There is significant risk that it is disproportionately expensive to implement measures to improve hydromorphological conditions at this time because we have an incomplete understanding of the relationship between morphology pressures and biological impacts.

Within transitional and coastal waters in particular the ecological impacts that can be directly attributed to commercial fisheries operations are not well understood. In some cases we know the source of the morphological pressure but are not able to quantify the exact nature and extent of the impact on biology. Morphological pressures are rarely if ever the sole pressure exerted on the water environment. As different pressures can act in combination to cause failure to achieve good status or potential it is difficult to relate individual modifications or management actions to identified ecological impacts.

Where we have low confidence that commercial fin or shell fisheries pressure is adversely affecting biology (and to what extent), further studies are required to understand the relationship between the pressure and biology before we can attribute the failure in ecological status to morphological pressures. Until this link is sufficiently established for a water body, there is a significant risk that there will be either no or low benefits from taking remedial action to reduce the morphological pressure.

In these cases we will improve our understanding of these pressure-impact relationships. By doing so we will improve our understanding of which specific measures will deliver greatest benefit to the specific biological elements that are most impacted.

Investigation type

Investigate source of failure & relationship with ecological impact

Example of investigation
A study is being undertaken to develop a methodology to assess the level of morphological risk that commercial fisheries activities could pose. This will be done by integrating information on fisheries activity with information on habitat sensitivities. It will include quantification of the pressure, evaluation of impacts across habitat types and the spatial distribution of the effects. Its purpose is to determine the levels or types of fishing activity that could compromise good ecological status or potential. This information will then be used to determine what (if any) are the most appropriate measures to reduce or mitigate the impacts of ongoing commercial fisheries activities, or else the most appropriate measures to improve hydromorphological and biological quality.
Possible future measures
This will depend upon the outcome of the study, but may include the development and uptake of best practice guidance.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Not possible to identify measures at this stage

Reference	M2c to M2j
Element predicted not to achieve good by 2015	Morphology
Reason for failure	M2c = Confirmed - physical modification wider environment M2d = Confirmed - physical modification other sustainable human use M2e = Confirmed - physical modification flood protection M2f = Confirmed - physical modification urbanisation M2g = Confirmed - physical modification land drainage M2h = Confirmed - physical modification water storage and supply (including for power generation) M2i = Confirmed - physical modification recreation M2j = Confirmed - physical modification inland navigation
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

Low confidence that morphological pressures are adversely affecting biology

Where we know that morphological pressures are adversely affecting biology but we have low confidence in the nature or extent of impacts, further studies are required to understand the relationship between the pressure and biology. Until this link is sufficiently established for a water body there is a significant risk that there will be either no or low benefits to the biology from taking remedial action to reduce the morphological pressure.

Within some water bodies our assessments have confirmed the presence and cause of morphological pressures, which have been identified as the reason for failure. However, the exact nature and extent of impacts on the biological quality elements as a consequence of these known morphological pressures is not always clear. In these cases we need to improve our understanding of these pressure-impact relationships. By doing so we will improve our understanding of which specific measures will deliver greatest benefit to the specific biological elements that are most impacted.

In addition, in many cases morphological pressures are not the only pressures on the water environment and these can act in combination to exert a negative impact on ecological status. In these cases it is important to understand if there is a key limiting pressure that should be the focus of early action as this will deliver greatest benefit to

the biology. Where morphology is not the limiting pressure there is likely to be very limited benefit to the biology relative to the cost of taking action.
Investigation type
Investigate nature and extent of ecological impact
Example of investigation
Where there is a lack of adequate data or low confidence in our understanding of the ecological impacts of known morphological pressures more detailed study is required. These more detailed site or water body scale studies will provide better understanding of the morphological and biological condition, using a range of different survey, monitoring and modelling techniques. Where required, analysis of morphological pressures and other relevant information to determine the significance of morphology in relation to other pressures on the water environment, for example water quality issues, relative to ecological status. The improvement of our evidence base will enable successful delivery of hydromorphological measures that address the ecological impacts in a way that is more targeted and not disproportionately expensive.
Possible future measures
There are a wide range of measures that could be delivered in future to address known hydromorphological pressures, including: • Modification of existing structures • Development and implementation appropriate sediment or vegetation management strategies • Cessation of maintenance or changing maintenance operations • Modification or removal of barriers to fish passage • Restoration or enhancement of morphological conditions and habitat The justification for their future use will depend on analysis of the technical feasibility of delivery in consideration of local conditions within each specific water body and analysis of the costs and benefits of that action.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wholesale restoration or removal of flood and coastal defences, and other engineered or reinforced channels. • Removal of major infrastructure, bridges and culverts under buildings. • Hull design or other modifications to vessels. • Measures which are not proven to be technically successful or applicable at the scale or under the conditions of particular water bodies . • Removal of all barriers to migration

Reference	M3a to M3h
Element predicted not to achieve good by 2015	Morphology
Reason for failure	M3a = Confirmed - physical modification flood protection M3b = Confirmed - physical modification urbanisation M3c = Confirmed - physical modification land drainage M3d = Confirmed - physical modification water storage and supply (including for power generation) M3e = Confirmed - physical modification ports and harbours M3f = Confirmed - physical modification flood and coastal erosion protection M3g = Confirmed - physical modification inland navigation M3h = Confirmed - physical modification recreation
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: no known technical solution

Justification for alternative objective

Technical solutions to address the ecological impact caused by the physical modification are under development and their effectiveness is not yet known

There is a known morphological pressure (a physical modification) and an observed biological impact but uncertainty surrounds the effectiveness of the measure(s) available to reduce that impact.

There are a range of morphological improvement measures available to mitigate and reduce biological impacts from physical modification. However, we do not always have a high level of confidence in the outcome and effectiveness of these improvement measures in relation to the specific biological quality elements. Many of the morphological improvement measures are yet to be proven in terms of their effect on biology at the water body scale. Similarly, the effectiveness of morphological improvement measures across differing environmental conditions, for example, different river types, remains unknown.

A programme of research is underway to improve our confidence in the applicability, feasibility and success of a range of morphological improvement measures. Extending the deadline for achieving objectives will allow time to complete these investigations to confirm the effectiveness of morphological improvement measures.

For artificial and heavily modified water bodies, mitigation measures have been identified as necessary in order to achieve GEP. The feasibility of these measures

requires further examination. Mitigation measures defined from the ecological potential classification process are derived from a generic list that deals with pressures and impacts on a broad scale. To ensure that the measures are technically feasible in each individual water body, local conditions and requirements must be considered. Mitigation measures must also be looked at in combination to identify their effect where there are multiple pressures and impacts present in the water body.

Investigation type

Investigate feasibility of measures

Example of investigation

Where we have low confidence in how effective the morphological improvement measures are in bringing biological improvements, further investigations are underway. Investigations are taking the form of catchment trials, testing of measures and monitoring the success of measures in bringing biological improvements.

The biological improvement brought about by morphological improvement measures in some water bodies may be different where different physical conditions prevail. Certain measures may be effective in some water bodies and not others. The above trials and investigations will help determine situations in which specific measures are likely to be applicable and suitable.

Possible future measures

Once investigations have established the effect of morphological improvement measures this will inform the choice of measure to be implemented in order to meet WFD objectives. Some possible measures are listed below:

- Removal of barriers to fish passage.
- River enhancement/restoration schemes
- Restoration of natural flows through habitat management & removal of impediments to flow.
- Revised sediment management strategies
- More widespread use of Sustainable Drainage Systems.
- Codes of Practice / General Binding Rules for operational activities/boat traffic.
- Opportunistic habitat enhancements on the back of capital and maintenance works

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

- Wholesale restoration or removal of flood and coastal defences, and other engineered or reinforced channels.
- Removal of major infrastructure, bridges and culverts under buildings.
- Hull design or other modifications to vessels.
- Measures which are not proven to be technically successful or applicable at the scale or under the conditions of particular water bodies
- Removal of all barriers to migration

Reference	M5a
Element predicted not to achieve good by 2015	Fish
Reason for failure	Confirmed - physical modification barriers to fish migration
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive - Disproportionate burdens

Justification for alternative objective

If implemented before 2015, the required measure would impose a disproportionate burden. We are considering possible relevant alternative financing mechanisms.

We are confident that the fish classification is at less than good status and that barriers to fish migration are the only or contributory factor in the observed impact. A technically feasible solution is available. The results of the national impact assessment have shown that there is a favourable cost/benefit ratio associated with remedies to deal with barriers to fish migration. This will be supported by the introduction of the fish passage regulations, expected in 2011. Further investigation of alternative financing mechanisms will take place in order to introduce these measures, or identification of the "polluter" if this is possible. We will follow the Common Implementation Strategy Guidance Document No. 20, where it states that when affordability arguments are used to extend the deadline, the possibility to use relevant alternative financing mechanisms should be fully considered, which could include distribution of costs along polluters and users, use of the public budget (at different levels), private investment, EU and international funds etc. Environment Agency, Defra and other EU partners are currently preparing an EU Life bid, for example, on developing expertise and sharing best practice on catchment restoration funds.

Affordability is one area where there is limited guidance available at a European level and hence additional care must be taken in justifying exemptions to ensure that they follow the spirit of the Directive and its objectives. Additional care has been taken in explaining why these exemptions are being used and in making this transparent.

Although the adoption of the WFD entails obligations for member state to make available the necessary means for implementation, this needs to be moderated by the option available to member state to phase the implementation (through extended deadlines) of measures to spread the costs of implementation (while taking clear and demonstrable action in the first cycle).

To apply a time extension on grounds of affordability consideration should be given to the availability of alternative financing mechanisms, the consequences of non-action and steps taken to resolve affordability in the future.

Government is generally involved in financing fish passes because of the nature of the problem. There are no “polluters” in the normal sense of the word and the benefits are typically to the general public rather than identifiable individuals or organisation. Where fish passes can be financed by other means this is generally done. In particular to reduce costs care is taken to make sure that fish passes are installed where other changes to the water body (e.g. for flood defence) are taking place. This means that a large number of necessary fish passes are installed at low or no cost, but this is not sufficient to cover all cases where there is a positive benefits to cost ration.

The polluter pays principle is the central tenet of the Directive and where benefits are produced of similar importance is the beneficiary pays principle. Only when action is not financeable through these principles should resort be made to public budgets.

In the main the fish passes have no identifiable “polluter” and the beneficiaries are impossible to target because these are generally non use benefits (i.e. not individual or organisation like fisheries). If “polluters” or beneficiaries could be uniquely identified they would be chased for a contribution to the cost which may make them affordable depending upon the scale of the cost.

In terms of the consequences of the time extension for fish passes these are mainly the delayed benefits of achieving good ecological status in the relevant water bodies.

Defra is actively engaged in identifying alternative sources of financing for fish passes and in securing available funds through the process of allocating government funds. Defra sought an additional £10 million as part of business planning (25% to be spent on fish passes) and is currently establishing a business case for further expenditure as part of the Comprehensive Spending Review. Both the processes consider the costs and the benefits of the action in a similar way to that required by the Directive, to ensure that public budgets are spent on the most value for money interventions. As a consequence additional expenditure over and above that identified in the spending review process would not be considered value for money, in the sense that using the money to finance a greater number of fish passes would produce a net cost because the benefits of the passes are less than the benefits of alternative ways of spending the governments budget. This process of setting public budgets is kept under constant review as is the question of alternative sources of finance including taxes and changes and should changes arise in the future these will be reflected in later plans.

Investigation type

Investigate feasible measures

Example of investigation

Investigate cheaper measures and alternative financing mechanisms.

Possible future measures

The introduction of the new fish passage regulations will give additional powers to help address this pressure. Where the Environment Agency owns the barriers it will be our responsibility to address fish passage issues. For those owned by third parties, the responsibility will lie with them. Encourage local groups e.g. Rivers Trusts, angling associations, to install fish passes, which can often be more cost

effective. Explore Axis 4 Leader options in funding action at local catchment level.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Removal of all barriers to fish migration. In most cases we will have to introduce fish passes rather than removing the obstruction.

E9 Sediments pressure

Scope of the sediment pressure

For the purpose of this Plan sediment is taken to mean:

- organic and inorganic solids which may be on, or near the bed of a water body, or suspended within the water column.
- the direct polluting effects of sediment (including direct physical damage to biota, shading effects and smothering habitat). It includes managing delivery of excessive quantities of sediment from land based activities (urban and rural) and managing the redistribution of sediment from within water body activities (e.g. weed cutting etc).

We have assumed that sediment pressure does not include:

- Lack of sediment in a habitat due to anthropogenic activities modifying sediment dynamics (e.g. due to dredging and bank/foreshore development). Such aspects are a result of hydromorphological alterations and should be assessed through abstraction and/or morphological pressures.
- Impacts due to contaminants associated with sediment (e.g. nutrients and chemicals). Such aspects are a result of polluting activities that should be assessed under the relevant pressure.

Sediment pressure is relevant to rivers, lakes, transitional (estuarine) and coastal (TraC) waters. It is assumed that it has limited significance to groundwater.

Sediment pressure can have an impact on a variety of objectives relevant to WFD including:

- Surface water 'status' objectives
- Habitat Directive protected areas
- Economically significant species protected areas (Freshwater Fish Directive)
- Drinking water protected areas (including colour problems) (Surface Water Abstraction Directive)

The scale of the problem

The relationship between the amount of sediment in a river and any environmental impact is not simple. In some river catchments there is relatively little sediment but because the river is particularly sensitive then the impact can be large. At the other end of the scale, some rivers can have a high sediment load but this may actually support a particular habitat or not be considered to have a significant impact.

All river basin districts identified sediment as a Significant Water Management Issue, with many citing it among the 'top five' issues within their river basin district (RBD). We are developing a weight of evidence approach to identify the scale and source of the problem. Risk assessment information forms part of this weight of evidence.

Sediment risk assessment information is given in Annex G. Note that the large water bodies that were split into smaller bodies at the end of 2008 have not yet had a new sediment risk assessment, and so have been reported as 'Not Assessed'. However, the assessment made on the original smaller water body has been taken into account as part of our wider weight of evidence to appraise and determine appropriate measures.

Another key piece of information for weight of evidence is sediment monitoring information. However, we do not routinely measure sediment quantity, type, or quality. Sediment is difficult to monitor routinely because levels of sediment are largely related to rainfall events that are unpredictable and sediment does not remain in the water column making normal

water quality sampling unreliable. The current evidence base is focussed on detailed studies at specific sites, with limited national collation.

Understanding precisely how ecology responds to different levels and types of sediment is complex, and often unclear. Given this diversity and uncertainty, it is extremely challenging to define appropriate targets and standards to support particular WFD objectives for different types of a water body.

There are currently no UKTAG water quality standards for sediment. Similarly there are no mandatory water quality standards for sediment in existing Directives. It is assumed that where sediment compromises delivery of WFD objectives (e.g. Good Ecological Status) then this will be picked up through ecological monitoring. However, WFD Classification and associated ecological monitoring are new tools. It is therefore unlikely we will have sufficient information or knowledge from them in the short term to develop new, widespread national measures for sediment pressure in the first round of river basin management planning. Our weight of evidence will incorporate this information when it becomes available but currently it is assumed that:

- planning of local measures to tackle sediment problems will be based on local knowledge and expert judgement of Environment Agency national, regional and area staff in close co-operation with other relevant co-deliverers (e.g. Natural England, Countryside Council for Wales)
- if there is no evidence that sediment is harming WFD objectives, we will assume sediment conditions are adequate for Good Ecological Status.

Source of the problem

The variation in sediment behaviour (derivation, transport, and deposition) coupled with limited monitoring can make it difficult to specifically apportion the sediment pressure to particular sources, sectors and activities. For example, it is difficult to determine the relative contributions of sediment to a rural watercourse from arable cultivation, the livestock sector and bank side erosion.

The complexity of apportioning the sediment pressure makes it difficult to precisely identify sources and sectors. It is also difficult to have confidence in the impact of specific measures and the timescale for improvements, particularly at a local level.

In the first round of river basin management planning we will be very reliant upon building a weight of evidence to justify and identify appropriate action at the river basin district scale, and in particular fishery, biology and investigative monitoring at the local scale.

Appraisal of measures and objectives

The approach to assessing available measures to tackle sediments and determining appropriate objectives is set out in the decision tree below.

National measures (M1, M2 and M3a)
Although we do not have enough information at a national level to justify new wide-scale national action on sediment, many existing national measures will help reduce the risk of problems from sediment. These measures will be particularly important to prevent further deterioration. They include:

- Legislation to minimise impacts from sediment and suspended solids in consented discharges.

- Pollution prevention legislation (such as anti-pollution Works Notices) to prevent illegal discharges or high risk activities that may give rise to sediment problems.
- Agricultural cross-compliance and associated measures (e.g. those stemming from Nitrates Directive, Sludge Directive, waste management and storage of materials such as slurry) to reduce the risks of sediment laden run-off from farming activities.
- Agri-environment Entry Level Scheme (ELS) in England and Tir Cynnal in Wales, as well as woodland management schemes in Rural Development Programmes.
- Pollution Reduction Plans for Priority Hazardous Substances (e.g. TBT) consider sediment as a source and sink of pollution and propose appropriate mitigation strategies.
- Existing pollution prevention guidance and policy to encourage:
  - better management of run-off from construction sites;
  - new developments to be better designed to avoid (or at least minimise) adverse impacts on sediment transport and deposition;
  - increased use of sustainable drainage systems (SUDS) to draining developed areas.

Many of these existing measures are primarily aimed at other pressures (e.g. phosphorus), but we must maximise their benefit for sediment management. Proposals for using these measures to tackle sediment are given in Annex C of this plan. Those measures that have not been included are summarised in Table 15 below.

It is assumed that the economic justification for using these national measures has been established through national processes such as public consultation on new and revised regulations and their associated impact assessments (e.g. recent Government consultations on revised powers to tackle diffuse pollution) and other appraisal (e.g. Defra/Welsh Assembly Government's preliminary Cost-Effectiveness Analysis for Water Framework Directive).

Regional measures (M3b and M4)
Despite the application of these national measures, there will be some water bodies where sediment remains a problem. Where there is sufficient evidence, we aim to ensure that measures are developed and implemented at a RBD, or more local, level to address these problems.

Local biology and fish class information has only very recently become available to help identify specific water bodies where sediment may be compromising WFD Objectives. Regional and Area Environment Agency staff have reviewed biological and fish class data and identified 'reasons for failure', including those water bodies believed to be impacted by sediment. They have also used expert judgement to estimate whether biological objectives are likely to be achieved given existing or proposed national and regional measures including:

1. Nationally funded but river basin district targeted (M3b) measures:
- The England Catchment Sensitive Farming Delivery Initiative (ECSFDI) which RBD liaison panels have already contributed to through the recent extension and refresh programme.
- Environment Agency Wales funded catchment initiatives.
- Agri-environment Higher Level Scheme (HLS), Tir Cynnal and Tir Gofal.
- Existing or proposed Grant in Aid funded pollution prevention campaigns (including use of anti-pollution works notices).

2. River basin district lead (M4) measures:
- Partnerships with local authorities, water companies, local communities and developers to help control sediment from urban areas by putting in place Sustainable Urban Drainage Systems (SUDS).

- Partnerships with the farming community to help control sediment from agricultural diffuse pollution.
- Partnerships and Codes of Practice to help improve land drainage, dredging/de-silting and weed-cutting operations.
- Partnerships to minimise impacts from boat traffic wash.
- Bank/shore habitat restoration and stabilisation projects such as the work carried out by the various Rivers Trusts.

This process has lead to the development of the programme of measures outlined in Annex C of this river basin management plan.

It is likely that most new action to resolve sediment problems in the first round of river basin management will be carried out through existing or proposed voluntary initiatives and partnerships (M4 measures). The economic appraisal of these will be developed as part of the river basin district measures appraisal process.

Measures which were considered but have not been included in Annex C are summarised in Table 15 below.

Table 15. **Sediment measures that have been considered but not included in scenarios A or B**

Proposed option:	Type of measure:	Reason for not including it in scenario A or B
Modify agricultural cross-compliance so it is more effective at supporting WFD objectives in respect of sediment.	M2 – national	Technically Infeasible – practical constraints of a technical nature prevent implementation of the measure by an earlier date. Review and development of cross-compliance is linked to EU Common Agricultural Policy and undertaken at an EU level
Modify agri-environment schemes so they are more effective at supporting WFD objectives in respect of sediment.	M2 – national	Technically Infeasible – practical constraints of a technical nature prevent implementation of the measure by an earlier date. Review and development of agri-environment is linked to EU Common Agricultural Policy and undertaken at an EU level. There are also practical constraints to modifying individual farm agreements which have not yet completed their original lifespan. A review of some parts of agri-environment id due in 2010 and we intend identify a range of resource protection/sediment management measures that need to be included as options in future schemes
General Binding Rules (GBRs) to control sediment releases from particularly high risk activities (e.g. construction, or some forestry operations)	M3a - national	However, inclusion in this list of GBRs could change in the future depending on current discussions with Defra who have been considering GBRs as part of their work on non-Agricultural diffuse pollution.
Require all new developments to have Sustainable Urban Drainage Systems in catchments where sediment laden run-off is contributing to failure of good status.	M3b - nationally funded, locally targeted	However, inclusion in this list could change in the future depending on current discussions with Defra.

Proposed option:	Type of measure:	Reason for not including it in scenario A or B
Markedly increase Environment Agency resources allocated to agricultural and urban pollution prevention and enforcement activity.	M4 – RBD led	Likely to be disproportionately expensive - Implementation of the measure by an earlier deadline would impose disproportionate burdens We intend taking a phased approach, targeting Grant in Aid funded pollution prevention an enforcement work at the highest priority sites where we have most certainty about the activities giving rise to sediment problems.

Objectives and extended deadlines

Many of the national measures detailed above were originally intended for other pressures (e.g. nutrients). As such, there is significant uncertainty regarding how effective they will be in mitigating sediment pressures. It is highly probable that these measures alone will not be sufficient to ensure wide scale attainment of WFD objectives, where sediment is the principle cause of failure. However, we believe that if used robustly they may be sufficient to minimise further deterioration due to sediment, and are therefore worthwhile. There is also considerable uncertainty with regard to many sediment measures targeted by RBDs, particularly in relation to the efficacy of new diffuse pollution measures (e.g. Water Protection Zones) or the willingness of some stakeholders to participate in partnerships.

Furthermore there are often uncertainties on the causes of failure where sediment is a pressure. It is often difficult to demonstrate whether the primary cause of a biological failure is due to sediment or some other pressure (e.g. hydromorphology). Even when sediment is identified as the primary cause it is not always clear what the relative contributions of sediment are from different sources in a particular water body (e.g. agriculture sector and/or aquaculture sector).

Given these uncertainties it is highly likely that in many cases where sediment is implicated as a cause of failure, we will need to undertake further investigation to determine an appropriate course of action.

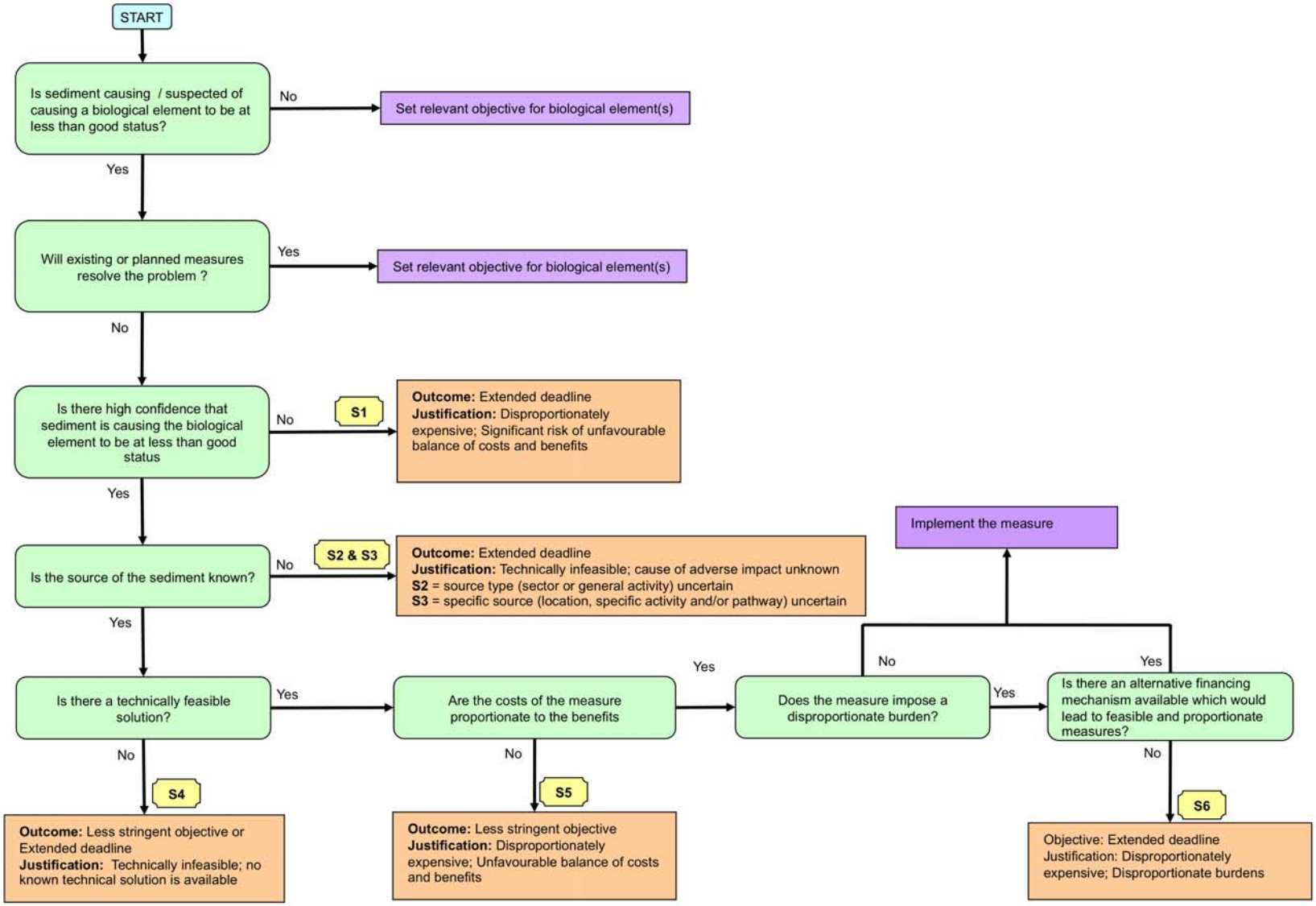
Actions required to improve the evidence base for future rounds

To improve our ability to deal with sediment appropriately in future, the following actions will be undertaken:

- Ensure the implementation of appropriate monitoring (routine and targeted) for suspended solids and bed sediments including sediment tracking studies.
- Collation and review of a national evidence base.
- Review of existing science and commissioning of new science in a strategic way to better understand:
  - the link between ecology and sediment,
  - the sources and fate of sediments in catchments,
  - appropriate standards/thresholds to help manage various types of sediment issue (including biological indicators),
  - the effectiveness of measures to tackle sediment problems.
- Development of guidance to support information gathering for weight of evidence approach, targeting monitoring and appraisal of measures.

Anticipated costs for this are likely to be a minimum of £20m over the first river basin management cycle (see Defra's preliminary Cost Effectiveness Analysis report for further detail).

Decision tree for sediment



Reference	S2a
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Suspected – sediment from unknown diffuse sources
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The source (sector or general activity) of the sediment impacting on biology is not yet confirmed

The sediment causing the failure of biological elements to achieve good status is suspected to come from diffuse sources. Until the specific sources and pathways are known with reasonable confidence, the identification and application of measures (including who needs to implement them) to reduce the sediment inputs is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the source and pathways of sediment causing failure and to identify and implement appropriate measures.

Investigation type

Investigate source of failure

Example of investigation

Investigations to confirm the source of sediment and the pathways by which the sediments are entering water bodies (e.g. agricultural, urban or abandoned mines etc). The investigation may include site visits, monitoring, and desk study modelling.

Possible future measures

Depending on outcome of investigation, potential measures include:

- More local partnership projects to support farmers to change practice, or stabilise bank-side habitat
- Increased roll-out (in terms of duration and geographic extent) of Catchment Sensitive Farming type advisory initiatives in England and Wales
- Increased Environment Agency-led pollution enforcement campaigns (including

use of anti-pollution works notices)
- Where appropriate designation of Water Protection Zones
- Widen the measures and activities included in agri-environment initiatives (e.g. rural sustainable drainage systems) as well as securing more effective targeting and enhanced funding
- Widen the measures and activities that are incorporated in to Common Agricultural Policy funded initiatives (e.g. increase soil resource protection measures in current approach to cross-compliance, or whatever may follow in future)
- Establish and or extend existing national partnerships that provide advice and support to land managers to improve practices (e.g. continued roll out of Think: Soils training)
- Targeted land use change (e.g. afforestation or reversion of arable land to low intensity pasture) in priority areas
- More local partnership projects with Forestry Commission and other forestry operators to implement Forestry Guidelines
- Develop current Forestry Guidelines into mandatory requirements or General Binding Rules for use in high risk situations
- Designation of Water Protection Zones that apply to sites specifically impacted by Forestry operations
- More local partnership projects with key partners e.g. Highways Agency, local authorities and Business Groups to change practice and reduce the risk of non-agricultural diffuse pollution
- Establish Urban Catchment Officers in England and Wales to give advice to businesses, local authorities and those responsible for managing roads to help prevent diffuse pollution (similar to England Catchment Sensitive Farming Delivery Initiative)
- Development of General Binding Rules for particular high risk activities and sectors (e.g. construction sector)
- Establish and or extend existing national partnerships that provide advice and support to improve practice
- Targeted retro-fitting of Sustainable Urban Drainage systems in priority areas
- Targeted land use change e.g. prohibition of development in priority areas
- Code of Practice on dredging and disposal of in-channel sediment
- Continue roll-out of national Coal Mine programme and Metal Mines Strategy in Wales
- Develop non-coal mine programme to target treatment solutions at priority sites
- Tighten discharge consents for some trade activities in high risk areas (i.e. will result in changes to operational practices and/or installation of treatment processes to remove sediment from waste water prior to discharge)

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

- Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales
- Wide scale reversion of agricultural land to woodland over large parts of England and Wales
- Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales
- Wide scale prohibition of high risk forestry activities in large parts of England and Wales
- Wide scale land use change e.g. prohibition of development in large parts of England and Wales that are particularly sensitive to non-Agricultural diffuse water

pollution
- Wide scale, precautionary tightening of discharge consents for suspended solids for most point sources through England & Wales

Reference	S2b
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Suspected – sediment from diffuse source agricultural
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The source (sector or general activity) of the sediment impacting on biology is not yet confirmed

Agriculture is the suspected source of the sediment. However, until this is confirmed with reasonable confidence, the identification and application of measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm that agricultural sources are causing the failure and to identify and implement appropriate measures.

Investigation type

Investigate source of failure

Example of investigation

Investigations to confirm the source of sediment and the pathways by which the sediments are entering water bodies (e.g. field run-off, field drains, road/track drains, bank-side erosion and livestock poaching etc.). The investigation may include site visits, monitoring, and desk study modelling.

Possible future measures

If agriculture is confirmed as the source of the problem:

- More local partnership projects to support farmers to change practice, or stabilise bank-side habitat
- Increased roll-out (in terms of duration and geographic extent) of Catchment Sensitive Farming type advisory initiatives in England and Wales
- Increased Environment Agency-led pollution enforcement campaigns (including

use of anti-pollution works notices)
- Where appropriate designation of Water Protection Zones
- Widen the measures and activities included in agri-environment initiatives (e.g. rural sustainable drainage systems) as well as securing more effective targeting and enhanced funding
- Widen the measures and activities that are incorporated in to Common Agricultural Policy funded initiatives (e.g. increase soil resource protection measures in current approach to cross-compliance, or whatever may follow in future)
- Establish and or extend existing national partnerships that provide advice and support to land managers to improve practice
- Targeted land use change (e.g. afforestation or reversion of arable land to low intensity pasture) in priority areas

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

- Wide scale reversion of arable land to low intensity pasture over large parts of England and key areas in Wales
- Wide scale reversion of agricultural land to woodland over large parts of England and Wales
- Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	S2c
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Suspected – sediment from diffuse source forestry
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The source (sector or general activity) of the sediment impacting on biology is not yet confirmed

Forestry is the suspected source of the sediment. However, until this is confirmed with reasonable confidence, the identification and application of measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help investigate and identify the sources and pathways of sediment that are contributing to biological failure and inform the identification of appropriate measures to reduce sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm that forestry is the source causing the failure and to identify and implement appropriate measures.

Investigation type

Investigate source of failure

Example of investigation

Investigations to confirm the source of sediment and the pathways by which the sediments are entering water bodies (e.g. forestry tracks, clear felling etc). The investigation may include site visits, monitoring, and desk study modelling.

Possible future measures

If forestry is confirmed as the source of the problem:

- More local partnership projects with Forestry Commission and other forestry operators to implement Forestry Guidelines
- Develop current Forestry Guidelines into mandatory requirements or General

Binding Rules for use in high risk situations • Where appropriate, designation of Water Protection Zones that apply to sites specifically impacted by Forestry operations
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale prohibition of high risk forestry activities in large parts of England and Wales

Reference	S2d
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Suspected – sediment from diffuse source road run-off Suspected - sediment from diffuse source mixed urban run-off Suspected - sediment from diffuse source housing Suspected - sediment from diffuse source trading/industrial estates Suspected - sediment from diffuse source contaminated land Suspected - sediment from diffuse source contaminated sediments
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The source (sector or general activity) of the sediment impacting on biology is not yet confirmed

Urban sources (including roads) are suspected source of the sediment. However, until this is confirmed with reasonable confidence, the identification and application of measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures to reduce sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm that urban sources of sediment are causing the failure and to identify and implement appropriate measures.

Investigation type

Investigate source of failure

Example of investigation

Investigations to confirm the source of sediment and the pathways by which the sediments are entering water bodies (e.g. housing estates, industrial/trading estates, contaminated land, waste management sites, misconnected foul sewers or road run-off etc). The investigation may include site visits, monitoring, and desk study

modelling.

Possible future measures

If urban sources are confirmed as being the source of the problem:-

- More local partnership projects with key partners e.g. Highways Agency, local authorities and Business Groups to change practice and reduce the risk of non-agricultural diffuse pollution
- Establish Urban Catchment Officers in England and Wales to give advice to businesses, local authorities and those responsible for managing roads to help prevent diffuse pollution (similar to England Catchment Sensitive Farming Delivery Initiative)
- Increased Environment Agency pollution enforcement campaigns (including use of anti-pollution works notices)
- Where appropriate, designation of Water Protection Zones
- Development of General Binding Rules for particular high risk activities and sectors (e.g. construction sector)
- Establish and or extend existing national partnerships that provide advice and support to improve practice
- Extend the geographic scale and pace of roll-out of work to correct misconnections of foul sewers to surface water drains
- Targeted retro-fitting of Sustainable Urban Drainage systems in priority areas
- Targeted land use change e.g. prohibition of development in priority areas
- Code of Practice on dredging and disposal of in-channel sediment

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

- Wide scale land use change e.g. prohibition of development in large parts of England and Wales that are particularly sensitive to urban diffuse water pollution

Reference	S2e
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Suspected - sediment from disused mines - point and/or diffuse
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown
Justification for alternative objective	
The source (sector or general activity) of the sediment impacting on biology is not yet confirmed Disused mines are a suspected source of the sediment. However, until this is confirmed with reasonable confidence, the identification and application of measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015. Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures to reduce sediment. An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm that disused mines are the source of the sediment causing failure and to identify and implement appropriate measures.	
Investigation type	
Investigate source of failure	
Example of investigation	
Investigations to confirm the source of sediment and the pathways by which the sediments are entering water bodies (e.g. old flooded adits, run-off from waste spoil heaps etc). The investigation may include site visits, monitoring, and desk study modelling.	
Possible future measures	
If disused mines are confirmed as the source of the problem: • Continue roll-out of national Coal Mine programme and Metal Mines Strategy in	

Wales • Develop non-coal mine programme to target treatment solutions at priority sites.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale rehabilitation at all disused coal and non-coal mines sites across the whole of England and Wales

Reference	S2f
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Suspected - sediment from point source (water industry, domestic and trade premises)
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The source (sector or general activity) of the sediment impacting on biology is not yet confirmed

Point source discharges are the suspected source of the sediment. However, until this is confirmed with reasonable confidence, the identification and application of measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures to reduce sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm that point source discharges are the source of the sediment causing failure and to identify and implement appropriate measures.

Investigation type

Investigate source of failure

Example of investigation

Investigations to confirm the source of sediment and the pathways by which the sediments are entering water bodies (e.g. sewage works, water treatment works, sewer overflows, fish farms etc). The investigation may include site visits, monitoring, and desk study modelling.

Possible future measures

If point source discharges are confirmed as the source of the problem:

- Tighten discharge consents for some trade activities in high risk areas (i.e. will

result in changes to operational practices and/or installation of treatment processes to remove sediment from waste water prior to discharge)
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
None

Reference	S3a
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Confirmed – sediment from agricultural diffuse Source Confirmed - sediment from diffuse source forestry Confirmed - sediment from road run-off Confirmed – sediment from mixed urban run-off Confirmed - sediment from housing diffuse source Confirmed – sediment from trading/industrial estates diffuse source Confirmed – sediment from contaminated land Confirmed - sediment from contaminated sediments Confirmed - sediment from disused mines point and/or diffuse
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The specific source (location, specific activity and/or pathway) of the sediment that is impacting on the biology is not known

Until the specific source(s) of the sediment is known with reasonable confidence, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures

Projects have also been initiated that will review the effectiveness of measures to control diffuse pollution, including sediment, that will improve the identification of appropriate cost effective solutions.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the source and pathways of sediment causing the failure and to identify and develop appropriate measures (e.g. source protection measures to stop diffuse pollution occurring in the first place or mitigation measures to stop sediment getting into water bodies).

Investigation type
Investigate source of failure
Example of investigation
Investigations to identify the relative importance of the specific activities and locations giving rise to unacceptable quantities of sediment in a river system. This may include site visits, monitoring, desk study modelling and stakeholder (e.g. farmer) liaison.
Possible future measures
Depending on outcome of Investigation, potential measures include: • More local partnership projects to support farmers to change practice, or stabilise bank-side habitat • Increased roll-out (in terms of duration and geographic extent) of Catchment Sensitive Farming type advisory initiatives in England and Wales • Increased Environment Agency-led pollution enforcement campaigns (including use of anti-pollution works notices) • Where appropriate designation of Water Protection Zones • Widen the measures and activities included in agri-environment initiatives (e.g. rural sustainable drainage systems) as well as securing more effective targeting and enhanced funding • Widen the measures and activities that are incorporated in to Common Agricultural Policy funded initiatives (e.g. increase soil resource protection measures in current approach to cross-compliance, or whatever may follow in future) • Establish and or extend existing national partnerships that provide advice and support to land managers to improve practices (e.g. continued roll out of Think: Soils training) • Targeted land use change (e.g. afforestation or reversion of arable land to low intensity pasture) in priority areas • More local partnership projects with Forestry Commission and other forestry operators to implement Forestry Guidelines • Develop current Forestry Guidelines into mandatory requirements or General Binding Rules for use in high risk situations • Designation of Water Protection Zones that apply to sites specifically impacted by Forestry operations • More local partnership projects with key partners e.g. Highways Agency, local authorities and Business Groups to change practice and reduce the risk of non-agricultural diffuse pollution • Establish Urban Catchment Officers in England and Wales to give advice to businesses, local authorities and those responsible for managing roads to help prevent diffuse pollution (similar to England Catchment Sensitive Farming Delivery Initiative) • Development of General Binding Rules for particular high risk activities and sectors (e.g. construction sector) • Establish and or extend existing national partnerships that provide advice and support to improve practice • Targeted retro-fitting of Sustainable Urban Drainage systems in priority areas • Targeted land use change e.g. prohibition of development in priority areas

- Code of Practice on dredging and disposal of in-channel sediment
- Continue roll-out of national Coal Mine programme and Metal Mines Strategy in Wales
- Develop non-coal mine programme to target treatment solutions at priority sites
- Tighten discharge consents for some trade activities in high risk areas (i.e. will result in changes to operational practices and/or installation of treatment processes to remove sediment from waste water prior to discharge)

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

- Wide scale reversion of arable land to low intensity pasture over large parts of England and Wales
- Wide scale reversion of agricultural land to woodland over large parts of England and Wales
- Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales
- Wide scale prohibition of high risk forestry activities in large parts of England and Wales
- Wide scale land use change e.g. prohibition of development in large parts of England and Wales that are particularly sensitive to non-Agricultural diffuse water pollution
- Wide scale, precautionary tightening of discharge consents for suspended solids for most point sources through England & Wales

Reference	S3b
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Confirmed – sediment from agricultural diffuse source
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible - cause of adverse impact unknown

Justification for alternative objective

The specific agricultural source (location, specific activity and/or pathway) of the sediment that is impacting on the biology is not known

Until the specific source(s) of the sediment is known with reasonable confidence, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures

Projects have also been initiated that will review the effectiveness of measures to control diffuse pollution, including sediment, that will improve the identification of appropriate cost effective solutions to reduce sources of agricultural sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the agricultural source and pathways of sediment causing the failure and to identify and develop appropriate measures (e.g. source protection measures to stop diffuse pollution occurring in the first place or mitigation measures to stop sediment getting into water bodies).

Investigation type

Investigate source of failure

Example of investigation

Investigations to identify the relative importance of the specific activities and locations giving rise to unacceptable quantities of sediment in a river system. This may include site visits, monitoring, desk study modelling and stakeholder (e.g. farmer) liaison.

Possible future measures
When specific source identified: • More local partnership projects to support farmers to change practice, or stabilise bank-side habitat • Increased roll-out (in terms of duration and geographic extent) of Catchment Sensitive Farming type advisory initiatives in England and Wales • Increased Environment Agency-led pollution enforcement campaigns (including use of anti-pollution works notices) • Where appropriate designation of Water Protection Zones • Widen the measures and activities included in agri-environment initiatives (e.g. rural sustainable drainage systems) as well as securing more effective targeting and enhanced funding • Widen the measures and activities that are incorporated in to Common Agricultural Policy funded initiatives (e.g. increase soil resource protection measures in current approach to cross-compliance, or whatever may follow in future) • Establish and or extend existing national partnerships that provide advice and support to land managers to improve practice • Targeted land use change (e.g. afforestation or reversion of arable land to low intensity pasture) in priority areas
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale reversion of arable land to low intensity pasture over large parts of England and key areas in Wales • Wide scale reversion of agricultural land to woodland over large parts of England and Wales • Wide scale reduction in livestock densities (cattle, sheep and pigs) over large parts of England and Wales

Reference	S3c
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Confirmed - sediment from diffuse source forestry
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The specific forestry source (location, specific activity and/or pathway) of the sediment that is impacting on the biology is not known

Until the specific source(s) of the sediment is known with reasonable confidence, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures

Projects have been initiated that will review the effectiveness of measures and guidance to control diffuse pollution (e.g. review of the Forest and Water guidelines), including sediment, that will improve the identification of appropriate cost effective solutions to reduce sources of sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the agricultural source and pathways of sediment causing the failure and to identify and develop appropriate measures (e.g. source protection measures to stop diffuse pollution occurring in the first place or mitigation measures to stop sediment getting into water bodies).

Investigation type

Investigate source of failure

Example of investigation

Investigations to identify the relative importance of the specific activities (e.g. Clear felling) and locations giving rise to unacceptable quantities of sediment in a river system. This may include site visits, monitoring, desk study, modelling and stakeholder liaison.

Possible future measures
• More local partnership projects with Forestry Commission and other forestry operators to implement Forestry Guidelines • Develop current Forestry Guidelines into mandatory requirements or General Binding Rules for use in high risk situations • Where appropriate, designation of Water Protection Zones that apply to sites specifically impacted by Forestry operations
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale prohibition of high risk forestry activities in large parts of England and Wales

Reference	S3d
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Confirmed - sediment from road run-off Confirmed – sediment from mixed urban run-off Confirmed - sediment from housing diffuse source Confirmed – sediment from trading/industrial estates diffuse source Confirmed – sediment from contaminated land Confirmed - sediment from contaminated sediments
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The specific source (location, specific activity and/or pathway) of the sediment that is impacting on the biology is not known

Until the specific Urban sources (including roads) of the sediment is known with reasonable confidence, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures

Projects have also been initiated that will review the effectiveness of measures to control diffuse pollution, including sediment, that will improve the identification of appropriate cost effective solutions to reduce sources of sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the urban source and pathways of sediment causing the failure and to identify and develop appropriate measures (e.g. source protection measures to stop diffuse pollution occurring in the first place or mitigation measures to stop sediment getting in to water bodies e.g. SUDS)

Investigation type

Investigate source of failure

Example of investigation

Investigations to identify the relative importance of the specific activities and locations giving rise to unacceptable quantities of sediment in a river system. This may include

site visits, monitoring, desk study modelling and stakeholder liaison (e.g. SME sector groups, local authorities and Highways Agency, the public).

Possible future measures

- More local partnership projects with key partners e.g. Highways Agency, local authorities and Business Groups to change practice and reduce the risk of non-agricultural diffuse pollution
- Establish Urban Catchment Officers in England and Wales to give advice to businesses, local authorities and those responsible for managing roads to help prevent diffuse pollution (similar to England Catchment Sensitive Farming Delivery Initiative)
- Increased Environment Agency pollution enforcement campaigns (including use of anti-pollution works notices)
- Where appropriate, designation of Water Protection Zones
- Development of General Binding Rules for particular high risk activities and sectors (e.g. construction sector)
- Establish and or extend existing national partnerships that provide advice and support to improve practice
- Extend the geographic scale and pace of roll-out of work to correct misconnections of foul sewers to surface water drains
- Targeted retro-fitting of Sustainable Urban Drainage systems in priority areas
- Targeted land use change e.g. prohibition of development in priority areas
- Code of Practice on dredging and disposal of in-channel sediment

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

- Wide scale land use change e.g. prohibition of development in large parts of England and Wales that are particularly sensitive to non-Agricultural diffuse water pollution

Reference	S3e
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Confirmed - sediment from disused mines point and/or diffuse
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The specific source (location, specific activity and/or pathway) of the sediment that is impacting on the biology is not known

Until the specific point or diffuse source(s) of the sediment from disused mines is known with reasonable confidence, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures

Projects have also been initiated that will review the effectiveness of measures to control diffuse pollution, including sediment, that will improve the identification of appropriate cost effective solutions to reduce sources of sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the source and pathways of sediment causing the failure and to identify and develop appropriate measures (e.g. reducing the risk of run-off from waste spoil heaps or tackling flooded adits).

Investigation type

Investigate source of failure

Example of investigation

Investigations to identify the relative importance of the specific activities and locations giving rise to unacceptable quantities of sediment in a river system. This may include site visits, monitoring, desk study modelling and stakeholder liaison (e.g. land owners and Coal Authority).

Possible future measures
When Specific source is identified: • Continue roll-out of national Coal Mine programme and Metal Mines Strategy in Wales • Develop non-coal mine programme to target treatment solutions at priority sites.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
• Wide scale rehabilitation at all disused coal and non-coal mines sites across the whole of England and Wales

Reference	S3f
Element predicted not to achieve good by 2015	Biological element
Reason for failure	Confirmed - sediment from point source (water industry, private and trade)
Alternative objective	Extended deadline
Reason for alternative objective	Technically Infeasible - cause of adverse impact unknown

Justification for alternative objective

The specific point source (location, specific activity and/or pathway) of the sediment that is impacting on the biology is not known

Until the specific point source of the sediment is known with reasonable confidence, the identification and application of additional measures (including who needs to implement them) tailored to local circumstances is not possible. It is therefore not technically feasible to achieve good status by 2015.

Projects have been initiated that will develop methodologies for reviewing and gathering evidence to help identify the sources and pathways of sediment that is contributing to biological failure and inform the identification of appropriate measures

Projects have also been initiated that will review the effectiveness of measures to control diffuse pollution, including sediment, that will improve the identification of appropriate cost effective solutions to reduce sources of sediment.

An extended deadline for achieving good ecological status is therefore required. This will allow time to undertake investigations to confirm the source and pathways of sediment causing the failure and to identify and develop appropriate measures (e.g. put in place additional treatment, and/or changes in operational practices to reduce sediment in discharge).

Investigation type

Investigate source of failure

Example of investigation

Investigations to identify the relative importance of the specific activities and locations giving rise to unacceptable quantities of sediment in a river system. This may include site visits, monitoring, desk study modelling and stakeholder liaison (e.g. fish farms).

Possible future measures
When point source is identified: • Tighten discharge consents for some trade activities in high risk areas (i.e. will result in changes to operational practices and/or installation of treatment processes to remove sediment from waste water prior to discharge)
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
None

E10 Priority Substances, Priority Hazardous Substances and Specific Pollutants

Water Framework Directive requirements and standards

Priority Substances and Priority Hazardous Substances

The Water Framework Directive provides for the identification of priority substances, for which the objectives are a progressive reduction of discharges, emissions and losses and, for a subset of priority hazardous substances, a cessation or phasing out of discharges, emissions and losses within 20 years. It also requires that environmental quality standards (EQS) are established at EU level, which must be met for 'good chemical status' to be achieved.

A list of 33 priority substances, including 13 priority hazardous substances, was agreed by co-decision in 2001 (Decision 2455/2001/EC). EQS for these substances were published in December 2008 in Directive 2008/105/EC on Environmental Quality Standards in the Field of Water Policy (the "EQS Directive"). This effectively replaces the Dangerous Substances Directive (76/464/EEC). The EQS Directive also includes the requirement that concentrations of certain priority substances do not increase in sediment and/or biota, in addition to the requirement for Member States to establish an inventory of emissions, discharges and losses of priority substances and priority hazardous substances in each river basin district.

The EQS Directive reiterates that the objectives and provisions of WFD Article 4 apply, therefore the objective to achieve 'good chemical status' and for a progressive reduction of priority substances and cessation of priority hazardous substances are subject to disproportionate cost and technical infeasibility considerations.

Specific Pollutants

Member States must also identify "specific pollutants" - substances of national concern which are discharged in significant quantities – and develop appropriate EQS using a common methodology. Standards for specific pollutants must be met for good ecological status to be achieved

In the first instance, the UK WFD Technical Advisory Group (UKTAG) prioritised 19 potential specific pollutants. EQS were developed for 10 substances and these were reviewed by stakeholders in 2007. For the remaining 9 substances, UKTAG has recommended that existing standards should be used in the first planning cycle, because in the absence of high quality field and toxicity data, a large safety factor would have to be incorporated into the EQS. This approach tightens the EQS, potentially resulting in an over-precautionary standard that is inconsistent with environmental conditions and which confers no additional environmental benefit. The intention is that UKTAG will continue to collect suitable data with which to review standards in time for the second river basin management planning cycle. To this end, UKTAG has established links with other Member States (including Germany, France, the Netherlands, Belgium and the Republic of Ireland) with a view to sharing best practice and where possible developing common solutions.

Current compliance

We have assessed compliance with standards for priority substances and specific pollutants in order to identify those water bodies at risk of not achieving WFD objectives and consequently, where measures are required. Based on monitoring data from 2006-08, about 9% of water bodies in England and Wales will fail to achieve standards for priority

substances, priority hazardous substances and specific pollutants. Over half of these water bodies fail with high (at least 95%) confidence.

Pollution Reduction Plans and development of measures

Chemicals are released into the environment from a wide range of sources including urban and agricultural land use, industry, domestic release to sewers, mines, ports and harbours. The relative importance of these sources varies depending on the chemical, hence the feasibility and effectiveness of various actions to reduce environmental concentrations will vary between substances. For this reason, programmes of measures must be developed for each substance.

Our approach has been to develop national pollution reduction plans (PRPs) for all priority and priority hazardous substances and 6 specific pollutants. The full list is included in Annex F. PRPs review current data on production, uses, sources, environmental monitoring and release, and include an evaluation of available regulatory restrictions and potential control measures. This assesses each available and potential measure for technical feasibility and cost effectiveness, using a range of supporting information, e.g. the preliminary cost effectiveness analysis (pCEA).

Details of the available and potential measures for each substance were collated for each failing water body. Local Environment Agency staff used this information to select those measures that could be usefully applied at the water body scale within their RBD. They also identified any local (M4) measures that could help deliver WFD obligations. These include investigations, targeted pollution prevention advice and campaigns and voluntary agreements based on best practice. All relevant measures have been included in Annex C of this river basin management plan[28].

The PRPs were sent to industry sectors, trade associations, conservation organisations, regulators and liaison panels for their comments, during early 2009. This targeted consultation was supported by several sector-specific workshops. The PRPs were then updated to take account of comments received via the consultation and workshops, but are intended to be “living documents” and will be updated, for example to reflect changes in compliance, uses/sources and measures as more information becomes available, and as progress is made through the first river basin management planning cycle.

The rational used to identify measures for the first river basin management planning cycle is summarised below. More detailed information on measures, including those measures that apply at the national scale and which will be used for generally bearing down on emissions of priority hazardous substances, is provided in the PRPs.

Measures tend to fall into three categories:

i) Control at source

There are a number of initiatives, particularly at the European level, to restrict chemicals at source. These include the REACH (Registration, Evaluation and Authorisation of Chemicals) Regulations and substance-specific marketing and use restrictions. These initiatives will reduce emissions of chemicals to water and for some substances, for example isoproturon,

[28] NB: Water body compliance is based on median data from all sampling points within that water body. This may mean that a water body reported as “compliant” may have some localised areas of non-compliance. Where the source of non-compliance is known, additional M4 measures will be identified to address the problem, where it is cost effective and technically feasible to do so.

pentachlorophenol and trichlorobenzenes, we believe the reduction will sufficient to achieve WFD objectives.

The Environment Agency is an enforcing body for REACH and as such, undertakes risk-based campaigns to address assess compliance with chemical restrictions and coordinates associated enforcement action. Where possible, we will include priority substances and priority hazardous substances in our enforcement campaigns.

ii) Actions to address point sources of pollution

Sewage treatment works

While standards of sewage treatment have greatly improved in recent years, sewage treatment works (STW) are often a source of chemicals including metals, pesticides, PAHs and TBT. These can arise from discharges of trade effluent to sewer, domestic use and road runoff.

For some substances, the effectiveness of planned source control measures and additional end-of-pipe treatment options is unknown. In these cases, investment in improved sewage treatment (in addition to that required to comply with other EC Directives) might be ineffective and disproportionately costly. The updated WFD Impact Assessment estimated the annual cost to the water industry of end-of-pipe removal of chemicals at around £329m if implemented in the first planning cycle, or £131m if implemented over three cycles.

Therefore we have proposed that under PR09, the water industry will carry out a programme of investigation to identify those STW that are at risk of causing non-compliance with WFD objectives for chemicals. Where a STW is identified as causing a problem, companies will assess the effectiveness and costs of options for removing the risk, including end-of-pipe treatment, control at source and catchment-based solutions, for example tightening trade discharges to sewer. Investigations will be completed by 2012 to allow removal options to be appraised in time for the second round of river basin management planning.

Industrial discharges

Industrial sites, including those regulated under the Environmental Permitting Regulations (EPR, formally the Pollution Prevention and Control Regulations) may be a source of chemicals. There is some uncertainty in relation to the impact of specific sites or activities on the achievement of WFD objectives, particularly in relation to downstream EQS failures or emissions of priority hazardous substances. Therefore in the first planning cycle, we want to work with a range of sectors to address these information gaps. This may involve:

- Investigations to confirm the loading from sites listed on the Pollution Inventory and determine the contribution of that loading to downstream EQS failures
- Investigations to confirm whether priority hazardous substances are being discharged at specific sites
- An assessment of the available measures which could help achieve WFD objectives, for example, use of alternative chemicals, better pollution prevention measures or improved end-of-pipe treatment - and the cost of these measures.

Investigations may be prioritised at certain sites, depending on releases reported on the Pollution Inventory, downstream EQS failures or know uses of particular substances. Investigations should be completed by 2012 and where risks to the achievement of WFD objectives are confirmed, an appraisal of the available measures should also be carried out. Potential measures would be subject to a disproportionate cost assessment on a site by site basis. This will ensure that cost-effective, sustainable, long-term solutions can be identified and implemented within the second cycle of river basin management planning.

We will also provide advice to small and medium sized businesses on obligations in relation to priority substances, priority hazardous substances and specific pollutants through the NetRegs website (www.netregs.gov.uk).

Discharges from abandoned mines

Many of the largest discharges of metals to surface and ground waters arise from mining e.g. minewaters and discharges from mine spoil heaps. At least 164 river catchments in England and Wales are known to be impacted by abandoned mines and are failing to achieve good status.

Abandoned coal mines are a significant source of metals including iron. The Coal Authority is continuing to implement a phased remediation plan up to 2027 for the priority sites which are contributing to the failure of 54 water bodies to meet good status.

The majority of EQS failures for other metals, particularly lead and cadmium, are in metal mining areas, particularly in the South West, Western Wales, Dee, Northumbrian and North West RBDs. There are also some problems in the Humber, Solway-Tweed and Severn RBDs. 110 water bodies are failing to achieve good status because of non-coal (primarily metal) mines. The Defra/Welsh Assembly Government/Environment Agency non-coal mines prioritisation project included a comprehensive analysis of impact and identified 221 water bodies impacted by non-coal mines with a further 236 probably impacted.

Remediation of all non-coal mines by 2015 would rely on established technologies such as those employed at Wheal Jane in Cornwall. These technologies, whilst proven, consist of chemical dosing which is costly, energy intensive and unsustainable in the long-term. It would be disproportionately expensive to employ this treatment technology on a large scale. However recent trials of innovative technologies have indicated that passive treatment may be viable and cost effective. We are hoping to carry out studies to pilot these technologies in the first planning cycle.

To progress a suitable strategy we need to carry out detailed catchment investigations to confirm the relative importance of sources and to optimise treatment solutions. Phasing of subsequent remediation measures would allow costs to be spread and for treatment technologies to be developed at a significant saving. The non-coal mines project has estimated that a programme to deal with the water-related environmental problems in all of the impacted water bodies would cost £370 million over an initial ten year period, with additional subsequent operating costs.

It would also be beneficial if responsibility for managing non-coal minewaters could be given to a government funded body (analogous to the Coal Authority's role for coal mine waters). This change should take place before 2012 to allow measures to be implemented in the second planning cycle.

iii) Actions to address diffuse pollution

Diffuse pollution arises from a range of sectors. It is often difficult to quantify as it can vary spatially and over time, therefore the significance of various sources – and hence the effectiveness of any associated restrictions – can be uncertain. For this reason, the measures included in this plan tend to focus on pollution prevention through local education campaigns, voluntary initiatives and the adoption of best practice methodologies and improved source apportionment through investigations. Measures are driven by cross-compliance with Nitrates and Sludge Directives, the Silage, Slurry and Agricultural Fuel Oil Regulations, the Groundwater Directive, anti-pollution works notices and policies on development planning, as well as restrictions on the use of certain substances.

Most of the existing and proposed national measures to control diffuse water pollution focus on preventing deterioration in the status of water bodies. For example, there are few instances of non-compliance with standards for pesticides, but some are increasing in concentration in drinking water protected areas and this trend must be reversed to meet obligations under WFD Article 7 (specific measures to meet the requirements of Article 7 are listed in Annexes C and D). Our PRPs have identified a range of measures that could be deployed voluntarily or through regulatory mechanisms. For example while the pesticide cypermethrin has been temporarily suspended for use in sheep dip, we will continue to promote further use restrictions in the agricultural, forestry and wood preservation sectors through the use of voluntary mechanisms. These could include catchment sensitive farming, rectifying misconnections of foul sewer to surface water drains, and national pesticides initiatives, for example the Voluntary Initiative, the Amenity Forum and the National Pesticides Strategy. We will be aiming to achieve compliance with the EQS by 2015, and will complement voluntary and partnership working with targeting pollution enforcement activity, e.g. anti-pollution works notices. This will ensure actions taken by our co-deliverers are not undermined by the inappropriate activities of others.

For pesticides generally, we will promote the use of voluntary mechanisms during the first cycle unless there is a clear case for immediate introduction of measures via regulatory mechanisms. Early in the first planning cycle, we will be exploring the scope for use of water protection zones (a regulatory mechanism) for a limited number of sites where implementation of measures via voluntary approaches has already proved to be unsuccessful. For other catchments if voluntary take up is not successful in the first cycle we will be seeking more extensive regulatory mechanisms in subsequent cycles.

The situation is somewhat different for the marine antifoulant TBT. Just over 60 water bodies fail the EQS for TBT, despite its use being heavily restricted already. Although further measures to restrict tin-based substances as plastic additives are being considered at European level, (and we have included measures to increase enforcement of existing restrictions) it may be that the major remaining sources arise from historical contamination of sediments and land, the re-suspension by boat movements and dredging as well as inputs from the sewerage system.

Measure for TBT therefore include investigations by the navigation sector into the impact of dredging and dredging disposal activities where these may cause or contribute to EQS failures or deterioration in a water body. We have also included measures to require a national guidance framework for dredging and dredgings disposal to be developed by December 2009 and to be applied by December 2012. The development of the framework will be overseen by Defra and Welsh Assembly Government in conjunction with the Port and Harbour Authorities, the Marine and Fisheries Agency (and future Marine Management Organisation) and the Environment Agency. Where ports and harbours are confirmed as a significant source of TBT to a water body, for example as a result of dredging activities that re-suspend contaminated sediments into the water column, the framework will drive local measures for individual ports and harbours to be applied at a local level by December 2012 where not disproportionately expensive or technically infeasible. This work will be informed by the Defra "Contaminated Marine Sediment" Project and the Cefas Project which is assessing the environmental impact of navigational dredging in estuaries and coastal waters.

Measures will also be applied to other contributing sectors, as appropriate, to deal with their contributions. We cannot predict the extent the national guidance framework will achieve compliance with the EQS, so generally we have predicted less than good status by 2015.

Approach in the first planning cycle

There are a number of initiatives, particularly at EU level, to restrict chemicals at source. These should reduce emissions to water, and where we believe the reduction is sufficient to achieve WFD objectives e.g. where there are few or no EQS failures, we have not proposed additional measures for the first river basin management planning cycle. We will carry out appropriate monitoring to ensure that WFD obligations for such substances continue to be achieved.

Where we have less certainty that such restrictions will achieve WFD objectives, for example where other sources of a substance remain, we have proposed investigations to evaluate the significance of those sources and options to address their impact where a risk to WFD objectives is confirmed. We have included additional measures where we are able to quantify their impact with confidence and we will continue to carry out targeted pollution prevention measures and enforcement of existing marketing and use restrictions.

Development of predicted outcomes

We have identified predicted outcomes for the first planning cycle for each water body, for each relevant substance. These predicted outcomes are included in Annex B of this plan and take into account the effectiveness of the measures described above.

Where the available measures will maintain or achieve compliance with the EQS by 2015, we have assigned a predicted outcome of good chemical status for priority substances and at least good ecological status for specific pollutants. Where the available measures will not achieve compliance by 2015, we have set alternative objectives for those substances. The rationale for this decision is presented in the chemicals decision tree below. There are 5 main justifications for setting alternative objectives:

- the water body is currently non-compliant with the EQS with low confidence of failure;
- the water body is currently non-compliant with the EQS with high confidence of failure, but the source of the substance is not known, or not known in sufficient detail to be able to identify appropriate measures;
- the water body is currently non-compliant with the EQS, with high confidence of failure, the source of the substance is known but there is no technically feasible solution;
- the water body is currently non-compliant with the EQS, with high confidence of failure, the source of the substance is known, but while there are technically feasible measures, the costs of the measures are not proportionate to the benefits;
- the water body is currently non-compliant with the EQS, with high confidence of failure, the source of the substance is known, there is a technically feasible solution and the cost of a measure is in proportion to the benefit, but it imposes a disproportionate burden and an alternative financing mechanism is not available.

More information on alternative objectives is included in the decision code tables at the end of this section, together with details of the investigations that will be carried out to confirm failures and identify sources, potential measures for the second planning cycle and measures which are considered to be technically infeasible or disproportionately costly.

Use of Biotic Ligand Models

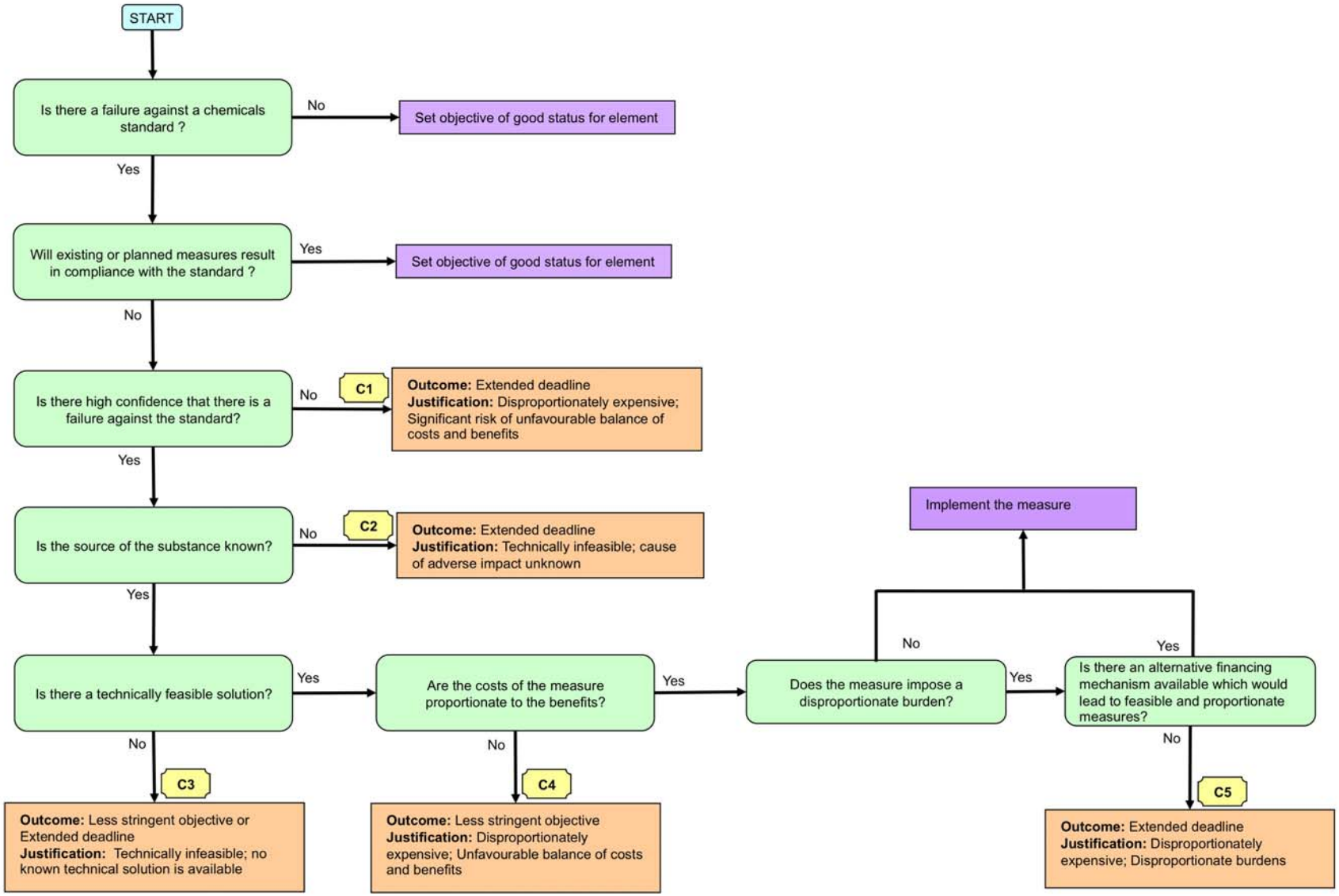
The WFD allows for the consideration of bioavailability when assessing monitored metal concentrations against EQS. We have developed biotic ligand models (BLMs) for copper and zinc, which are able to estimate the fraction of dissolved metal concentrations in freshwater that is biologically relevant, i.e. able to exert toxic effects, based on physico-chemical parameters. We have assessed our monitoring data for copper and zinc using the BLMs and as a result have 3 classes of compliance for these substances:

- Compliant with the EQS based on face value monitoring data, in which case we have assigned a predicted outcome of “good” by 2015;
- Compliant with the EQS based on bioavailable fraction, in which case we have assigned a predicted outcome of “good” by 2015 on the basis that prevailing physiochemical conditions protect against risk to biology.
- Non-compliant with EQS based on bioavailable fraction (and hence, face-value data), in which case we have extended the deadline for achieving “good” to 2027. In the interim period, investigations into sources will be undertaken in order to identify appropriate measures for implementation in subsequent planning cycles.

Future river basin management planning cycles

Work carried out in during the first river basin management planning cycle should deliver some improvement in chemical status. It should also identify cost effective, proportionate and sustainable measures for implementation in the second planning cycle, or provide robust evidence to support less stringent objectives on the grounds of technical feasibility or disproportionate cost.

Decision tree for PHS, PS and SP



Reference	C1a
Element predicted not to achieve good by 2015	Priority substances, priority hazardous substances and specific pollutants
Reason for failure	Unknown - uncertain there is a failure / impact
Alternative objective	Extended Deadline
Reason for alternative objective	Disproportionately expensive: significant risk of unfavourable balance of costs and benefits

Justification for alternative objective

The water body is currently non-compliant with the EQS, but with low confidence of failure

For over 20 years we have routinely monitored surface waters for chemical parameters listed in a range of national and European legislation (including for example, those chemicals specified in the Dangerous Substances and Freshwater Fish Directives). The Environmental Quality Standards Directive (2008/105/EC) introduces new or more stringent standards for many substances. In some cases where a new standard has been introduced, we have not previously monitored surface waters for these substances – our monitoring programme is targeted where risk is considered to be highest. Similarly where a more stringent standard has been introduced our analysis may have been at a higher limit of detection than would now be required to assess compliance with the increasingly stringent standards. While we have adapted our monitoring programme to take account of the new standards, there is sometimes insufficient monitoring data to assess compliance with high confidence. This will be addressed as additional monitoring data becomes available.

For water bodies which are currently non-compliant with low confidence of failure, our priority in the first cycle will be to carry out further investigation to confirm the situation and identify sources and additional potential measures. To identify measures until the failure is confirmed would mean that there is a significant risk of wasted investment. This is considered disproportionately costly given the high possibility that such measures would not confer any additional environmental benefit.

Investigation type

Investigate to confirm failure and/or impact

Example of investigation

Additional monitoring or modelling (e.g. using SIMCAT models) to confirm failure against the standard with high confidence. Where an EQS failure is confirmed with high confidence, the significance of various sources can then be assessed in order to identify and apportion causes of failure. This will allow appropriate measures to be targeted for implementation in this or subsequent river basin management planning cycles.

Possible future measures
Possible future measures will depend on the substance in question, confirmation of failure against the standard and identification of sources that contribute to the failure. Measures which could be appropriate for individual substances are set out in national pollution reduction plans (PRPs) for all the priority and priority hazardous substances and 6 specific pollutants. Measures may include control at source (e.g. through additional marketing and use restrictions); additional regulatory controls on point sources, including sewage treatment works, industrial emissions and action to address discharges from abandoned mines; actions to address diffuse sources, e.g. pollution prevention (through local education campaigns, voluntary initiatives and the adoption of best practice methodologies), extension of schemes such as England Catchment Sensitive Farming Delivery Initiative and the Voluntary Initiative for pesticides, and additional controls on dredging to reduce releases of TBT from contaminated sediments.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Measures that are likely to be technically infeasible or disproportionately expensive will depend on the substance in question and the source of that substance. The PRPs include an evaluation of the technical feasibility and costs associated with available and potential measures, which is based a range of supporting information, e.g. the preliminary cost effectiveness analysis (pCEA). This illustrates that some measures will be more useful in the first river basin management planning cycle than others. For example, it is feasible and relatively cost effective to investigate the concentration of lead in leachate from landfill sites and remediate where necessary (estimated at £5 million per tonne lead removed); it is neither feasible nor cost effective to replace all domestic lead pipes to prevent leaching into the sewerage system (£54 – 136 million per tonne lead removed). It should also be noted that some substances, e.g. cadmium are naturally occurring and complete elimination from all surface waters will not be possible. Furthermore, in some exceptional circumstances where water bodies are severely impacted by a legacy of metal mining, it may be technically infeasible or disproportionately expensive to restore metal concentrations to a level that approaches the standard due to the nature of the metal sources.

Reference	C2a
Element predicted not to achieve good by 2015	Priority substances, priority hazardous substances and specific pollutants
Reason for failure	Unknown - reasons for failure unknown
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The source of the substance causing the failure is unknown

Chemicals are released into the environment from a wide range of sources including urban and agricultural land use, industry, domestic release to sewers, mines, ports and harbours. For water bodies where the sources of the pollution is not known, or not known in sufficient detail to be able to identify and appraise measures (including identification of the site or activity who is responsible for causing the pollution), it is technically infeasible to identify and implement additional measures, and achieve the objective by 2015.

For over 20 years we have routinely (usually annually) assessed compliance with water quality standards (such as those for the Dangerous Substances and Freshwater Fish Directives) and tried to identify the activities releasing the substances and causing the failure of the standards. We use a number of different approaches to do this including routine and investigative monitoring, modelling, and site inspections. Despite this, the sources of some of these old failures remains unknown.

In 2008 and 2009 we assessed compliance with the new standards for priority substances, priority hazardous substances and specific pollutants. Where these substances did not have standards under the old directives, or where the standards for the water framework directive are tighter than before, we have identified many new failures.

We have produced and consulted on (in conjunction with the draft river basin management plans) national pollution reduction plans for all the priority and priority hazardous substances and 6 specific pollutants. These identify potential point, diffuse and historical sources of these substances but their significance varies locally and in the time available, we have not been able to identify specific sources and their relative contributions for each of the new failures. An extended deadline for achieving good ecological and/or chemical status is therefore required.

Investigation type

Investigate cause of failure

Example of investigation
Potential point, diffuse and historical sources are set out in national pollution reduction plans (PRPs) for all the priority and priority hazardous substances and 6 specific pollutants. The significance of these and any locally relevant sources will be assessed through additional monitoring or modelling (e.g. using SIMCAT models) to identify and apportion causes of failure. This will allow appropriate measures to be targeted for implementation in this or subsequent river basin management planning cycles.
Possible future measures
Possible future measures will depend on the substance in question and the sources that contribute to the failure. Measures which could be appropriate for individual substances are set out in the PRPs. Measures may include control at source (e.g. through additional marketing and use restrictions); additional regulatory controls on point sources, including sewage treatment works, industrial emissions and action to address discharges from abandoned mines; actions to address diffuse sources, e.g. pollution prevention (through local education campaigns, voluntary initiatives and the adoption of best practice methodologies), extension of schemes such as England Catchment Sensitive Farming Delivery Initiative and the Voluntary Initiative for pesticides, and additional controls on dredging to reduce releases of TBT from contaminated sediments.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
"Measures that are likely to be technically infeasible or disproportionately expensive will depend on the substance in question and the source of that substance. The PRPs include an evaluation of the technical feasibility and costs associated with available and potential measures, which is based a range of supporting information, e.g. the preliminary cost effectiveness analysis (pCEA). This illustrates that some measures will be more useful in the first river basin management planning cycle than others. For example, it is feasible and relatively cost effective to investigate the concentration of lead in leachate from landfill sites and remediate where necessary (estimated at £5 million per tonne lead removed); it is neither feasible nor cost effective to replace all domestic lead pipes to prevent leaching into the sewerage system (£54 – 136 million per tonne lead removed). It should also be noted that some substances, e.g. cadmium are naturally occurring and complete elimination from all surface waters will not be possible. Furthermore, in some exceptional circumstances where water bodies are severely impacted by a legacy of metal mining, it may be technically infeasible or disproportionately expensive to restore metal concentrations to a level that approaches the standard due to the nature of the metal sources.

Reference	C3a
Element predicted not to achieve good by 2015	Priority substances, priority hazardous substances and specific pollutants
Reason for failure	Confirmed - point source - trade/industry EPR (non-water industry) Confirmed - natural mineralisation Confirmed - disused mines point and/or diffuse source Confirmed - diffuse source - contaminated land (incl. landfill) Confirmed - point/diffuse source - disused mines
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: no known technical solution

Justification for alternative objective

The water body is non-compliant with the EQS, but there is no technically feasible solution

This applies where a water body is non-compliant with the EQS, with high confidence of failure, the source of the substance is known, but there is there is currently no known technical solution available to mitigate the source of pollution.

For example, in one case of non-compliance with the EQS for iron, the reason for failure has been identified as natural mineralisation on the basis that there is a naturally high concentration of iron in the groundwater source discharging to the surface water body. There are no technically feasible means of removing the iron. It may be that it will never be possible to achieve the EQS in this water body, in which case when we review this plan in 2015 we will set a less stringent objective. Alternative objectives have also been set on this basis where landfill sites or trade discharges have been identified as the cause of EQS failures, but where appropriate treatment solutions must be developed. In these cases, our priority in the first cycle is to work with the relevant sectors to identify and develop cost-effective, sustainable, long-term solutions which can be implemented within the second cycle of river basin management planning. We have initiated this process through the consultation on our pollution reduction plans (PRPs).

In most cases, alternative objectives have been set on the basis of this justification where discharges from abandoned mines have been confirmed as the cause of EQS failures for metals. At least 164 river catchments in England and Wales are known to be impacted by abandoned mines and are failing to achieve good status.

Although remediation of such discharges has been possible, for example at Wheal Jane in Cornwall, the treatment system consists of chemical dosing which is costly, energy intensive and unsustainable in the long-term. Furthermore, although this technology is effective for treating most point source discharges of minewaters, disused mines cause a range of environmental impacts. Site-specific solutions must be developed for both diffuse and point sources, and it takes several years to design and obtain permissions before they can be implemented. Sustainable treatment methods for non-coal minewaters are less well established than for coal minewaters.

Recent trials of innovative technologies have indicated that passive treatment may be viable and cost effective. However, it is not known whether this type of technology will be capable of delivering compliance with EQSs in all cases. Therefore our approach in the first planning cycle is to undertake additional investigations and research, in order to identify and pilot these technologies. This means that standards for metals in water bodies affected by mine water discharges may not be achieved by 2015. However this work will allow us to develop sustainable and long-term solutions which can be implemented within subsequent cycles of river basin management planning. Solutions will be developed to address a range of mine water impacts, leading to maximum environmental benefit when implemented. Furthermore the Impact Assessment of the EQS Directive (Defra, 2009) indicates that this phased approach will significantly reduce the costs of meeting standards for metals in these water bodies, from an estimated £585 million to an estimated £374 million (present value).

Investigation type

Investigate feasible measures

Example of investigation

Initiatives such as the Welsh Metal Mines Strategy are piloting novel treatment technologies for discharges from abandoned mines. Where other sites or activities have been identified as a source of metals or other substances, our priority in the first cycle is to work with the relevant sectors to identify and develop cost-effective, sustainable, long-term solutions which can be implemented within the second cycle of river basin management planning. We have initiated this process through the consultation on our pollution reduction plans (PRPs).

Possible future measures

The outputs from the investigations outlined above will help identify technically feasible measures for implementation in subsequent river basin management planning cycles. Measures which could be appropriate for individual substances are set out in the PRPs but could include control at source, additional controls on point sources (particularly discharges from abandoned mines), and actions to address diffuse sources.

Possible future measures will be implemented where the risk from a given sector, site or activity is confirmed. For many water bodies, this will involve action on sewage discharges and other point sources and management of dredging practices. For this reason, the water industry will be carrying out a programme of investigation which will include an appraisal of the relative merits of a range of control measures and it may be for example, that control at source (i.e. marketing and use restrictions) will be

more appropriate for some substances. Similarly the ports and harbours authorities are developing a national guidance framework on dredging and the disposal of dredgings, which will help identify technically feasible measures for implementation in subsequent river basin management planning cycles. It should be noted that new solutions identified or developed as a result of any programme of investigation will be subject to considerations of disproportionate cost.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Measures that are likely to be technically infeasible or disproportionately expensive will depend on the substance in question and the source of that substance. The PRPs include an evaluation of the technical feasibility and costs associated with available and potential measures, which is based a range of supporting information, e.g. the preliminary cost effectiveness analysis (pCEA, Defra 2007).

This illustrates that some measures will be more useful in the first river basin management planning cycle than others. For example, it is feasible and relatively cost effective to investigate the concentration of lead in leachate from landfill sites and remediate where necessary (estimated at £5 million per tonne lead removed); it is neither feasible nor cost effective to replace all domestic lead pipes to prevent leaching into the sewerage system (£54 – 136 million per tonne lead removed).

It should be noted that some substances, e.g. cadmium are naturally occurring and complete elimination from all surface waters will not be possible. Where this is confirmed, we may decide to set less stringent objectives. We have received qualitative evidence from industry that some priority substances are present in the raw materials used in industrial processes, for example mercury is often present in caustic soda. It may not be possible to use alternative materials in some manufacturing processes, therefore any future measures would have to focus on end of pipe treatment – if technically feasible and not disproportionately costly. Similarly, cadmium is sometimes present in high concentrations in coal, but security of energy sources is of national importance therefore it may not be technically feasible to reject coal from cadmium-rich ore.

In some exceptional circumstances, water bodies may be so severely impacted (e.g. for some rivers polluted through a legacy of metal mining) that it may be technically infeasible or disproportionately expensive to restore metal concentrations to a level that approaches the standard due to the nature of the metal sources.

Reference	C4a
Element predicted not to achieve good by 2015	Priority substances, priority hazardous substances and specific pollutants
Reason for failure	Confirmed - diffuse source - mixed urban run-off Confirmed - point source - water industry sewage works Suspected - point source - water industry sewage works Suspected - diffuse source - contaminated sediments
Alternative objective	Extended deadline
Reason for alternative objective	Disproportionately expensive: unfavourable balance of costs and benefits

Justification for alternative objective

The water body is non-compliant with the EQS, but the costs of the measures are not proportionate to the benefits

In a very limited number of cases where a water body fails to achieve the EQS for TBT, technically feasible measures are available but an alternative objective has been set because the costs of the measures are currently considered to be disproportionate to the benefits.

Although most uses of TBT are banned in the EU, non-compliance with the EQS remains due to historic contamination in sediments. TBT may be present in imported textiles and treated timber and is present as an impurity in organotin compounds e.g. those present in PVC. There are numerous potential sources of TBT to the environment, many of which subsequently emerge at sewage treatment works.

The measures that would address these sources in the first planning cycle include a ban on the marketing and use of TBT-treated timber, requirements for special storage arrangements for TBT treated wood, a restriction on the use of dibutyltin stabilisers in PVC or a change to building regulation to ban the use of articles containing TBT above trace levels in new buildings where the TBT may be released to water. Without an accurate assessment of the significance of these sources and the environmental benefit that would arise from addressing them, it would be disproportionately costly to proceed with these measures.

An alternative option would require improved end-of-pipe treatment at sewage treatment works. The water industry has continued to improve effluent treatment in order to meet the requirements of the Dangerous Substances Directive and many discharges have consented limits for TBT and other substances. However, the new EQS for TBT is 100 times more stringent than the previous EQS and it is likely that in

some cases, effluent treatment will have to be upgraded further. In the absence of evidence on the removal efficacy of various treatment technologies, tertiary treatment with sand filters and granular activated carbon is considered the most effective treatment. However the preliminary cost effectiveness analysis (pCEA, Defra, 2007) considered that the immediate requirement of sand filters and GAC at all STW would be disproportionately costly on the basis of very large costs and unknown or limited benefits. Furthermore, it would be premature to require improved treatment given:

• the impact that other regulatory drivers will have on the sources of chemicals to the sewerage network from domestic, industrial and diffuse sources in the forthcoming years

• uncertainties over which sewage treatment works may need improvement given the controls currently in place or to be introduced and, hence, the technologies (secondary treatment, tertiary treatment or some other action) that may be required, and

• the large number of sewage treatment works that have to be assessed in relation to the above.

The pCEA recommended that the impact of current and planned measures should be allowed to take effect before additional measures are considered. Therefore under PR09, the water industry will carry out a programme of investigation to identify those STW that are at risk of causing non-compliance with WFD objectives for chemicals. They will also investigate the efficacy of various treatment technologies and carry our selected catchment investigations. This will allow a full range of options to be appraised where a risk is confirmed.

As a general point, if it is considered necessary and feasible to upgrade effluent treatment at a specific STW, the appropriate scheme may be proposed through the AMP process. The cost would be considered as part of this process and cost-effective schemes would proceed. There have been no instances where a local or site-specific case could be made for proceeding with schemes to achieve the requirements of the EQS Directive through PR09, due to the uncertainties outlined above.

In terms of addressing the risk from contaminated sediments: the Impact Assessment for the EQS Directive (Defra, 2009) estimated that to achieve the EQS for TBT by 2015, measures relating to capital and maintenance dredging would result in annual costs pf £185 million (based on current practices). By phasing implementation through the setting of alternative objectives, further work could be carried out to assess the cost-benefit of alternative solutions. This would result in annual costs of £35 million.

Investigation type

Cost / benefit assessment where the case for progressing a measure has yet to be confirmed

Example of investigation

Under PR09, the water industry will carry out a programme of investigation to identify those STW that are at risk of causing non-compliance with WFD objectives for chemicals. They will also investigate the efficacy of various treatment technologies and carry our selected catchment investigations. This will allow a full range of options

to be appraised where a risk is confirmed. We are hoping to carry out similar programmes of investigation with other sectors. Cost / benefit assessments will be based on site-specific considerations.

Possible future measures

Possible future measures will depend on the outputs of any cost / benefit assessments carried out. Measures which could be appropriate for individual substances are set out in the PRPs but could include control at source, additional controls on point sources and actions to address diffuse sources. For TBT, this may mean a ban on the marketing and use of TBT-treated timber, requirements for special storage arrangements for timber treated wood, a restriction on the use of dibutyltin stabilisers in PVC (this option is currently being explored at the EU level), a change to building regulation to ban the use of articles containing TBT above trace levels or additional effluent treatment at STW. It may be that measures which are currently considered disproportionately costly in relation to environmental benefit may become more viable options if technology developments or market forces result in a more favourable balance of costs and benefits.

Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive

Measures that are likely to be technically infeasible or disproportionately expensive will depend on the substance in question and the source of that substance. The PRPs include an evaluation of the technical feasibility and costs associated with available and potential measures, which is based a range of supporting information, e.g. the preliminary cost effectiveness analysis (pCEA).

This illustrates that some measures will be more useful in the first river basin management planning cycle than others. For example, it is feasible and relatively cost effective to investigate the concentration of lead in leachate from landfill sites and remediate where necessary (estimated at £5 million per tonne lead removed); it is neither feasible nor cost effective to replace all domestic lead pipes to prevent leaching into the sewerage system (£54 – 136 million per tonne lead removed). It should also be noted that some substances, e.g. cadmium are naturally occurring and complete elimination from all surface waters will not be possible. Furthermore, in some exceptional circumstances where water bodies are severely impacted by a legacy of metal mining, metal concentrations are so high that it is unlikely that any treatment will restore concentrations to a level that approaches the standard.

E11 Surface water drinking water protection planning

Water bodies from which drinking water is abstracted have been designated as Drinking Water Protected Areas (DrWPAs). The objectives for such areas are recorded in Annex D.

Pressures affecting surface water DrWPAs

The main pressures affecting surface water DrWPAs are pesticides, nutrients and organic matter from agriculture, although risks also exist from mining, transport, industry and the urban amenity sector. These pollutants most commonly enter watercourses through 'diffuse' pathways, such as runoff from fields or hard surfaces after application or rainfall; or in the case of organic matter, through degradation of drainage channels in peat.

Compliance status

There are currently 145 DrWPAs at risk in England and Wales. For full details see Annex D.

Development of measures

For **point source discharges** we use all existing permitting and other relevant regimes that are applicable. The main examples are Water Resources Act consents and Environmental Permitting Regulations permits.

For **non-deliberate, or diffuse inputs** of pollutants the controls are both regulatory and advisory and are delivered by the Environment Agency or through partnerships. The main measures are anti-pollution works notices, Nitrate Vulnerable Zone action plans, codes of good practice, local agreements and partnerships, the pesticides Voluntary Initiative, England Catchment Sensitive Farming Delivery Initiative and ad-hoc delivery of pollution prevention advice.

Consideration of DrWPAs will be made when planning and delivering these activities.

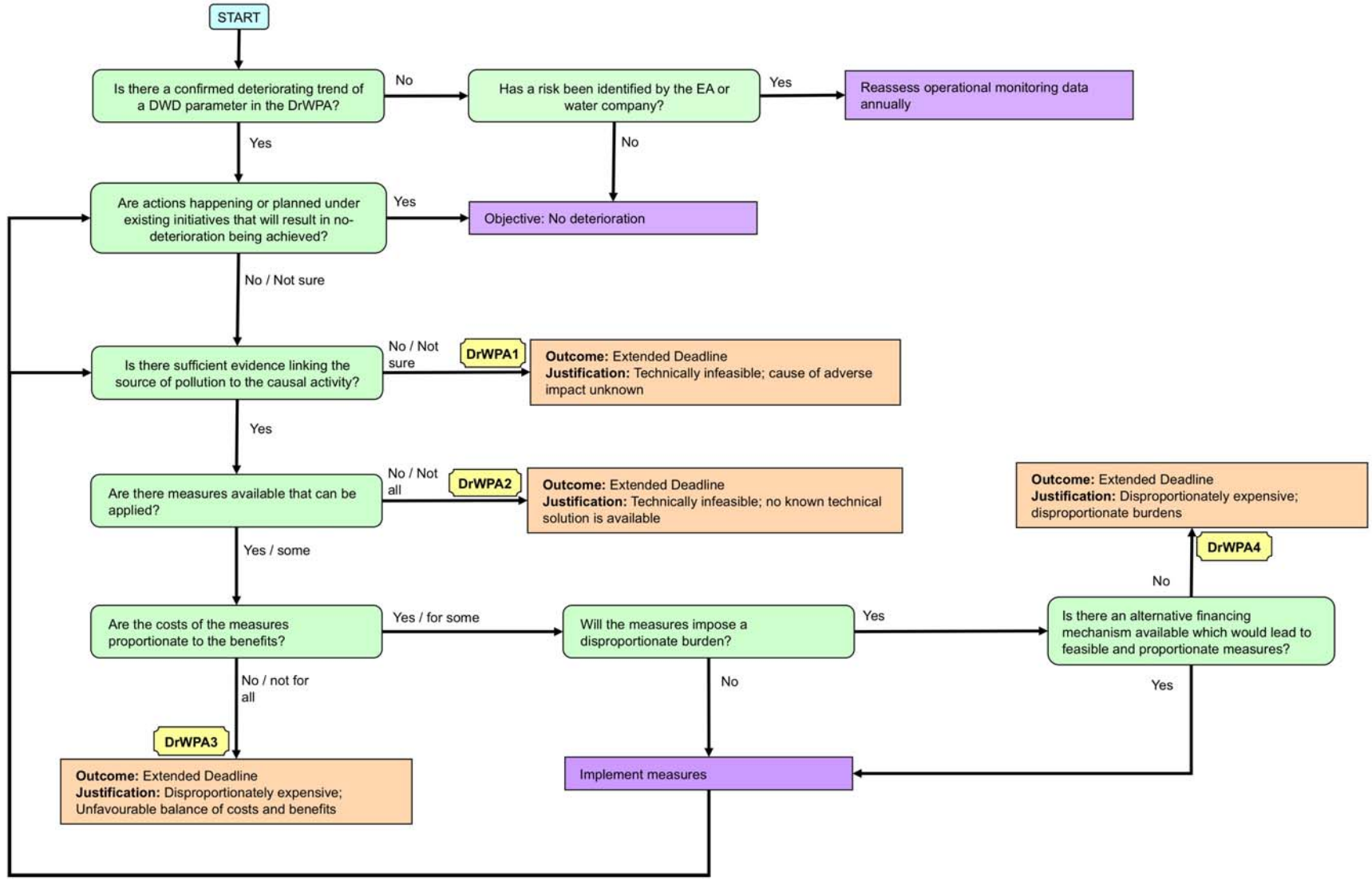
Where deterioration of DrWPAs can be confirmed with high confidence and existing measures are judged to be insufficient, Safeguard Zones may be established to target measures and gather information on the sources of pollution. Detailed Catchment Action Plans will be drawn up in Safeguard Zones to establish the necessary course of action.

The Environment Agency will seek to ensure the necessary environmental monitoring is undertaken to inform the designation of such areas and the programmes of measures needed.

Justification of extended deadlines

In some cases, although deterioration of water quality in a DrWPA can be confirmed, no measure can yet be applied because of the lack of understanding about the source or pathway of the pollutant. Extended deadlines for implementing measures have therefore been applied to 15 DrWPAs on the basis that measures are currently technically infeasible as the cause of the adverse impact is unknown. This decision process is outlined in the surface water DrWPA decision tree below and more detailed justification and supporting information is provided in the accompanying table.

Decision tree for surface water Drinking Water Protected Areas (DrWPAs)



Reference	DrWPA1a
Element predicted not to achieve good by 2015	Drinking Water Protected Areas
Reason for failure	Suspected - diffuse source agricultural
Alternative objective	Extended deadline
Reason for alternative objective	Technically infeasible: cause of adverse impact unknown

Justification for alternative objective

The specific source (location, specific activity and/or pathway) of the pollution is not known

Metaldehyde, Colour and Ammonia are predicted to cause failure of Article 7 objectives with high confidence. Although safeguard zones have been proposed for Metaldehyde and Colour issues elsewhere, in these instances it is not possible without further investigations. The types of measures used for addressing these parameters are likely to be predominantly advice-based and will therefore require some level of targeting in order to be effective. While effective targeting of measures may not require individual contributors to be identified, it does require a degree of understanding of land use patterns within the catchment of the abstraction, and the interrelationships between the various source(s) and their transport media.

Once investigations have yielded the necessary information, the Environment Agency will delineate Safeguard Zones and develop Catchment Action Plans within the first cycle.

Investigation type

Investigate source of failure

Example of investigation

Where the source of the issue cannot be sufficiently precisely identified as described above, there will be a number of ways in which to provide the necessary information. The most likely way forward will be to undertake both a desk-based exercise, using GIS mapping techniques and/or source apportionment modelling, in tandem with a bespoke investigative environmental monitoring programme.

Possible future measures

Farm visits, local seminars and workshops, text messaging and leaflet distribution are all communication media that can be utilised to disseminate best practice material and information on the relevant regulatory requirements. There are a variety of mechanisms available for such activity. Where such voluntary measures are ineffective, works notices may be served if appropriate, or Water Protection Zone (WPZ) orders may be sought to introduce additional statutory measures such as, for example, localised substance restrictions or mandatory limits on stocking densities or

fertiliser application.
Measures required to achieve 100% GES/GEP by 2027 that are likely to be technically infeasible or disproportionately expensive
Not relevant

E12 Identification and appraisal of M4 measures

Our staff identified the gap between the improvements resulting from M1-M3b measures and the achievement of Water Framework Directive default objectives in each water body. Local (M4) measures have been developed to help to close this gap, many of which were developed with liaison panels. A common set of appraisal criteria was developed with liaison panels and a national measures workshop was held in October 2007 to discuss and agree the criteria. This means that each M4 measure is developed, evaluated and recorded in the same way across England and Wales.

In the Anglian River Basin District three large workshops were held during November 2007. These were held in Lincoln, St Ives and Norwich. They were cross-cutting, dealing with all pressures and associated local measures. Over 100 participants took part from numerous organisations, including local authorities, wildlife trusts, riparian owners, business and industry etc. Local measures such as river restoration projects, habitat restoration and water efficiency measures were identified.

Further workshops were held with Environment Agency statutory committees (RFERAC and REPAC). Pressure specific workshops covering alien species and groundwater issues were organised on a river basin district level. The local measures were then collated in a database.

All local measures were then subject to review at another workshop held in March 2008. The suitability and effectiveness of the proposals were considered and their potential use in other catchments identified.

The resulting measures were then appraised using the measures appraisal guidance and included in the draft river basin management plan, which we consulted on between December 2008 and June 2009.

Further measures that will contribute to the achievement of Water Framework Directive objectives were identified during the consultation period. Over thirty workshops and presentations were held to engage stakeholder in the consultation, a number of new measures were identified during these meetings. There were also a number of measures that were identified through direct consultation responses and through discussions with other organisations and individuals. All of these measures were also appraised using the same appraisal criteria.

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River Basin Management Plan
Anglian River Basin District

Annex F: Mechanisms for action

Annex F: Mechanisms for action

Contents

F.1 Introduction

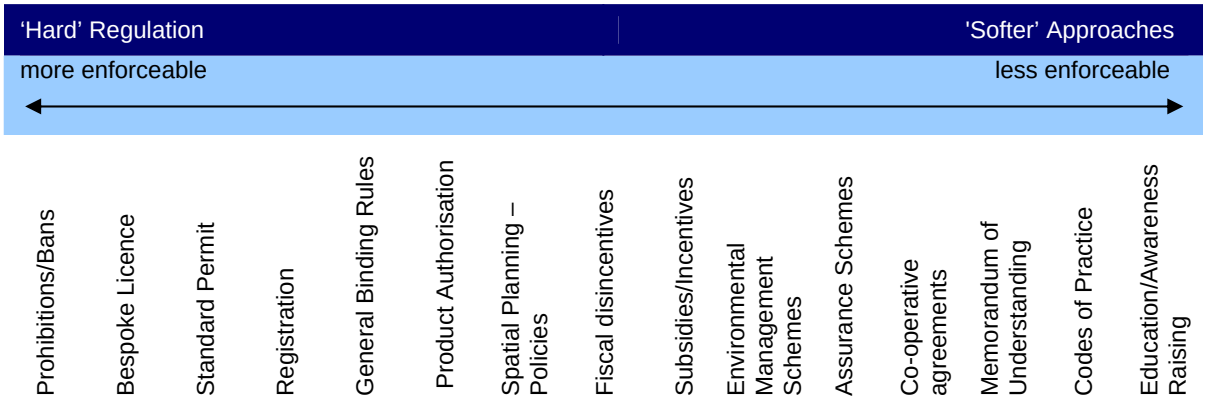
To achieve the objectives on the ground actions, (also known as measures) need to be set out along with the mechanism that can be used to carry out that action.

A ‘mechanism’ means the policy, legal and financial tools that are used to bring about particular actions. Mechanisms have often been put in place to implement European directives, which have been established to deal with problems that exist in common with other countries in the European Union. Others have been set up to manage the way that particular problems occur in England and Wales.

For this plan ‘measures’ mean the on the ground actions that apply mechanisms at a particular place or to deal with a particular issue. So, for example, a legislative mechanism enables a particular permit that controls emissions to be put in place, and this is what protects or improves the environment.

A range of mechanisms can be used, from hard regulation to softer approaches, which together can be very successful in achieving the outcomes needed for protecting and improving the water environment. Figure F.1 illustrates the types of approaches:

Figure F.1: **Types of approaches for mechanisms**



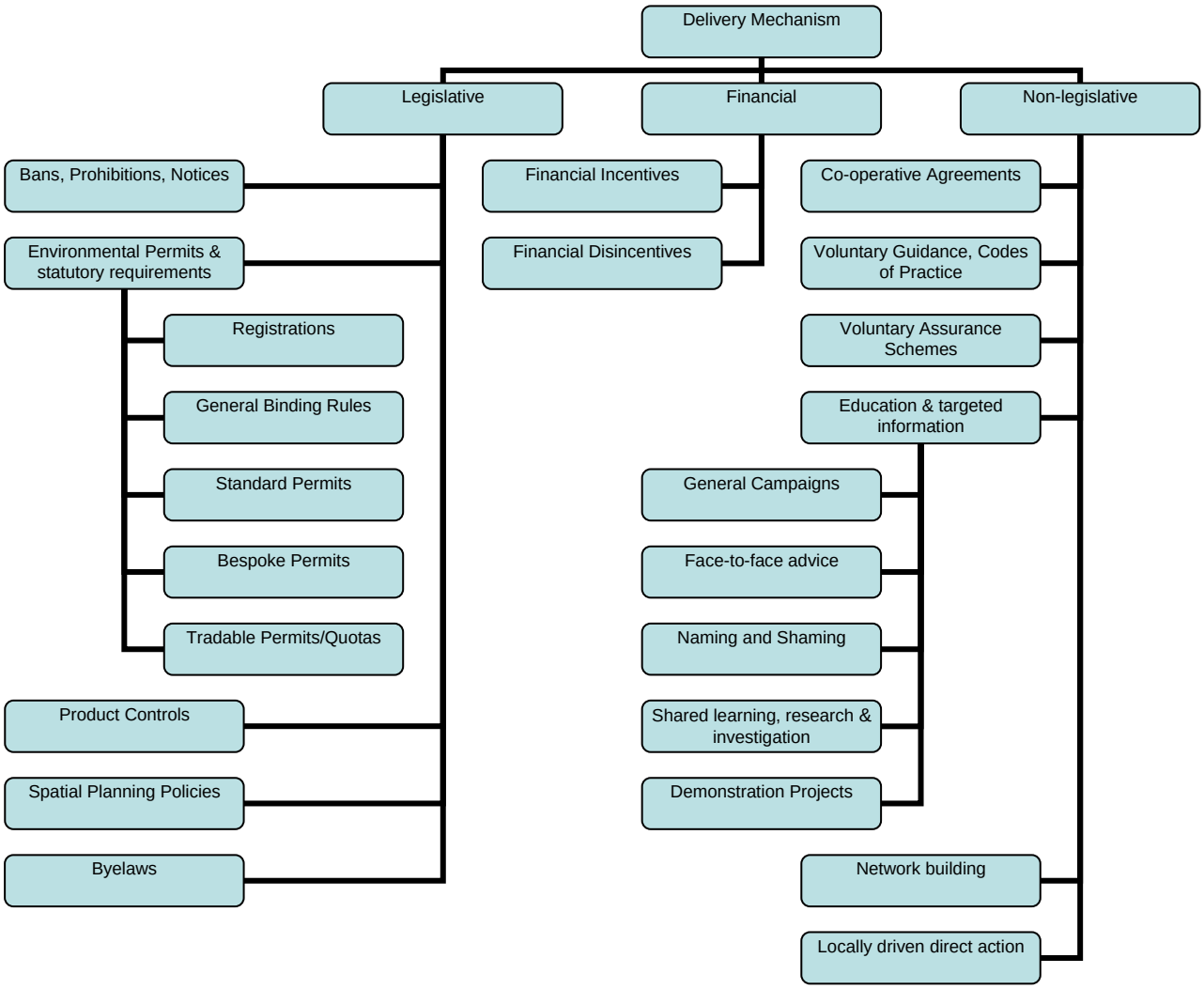
These mechanisms are already used to apply many of the so-called 'basic' measures to protect waters and the dependent ecology. These measures have helped achieve greatly improved standards, and represent a considerable amount of activity and investment. They need to continue in order to prevent deterioration.

Arrangements are also in place to make further use of these mechanisms, which will happen irrespective of the Water Framework Directive, and to establish further, 'supplementary' measures where these are needed to help achieve the Water Framework Directive's objectives.

This annex provides a general description of mechanisms that are available. It notes how these mechanisms can be used to put new actions in place where more needs to be done to achieve the Water Framework Directive's objectives. It also considers where new mechanisms might be available in the future to support actions in place.

Figure F.2 shows how different mechanisms may be related to each other.

Figure F.2: **A summary of types of mechanisms**



Annex C summarises the particular actions that will be put in place in the Anglian River Basin District to help meet the Directive's objectives.

Annex E describes how the available mechanisms have been reviewed to identify the most suitable actions to deal with the pressures in the river basin district and meet the objectives.

Other plans and programmes

As well as distinct mechanisms, this annex notes the various plans, programmes and strategies of the Environment Agency and other organisations that can be used to promote actions. Annex J (Other plans and processes) discusses in further detail how river basin planning and management can be better integrated with these at a strategic, policy and operational level so that multiple-benefits and sustainable outcomes can be achieved. It also sets out information to other public bodies as co-deliverers on what the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003 require them to do.

In particular it looks at:

- Building, town and country planning and regeneration
- Rural planning and agriculture
- Forestry management
- Flood and coastal erosion risk management
- Marine issues

F.2 Implementing European Union legislation for protecting water

This section describes how European directives have been implemented in England and Wales.

i) Bathing Water Directive

The Bathing Water Directive (76/160/EEC) sets out microbiological and chemical standards to protect public health at designated bathing waters (coastal and inland). Since its implementation European Union member states have monitored bathing waters throughout the bathing season in order to assess and report water quality against the mandatory and guideline standards in the Bathing Water Directive.

A revised Bathing Water Directive (2006/7/EC) is now in force but some member states, including the UK, will continue reporting under the current Directive until 2015. The revised Bathing Water Directive (2006/7/EC) includes tighter microbiological standards and a requirement to provide information about bathing waters on signs at beaches and online. The revised Directive classifies waters into four categories - excellent, good, sufficient and poor. Apart from limited exceptions, bathing waters must be classified as at least 'sufficient' standard by 2015.

How this Directive is implemented

Both directives are implemented through the Bathing Water Regulations 2008. The current Directive is implemented by the Environment Agency through the designation of bathing waters under the Bathing Waters (Classification) Regulations, Notice and Direction 1991. The revised Directive is implemented through the Bathing Water Regulations 2008. The Environment Agency is the competent authority under the Regulations.

These regulations are supported by other mechanisms that control pollution from particular points or from more widespread, or diffuse, sources (see F.6 and F.7 below).

There have been significant improvements in bathing water quality by improving water company discharges from sewage works and the sewerage infrastructure. These improvements have been funded through the periodic review of water companies' spending, which includes environmental investments.

Annex D shows for the location of designated bathing waters in the Anglian River Basin District, their compliance with the repealed Directive's objectives and their predicted compliance under the revised Directive. The revised Directive was transposed into domestic law in 2008 and the requirements are being phased in during the period to 2015.

You can find further information on the Environment Agency's website at:
http://www.environment-agency.gov.uk/business/regulation/107017.aspx

ii) Biocidal Products Directive

The Directive 98/8/EC on biocidal products concerns substances that are used to destroy or prevent the action of harmful organisms by chemical or biological means, and has three main objectives:

- To harmonise the European market for biocidal products, their active substances and product authorisation.
- To provide a high level of protection for people, animals and the environment from the use of biocidal products, through risk assessment. This requires the submission and evaluation of data on chemistry of the substances concerned, their toxicity to humans, and their toxicity and fate in the environment.
- To ensure products are sufficiently effective against the target species.

How this Directive is implemented

The Health and Safety Executive is the competent authority for the Directive, which is implemented through the Biocidal Products Regulations 2001 (as amended). The regulations are enforced by both the Health and Safety Executive and local authority inspectors and trading standards officers.

There are 23 different biocidal product types covering disinfectants, preservatives, pest control and speciality biocides such as antifouling products and embalming and taxidermist fluids.

You can find further information on the Health and Safety Executive's website -
http://www.hse.gov.uk/biocides/bpd/index.htm

iii) Birds Directive

The Council Directive on the conservation of wild birds (79/409/EEC) aims to control the hunting and killing of wild birds, and to protect their eggs and nests. European Union member states must also preserve, maintain or re-establish habitats (Special Protection Areas) to maintain the population of all species.

How this Directive is implemented

The Directive is implemented through the Wildlife and Countryside Act 1981 and the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). These are supported by a range of mechanisms, including:

- Direct action by Natural England, or by serving management notices or implementing management agreements under the Wildlife and Countryside Act 1981 to preserve, maintain and re-establish habitats and related environmental conditions for wild birds.
- This may be directed by Coastal Habitat Management Plans (CHaMPs) in some coastal sites.
- Conservation Regulations 1994 (Natural Habitats & Conservation) through designation of

Special Protection Areas. There are 23 SPAs in the Anglian River Basin District (see annex D).

You can find further information on the Joint Nature Conservation Committee's website at: http://www.jncc.gov.uk/page-1373

iv) Dangerous Substances Directive

The Directive 2006/11/EC (replacing repealed Directive 76/464/EEC) on pollution caused by certain substances discharged into the water environment aims to reduce pollution of surface waters by these dangerous substances, which have been selected mainly on the basis of how toxic or persistent they are, including how much they may accumulate in organisms.

The Directive requires the control of discharges that are liable to contain substances defined in List I or List II of the Dangerous Substances Directive and any other substances determined as hazardous by the Environment Agency.

- List I covers those substances that are particularly toxic, persistent and accumulate in the environment Actions must be introduced to eliminate pollution by these substances.
- List II covers substances whose effects are less severe. Actions must be introduced to reduce pollution by these substances.

The Directive has a number of daughter directives which set emission limit values and quality objectives, including:

- Directive 82/176/EEC concerning mercury discharged by the chloralkali electrolysis industry;
- Directive 84/156/EEC concerning mercury discharged by other industrial sectors;
- Directive 83/513/EEC concerning cadmium discharges;
- Directive 84/491/EEC concerning hexachlorocyclohexane discharges;
- Directive 86/280/EEC concerning DDT, carbon tetrachloride and pentachlorophenol;
- Directive 88/347/EEC concerning aldrin, dieldrin, endrin, isodrin, hexachlorobenzene, hexachlorobutadiene and chloroform;
- Directive 90/415/EEC concerning 1,2-dichloroethane, trichloroethane, perchloroethane and trichlorobenzene.

Article 6 (List I substances) of the Dangerous Substances Directive was repealed on entry into force of the Water Framework Directive. The remainder of the Directive will be fully repealed in 2013, after which controls under the Water Framework Directive will be used to provide at least the same level of protection.

How this Directive is implemented

The Environmental Quality Standards for List I substances are statutory standards under:

- The Surface Waters (Dangerous Substances) (Classification) Regulations 1989 (SI 1989/2286) and the Surface Waters (Dangerous Substances) Direction 1990;

- The Surface Waters (Dangerous Substances) (Classification) Regulations 1998 (SI 1992/337) and the Surface Waters (Dangerous Substances) Direction 1993.

National Environmental Quality Standards for Candidate List I and List II substances are set under:

- The Surface Waters (Dangerous Substances) (Classification) Regulation 1997 (SI 1997/2560);
- The Surface Waters (Dangerous Substances) (Classification) Regulations (SI 1998/389).

Non-statutory Environmental Quality Standards are set in the Department of the Environment Circular 7/89 “The Implementation of European Community Directives on Pollution caused by Certain Dangerous Substances discharged to the Aquatic Environment”.

You can find further information on the Environment Agency's website at: http://www.environment-agency.gov.uk/business/regulation/31937.aspx

v) Drinking Water Directive

The Drinking Water Directive (80/778/EEC), as amended by Directive (98/83/EC), aims to protect the health of consumers and make sure that the water is wholesome and clean. It sets standards for the quality of water intended for drinking or for use in food and drink manufacture to protect human health. A total of 48 microbiological and chemical water quality standards must be complied with and these are monitored mainly at the tap inside private and public premises. EU Member Countries can include additional and higher standards in their national regulations that implement the Directive, but must not set lower standards. This Directive also helps to protect the environment, as sources of drinking water must be free enough from contamination to allow inexpensive water treatment.

How this Directive is implemented

The Directive is implemented by**:** the Drinking Water Inspectorate and water undertakers through the Water Supply (Water Quality) Regulations 2000, as amended**;**

These regulations are supported by other mechanisms that control pollution from point and diffuse sources (see F.6 and F.7 below).

There are 230 public water supply abstractions in the Anglian River Basin District.

You can find further information, including data on how drinking water complies with the standards, on the Drinking Water Inspectorate's website at http://www.dwi.gov.uk/

vi) The Eel Regulation

The European Commission published Council Regulation 1100/2007 in September 2007, which aims to establish measures for the recovery of the stock of European eel. The Regulation requires Member States to develop and implement Eel Management Plans (EMPs) with the objective of reducing anthropogenic mortalities so as to permit with high probability the escapement to the sea of at least 40% of the silver eel biomass relative to the best estimate of escapement that would have existed if no anthropogenic influences had impacted the stock.

How this Regulation is implemented

The Environment Agency, on behalf of Defra and the Welsh Assembly Government, have produced 11 Eel Management plans for the ten river basin districts in England and Wales plus the cross-border Solway Tweed River Basin District, shared with Scotland. The Environment Agency will implement these Eel Management Plans following their approval by the European Commission during 2009. Each sets out short-term and long-term measures to manage and monitor eel populations within the 11 RBDs. Actions include better regulation of the fishery, removal of barriers to migration, increasing available habitat and reducing the impacts of entrainment. Progress against these measures must be reported to the European Commission triennially from June 2012.

You can find further information on the Defra website at:
http://www.defra.gov.uk/foodfarm/fisheries/freshwater/fishman.htm

vii) Environmental Impact Assessment Directive

Under the Environmental Impact Assessment Directive (85/337/EEC), as amended by Council Directive 97/11/EC and by Article 3 of Directive 2003/35/EC (to improve the rights for public participation), before consent is given for certain development projects, such as large-scale industrial or infrastructure projects, an assessment of the effects the development may have on the environment must be made, so that the competent authority that grants consent is aware of these possible consequences.

The developer makes the assessment and presents this in an environmental statement, which is consulted on widely. The environmental statement must identify, describe and assess impacts on people, plants and animals, soil, water, air, climate and the landscape, the built environment and cultural heritage, including how these factors link together. Consenting authorities can then assess whether a proposed development will have significant impacts on water bodies, and whether it may prevent environmental objectives being achieved.

How this Directive is implemented

The Directive is implemented through a number of statutory instruments, covering the consenting procedures for various categories of development, including activities such as forestry and quarrying. Projects that require planning permission are governed by the Town and Country Planning Regulations 1999 (Environmental Impact Assessment) (England and Wales) Regulations, as amended.

Associated mechanisms include:

- Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999;
- Harbour Works Environmental Impact Assessment Regulations 1999;
- Marine Works (Environmental Impact Assessment) Regulations 2007
- Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) Regulations 2007;
- Water Resources (England and Wales) Environmental Impact Assessment Regulations 2003 as amended;

- Uncultivated Land and Semi-natural Areas Environmental Impact Assessment Regulations 2001 (England).

The Environment Agency is consulted on environmental impact assessments for developments that may affect the water environment.

You can find further information on the communities and local government website at: http://www.communities.gov.uk/planningandbuilding/planning/sustainabilityenvironmental/environmentalimpactassessment

viii) Environmental Liability Directive

The Environmental Liability Directive (2004/35/EC) seeks to achieve the prevention and remedying of environmental damage to habitats and species protected under EC law and to species or habitat on a site of special scientific interest for which the site has been notified, damage to water resources and land contamination which presents a threat to human health. It reinforces the polluter pays principle and makes operators financially liable for threats of or actual damage.

How this Directive is implemented

The Directive is implemented through the following regulations:

- The Environmental Damage (Prevention and Remediation) (England) Regulations 2009
- The Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009

for which the competent authorities are:

- The Environment Agency, which deals with damage caused by activities that it regulates and all water damage;
- Local authorities, which deal with all land damage and the prevention of damage caused by activities regulated by them;
- Natural England or Countryside Council for Wales, which deals mainly with damage relating to biodiversity on land;
- The Marine and Fisheries Agency in England or Welsh Ministers in Wales, which deals with damage relating to biodiversity in marine waters if the damage is not caused by an activity regulated by the Environment Agency.

The regulations apply only to the most serious types of damage:

- damage that would lower the status of a Water Framework Directive water body;
- damage that adversely affects the site integrity of a SSSI or significantly affects the conservation status of a protected species or habitat;
- damage to land that causes a significant risk of adverse effects on human health.

Operators of economic activities are liable to prevent and remediate the damage their activities cause. For water and biodiversity damage the Regulations require much more extensive remediation than under existing legislation

You can find further information on Defra's website at:
http://www.defra.gov.uk/environment/policy/liability/index.htm

ix) Floods Directive

The European Directive on the Assessment and Management of Flood Risks (2007/60/EC of 23 October 2007, the Floods Directive) is a common framework for Member States to assess the risk of flooding, map its potential impact and plan measures to reduce potential and significant flood risk, with a focus on human health, cultural heritage, the environment and economic activity.

How this Directive is implemented

The Floods Directive came into force on 26 November 2007. The UK and other European Union member states must establish their own legislation to implement the Directive within two years of this date. Defra and the Welsh Assembly Government began their consultation (http://www.official-documents.gov.uk/document/cm75/7582/7582.pdf) on this in April 2009, when its draft Flood and Water Bill was published, but may transpose the Directive under section 2(2) of the European Communities Act.

You can find further information on Defra's website at
http://www.defra.gov.uk/environment/flooding/policy/fwmb/index.htm

x) Freshwater Fish Directive

The Directive on the quality of fresh waters that need protecting or improving to support fish life (2006/44/EC replacing Directive 78/659/EEC which was repealed) aims to protect and improve running or still waters capable of supporting “indigenous species offering a natural diversity”. It protects those fresh water bodies identified by European Union member states as waters suitable for sustaining fish.

It sets physical and chemical water quality objectives for salmonid (salmon and trout) waters and cyprinid (for example, roach, bream, tench and rudd) waters. The Directive will be repealed in 2013 after which controls under the Water Framework Directive will be used to provide at least the same level of protection as the Freshwater Fish Directive.

How this Directive is implemented

This Directive is implemented under the Surface Waters (Fishlife) (Classification) Regulations 1997 as amended and the Surface Waters (Fishlife) Direction 1997 with the Environment Agency as competent authority.

Annex D sets out the freshwater fish waters designated as protected areas in the Anglian River Basin District and their compliance with the Directive.

You can find further information on Defra's website at:
http://www.defra.gov.uk/foodfarm/fisheries/index.htm

and also on the Environment Agency’s website http://www.environment-agency.gov.uk/business/regulation/31955.aspx

xi) Groundwater Directives

The Directive on protecting groundwater against certain dangerous substances (80/68/EEC) prohibits discharges of particular substances and limits discharges of certain other substances into groundwater.

The Water Framework Directive and a new Directive (2006/118/EC) (on the protection of groundwater against pollution and deterioration, also known as the Groundwater Daughter Directive) was agreed in 2006, and this works alongside the old Groundwater Directive and provides supporting detail to the Water Framework Directive. It will be enacted in England and Wales during 2009. The old Directive will be repealed in December 2013.

The original Groundwater Directive (enacted in Great Britain through the Groundwater Regulations 1998) places controls on two lists of substances. (These Groundwater Directive lists are different from those in the Dangerous Substances Directive). Substances on list 1 are the most toxic and dangerous, whilst substances on List 1 are less dangerous but could still be harmful to groundwater in large amounts.

The 2006 Groundwater Directive replaces Lists 1 and 2 with hazardous substances and non-hazardous pollutants respectively, although the non-hazardous list is much broader than the old List 2 and covers all types of pollutants. The restrictions on these substances are substantially the same for both sets of legislation and are intended to prevent groundwater pollution. The Directives control both deliberate disposals of hazardous/non-hazardous substances, and other activities that might lead to accidental losses.

How these Directives are implemented

Directive 80/68/EEC is implemented by various pieces of legislation, including:

- The Environmental Permitting (England and Wales) Regulations 2007;
- The Water Resources Act 1991 (section 88 Discharge Consents);
- The Groundwater Regulations 1998 as amended.

Implementation of the new Groundwater Directive will initially be via the introduction of 2009 Groundwater Regulations which will repeal the 1998 Groundwater Regulations. Government will then incorporate the requirements in revised Environmental Permitting Regulations in 2010. There will be some minor policy changes but the existing enforcement arrangements will be maintained. Enforcement of groundwater authorisations under the existing regulations is also a part of cross-compliance under the Common Agricultural Policy.

Our Groundwater Protection: Policy and Practice document sets out our general approach on how we plan to deal with activities that pose a risk to groundwater and is available at http://publications.environment-agency.gov.uk/pdf/GEHO1006BLMW-e-e.pdf

You can find further information on the old Groundwater Directive (80/68/EEC) at http://www.environment-agency.gov.uk/business/regulation/31881.aspx

You can find further information on the new Groundwater Directive (2006/118/EC) at http://www.defra.gov.uk/environment/quality/water/wfd/daughter-dirs.htm

xii) Habitats Directive

The “European Community Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora”, aims to contribute towards ensuring biodiversity through the

conservation of natural habitats and wild plants and animals. Measures must be introduced to maintain or restore to ‘favourable conservation status’ the natural habitats and populations of wild plants and animals identified as important within the European Union (as specified in annexes to the Directive).

Representative areas with these habitats and species must be designated as Special Areas of Conservation. Special Areas of Conservation and Special Protection Areas designated under the Birds Directive (see section iii above) form a network of protected areas known as ‘Natura 2000’.

The Habitats Directive introduces for the first time for protected areas, the precautionary principle; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest. In such cases compensation measures will be necessary to ensure the overall integrity of network of sites.

As a consequence of amendments to the Birds Directive these measures are also applied to Special Protection Areas.

How this Directive is implemented

The Directive is implemented by the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended), known as 'the Habitats Regulations', which are administered by Natural England and the Countryside Council for Wales. Special Areas of Conservation and Special Protection Areas are also notified as Sites of Special Scientific Interest.

Regulation 3(3) and 3(4) of the Habitats Regulations require every competent authority to have regard to the requirements of the Habitats Directive while carrying out their functions. The Habitats Regulations (Regulation 48) require that any plan or project, for example a development application or an environmental permit, that is not directly connected with or necessary to the management of a Natura 2000 site, but which could have a likely significant effect on it has to have an appropriate assessment of its implications on the conservation objectives of the site. In most cases, plans or projects that could have a negative effect on the integrity of a site can not proceed.

Regulation 50 of the Habitats Regulations require all Competent Authorities to review the impact of certain types of existing permits and modify or revoke them where necessary to remove effect or risk of effects on Natura 2000 sites.

Annex D shows the location of Natura 2000 sites and compliance with the Directive's objectives for the Anglian River Basin District.

You can find further information on the Joint Nature Conservation Committee's website at: http://www.jncc.gov.uk/page-1374

xiii) Integrated Pollution Prevention and Control Directive

The Integrated Pollution Prevention and Control Directive (2008/1/EC replacing the repealed Directive 96/61/EC) is designed to prevent, reduce and eliminate pollution at source by using natural resources efficiently. It is intended to help industries operate in a more environmentally sustainable way.

The activities covered include those arising from energy, metals, mineral, chemical, waste management industries, as well as others such as paper/board production, slaughterhouses,

food and drink production, intensive pig and poultry farms. To comply with the regulations, operators need a permit and must use best available techniques to prevent emissions to air, land and water or, where that is not practicable, they must reduce them to an acceptable level. They must also minimise waste and recycle it where they can, conserve energy, prevent accidents and limit their environmental consequences, and return the site to a satisfactory state after operations cease.

How this Directive is implemented

The Directive is implemented by the Environmental Permitting (England and Wales) Regulations 2007. Competent authorities for these regulations are:

- the Environment Agency, which has responsibility for A(1) installations, the most polluting of the three industrial categories;
- local authorities, which have responsibility for A(2) installations (Local Authority Integrated Pollution Prevention and Control) and for Part B installations (Local Authority Pollution Prevention and Control).

(Prior to 6 April 2008 the Directive was implemented by the Pollution Prevention and Control (England and Wales) Regulations 2000).

This legislation helps deliver the Water Framework Directive objectives in a number of ways, including, for example, objectives for priority hazardous substances (cease or phase out discharges, emissions and losses) and by minimising other releases from major installations.

The regulations are supported by Europe-wide guidance notes on best available techniques.

There were 621 permits for Part A(1) installations in the Anglian River Basin District.

You can find further information on the Environment Agency's website at:
http://www.environment-agency.gov.uk/homeandleisure/37801.aspx

xiv) Major Accidents Directive

The Major Accidents Directive (96/82/EC), also known as the Seveso II Directive, aims to prevent accidents, and limit their consequences if they do occur, at sites using or storing certain dangerous substances above specified thresholds.

It deals with exceptional risks (fires, explosions and massive emissions of dangerous substances when an activity gets out of control) and the steps to be taken to prevent major accidents. Operators of establishments where high quantities of dangerous substances are used or stored must produce a safety report and an on-site emergency plan. In addition, the relevant local authority must produce an off-site emergency plan, and the public must be told of safety measures and what to do in the event of an accident.

How this Directive is implemented

The Directive is implemented by the Health and Safety Executive and the Environment Agency through the Control of Major Accident Hazards Regulations 1999.

You can find further information on the Health and Safety Executive's website at:
http://www.hse.gov.uk/comah/

xv) Marine Strategy Framework Directive

The Marine Strategy Framework Directive came into force on 15th July 2008. This Directive establishes an integrated policy for the protection of the marine environment in a similar manner to the Water Framework Directive. Where both directives apply in coastal waters, the Marine Strategy Framework Directive covers those aspects of the environmental status of the marine environment not covered by the Water Framework Directive. The Marine Strategy Framework Directive does not apply to transitional waters (e.g. estuaries). The Directive requires Member States to take necessary measures to maintain or achieve good environmental status in marine waters by 2020.

How this Directive is implemented

The Directive must be transposed by 2010. The Environment Agency is working with Defra, Welsh Assembly Government and others to ensure that implementation of both directives will be complementary where they overlap. Marine strategies have to be developed in order to protect and preserve the marine environment, prevent its deterioration, restore marine ecosystems and prevent and reduce inputs in the marine environment.

Date	Action
2012	• Initial assessments of current environmental status and the environmental impact of human activities • Determination of good environmental status for waters concerned • Establishment of targets and indicators
2014	Establish monitoring programmes for ongoing assessment and updating of targets
2015	Develop programmes of actions to achieve/maintain good environmental status
2016	Implement programme of actions
2020	Take the necessary measures to achieve or maintain good environmental status in the marine environment

xvi) Nitrates Directive

The Nitrates Directive (91/676/EEC) aims to protect water quality against nitrate pollution from agriculture. It encourages better management of animal manure, manufactured fertilisers and other nitrogen-containing materials spread onto land. In England and Wales discrete areas of land have been designated as Nitrate Vulnerable Zones, where the waters that the land drains to contain, or are likely to contain 50 mg/l of nitrate, or the waters are eutrophic or likely to become so. Some other European Union member states have declared the whole territory as being vulnerable to nitrate pollution.

An action programme must be put in place in Nitrate Vulnerable Zones that farmers have to observe to reduce nitrate pollution. Rules cover the storage of manure and periods when spreading manure and manufactured fertiliser to land is not allowed and limits on rates of nitrate application. A review of both the designations and action programme must be carried out at least every four years, the outcomes of which are used by Ministers to make appropriate amendments. As well as action programmes in Nitrate Vulnerable Zones Member States must have voluntary codes of good agricultural practice in place to promote general good practice to control nitrate on all farms.

How this Directive is implemented

In England this Directive is implemented under the Nitrate Pollution Prevention Regulations 2008. In Wales this Directive is implemented under the Nitrate Pollution Prevention (Wales) Regulations 2008.

The Environment Agency is the competent authority responsible for enforcing the Action Programs.

Associated mechanisms include:

- Prohibition and notices under the Water Resources Act 1991 s85 and/or Water Resources Act 1991 s86 to prevent nitrate pollution from discharges;
- Water Protection Zones when existing mechanisms will not achieve the required objectives;
- Statutory Code of Good Agricultural Practice.

About 96% of land is currently designated as Nitrate Vulnerable Zone in the Anglian River Basin District. The next review is expected to be implemented in 2013.

You can find further information in Annex D on protected areas and on the Environment Agency's website at: http://www.environment-agency.gov.uk/business/regulation/31901.aspx

xvii) Plant Protection Products Directive

The Plant Protection Products Directive (91/414/EEC), also known as 'The Authorisations Directive', aims to prevent adverse impacts from plant protection products by controlling the marketing and use of new products. Plant protection products include herbicides (weed killers), insecticides, fungicides, molluscicides (slug/snail killer) and other pesticide products used to protect plants.

New active substances for use in plant protection must be approved before they can be sold or used. To gain approval, the producers must submit a dossier identifying the active substance (and a plant protection product which contains in it); its physical and chemical properties; its effects on target pests; and any possible effects on workers, consumers, the environment and non-target plants and animals. The dossiers are evaluated at European level and a decision is made on whether the new substance can be approved for use and which conditions will apply across all European Union member states.

How this Directive is implemented

The Directive is implemented under the Plant Protection Products Regulations 2005 and administered by the Chemicals Regulation Directorate, an executive agency of Defra.

You can find more detailed information on the Chemicals Regulation Directorate website at: http://www.pesticides.gov.uk/approvals.asp?id=2310

xviii) Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

REACH entered into force on 1st June 2007 under EC regulation 1907/2006 to streamline and improve the legislative framework on supply and use of chemicals in the European

Union. REACH has several aims:

- To provide a high level of protection of human health and the environment from the use of chemicals.
- To make the people who place chemicals on the market (manufacturers and importers) responsible for understanding and managing the risks associated with their use.
- To allow the free movement of substances] on the EU market.
- To enhance innovation in and the competitiveness of the EU chemicals industry.
- To promote the use of alternative methods for the assessment of the hazardous properties of substances e.g. quantitative structure-activity relationships (QSAR) and read across.

A major part of REACH is the requirement for manufacturers or importers of substances to register them with a central European Chemicals Agency (ECHA). A registration package will be supported by a standard set of data on that substance. The amount of data required is proportionate to the amount of substance manufactured or supplied. If a substance is not registered then the data on it will not be available and as a result it will no longer be possible to manufacture or supply it legally.

REACH applies to substances manufactured or imported into the EU in quantities of 1 tonne per year or more. Generally, it applies to all individual chemical substances on their own, in preparations or in articles (if the substance is intended to be released during normal and reasonably foreseeable conditions of use from an article). Some substances are specifically excluded, for example radioactive substances, substances under customs supervision, the transport of substances, non isolated intermediates, waste and some naturally occurring low-hazard substances.

Some substances, covered by more specific legislation, have tailored provisions, including human and veterinary medicines, food and foodstuff additives and plant protection products and biocides. Others have tailored provisions within the REACH legislation, as long they are used in specified conditions, such as isolated intermediates and substances used for research and development. REACH also allows for the restriction of substances where it poses a particular threat that is deemed to require Community-wide action to mitigate the risk, or for substances of very high concern a company wishing to market or use such a substance must submit an application to the European Chemicals Agency for an authorization.

How this Regulation is implemented

The Competent Authority for REACH is the Health and Safety Executive (HSE), supported by others, in particular the Environment Agency. Implementation of REACH is phased with registration deadlines up to June 2018, depending on the annual tonnages involved.

Information on the hazardous properties of chemicals and their risk to the environment will be available through the European Chemicals Agency run database IUCLID http://iuclid.eu/

Further information is available at: http://www.hse.gov.uk/reach/

xix) Sewage Sludge Directive

The Sewage Sludge Directive (86/278/EEC) aims to protect people, animals, plants and the environment against the possibility of harmful effects from the uncontrolled spreading of sewage sludge on agricultural land.

It encourages sewage sludge to be used correctly and prohibits it being applied to soils unless the concentration of heavy metals in the soil is below certain limits (which vary according to pH). Monitoring must be carried out to make sure that the soil does not exceed these limits after sludge has been spread. Sludge must be treated before it is used, for example to reduce pathogen levels, unless it is injected or worked into the soil. Animals cannot graze on land that has been spread with sludge, and crops cannot be harvested from the land, for three weeks after the sludge has been spread.

Preventing soils becoming polluted in this way also protects surface water and groundwater from receiving polluted run-off.

How this Directive is implemented

The Directive is implemented through the Sludge Use in Agriculture Regulations 1989 as amended, with the Environment Agency as competent authority.

The Regulations are supported by general binding rules and financial disincentives through cross-compliance under the European Union's Common Agricultural Policy and Single Farm Payments made in England and Wales. All the water companies follow the Safe Sludge Matrix, an agreement made in December 1998 between Water UK and the British Retail Consortium, which bans the use of untreated sludge on agricultural land. There is also a non-statutory code of practice.

The water and sewerage companies are responsible for managing the recycling and disposal routes of the sewage sludge produced by their sewage treatment works. They must comply with the requirements of the Sewage Sludge Directive, the Waste Framework Directive and the Urban Waste Water Treatment Directive.

The Environment Agency is the enforcement authority for the relevant legislation.

The Water Services Regulation Authority is responsible for ensuring that the companies are adequately funded to carry out their functions, which include sewage sludge disposal.

You can find further information on the NetRegs website at:
http://www.environment-agency.gov.uk/netregs/businesses/agriculture/61893.aspx

xx) Shellfish Waters Directive

The Directive on the quality required of shellfish waters (2006/113/EC replacing Directive 79/923/EEC which is repealed) aims to protect or improve shellfish waters to support shellfish life and growth. It protects the water habitat of bivalve and gastropod molluscs, including oysters, mussels, cockles, scallops and clams. In this way, it contributes to the high quality of shellfish products eaten by humans. It sets physical, chemical and microbiological water quality requirements that designated shellfish waters must either comply with (‘mandatory’ standards) or try to meet (‘guideline’ standards).

The Directive will be repealed in 2013, after which controls under the Water Framework Directive will be used to provide at least the same level of protection to shellfish waters.

How this Directive is implemented

This Directive is implemented through the:

- Surface Waters (Shellfish) (Classification) Regulations (SI 1997/1332);
- Surface Waters (Shellfish) (Direction) 1997.

The Environment Agency is the competent authority.

Annex D sets out the shellfish waters designated as protected areas in the Anglian River Basin District and their compliance with the Directive.

Shellfish Waters Pollution Reduction Plans were prepared in 2008. These are available for the 124 Shellfish Waters in England and Wales and are available from: http://www.environment-agency.gov.uk/business/regulation/31931.aspx

You can also find further information on Defra's website at: http://www.defra.gov.uk/environment/quality/water/waterquality/shellfish/index.htm

xxi) Strategic Environmental Assessment Directive

The Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment requires a formal environmental assessment of plans and programmes which are likely to have significant effects on the environment. Authorities which prepare and/or adopt such a plan or programme must prepare a report on its likely significant environmental effects, consult environmental authorities and the public, and take the report and the results of the consultation into account during the preparation process and before the plan or programme is adopted. They must also make information available on the plan or programme as adopted and how the environmental assessment has been taken into account. River basin management plans fall within the scope of the Strategic Environmental Assessment Directive.

How this Directive is implemented

The Strategic Environmental Assessment Directive is implemented through the Environmental Assessment of Plans and Programmes Regulations 2004.

Guidance is provided in 'A Practical Guide to the Strategic Environmental Assessment Directive'.

Further information is available on the Communities and Local Government website - http://www.communities.gov.uk/planningandbuilding/planning/sustainabilityenvironmental/strategicenvironmentalassessment/

xxii) Sustainable Use of Pesticides Directive (Proposal)

The purpose of this Directive, as proposed, is to establish a legislative framework which:

- contributes to the reduction of impacts of plant protection products on human health and the environment;
- aims to achieve a more sustainable use of plant protection products;

- promotes a significant overall reduction in risks and hazards of using plant protection products consistent with necessary crop protection.

The final wording of this Directive will be adopted by the Commission in 2009. There are 2 articles of particular relevance to Water Framework Directive measures:

- Article 11 - specific measures to protect the aquatic environment and drinking water
- Article 12 - Reduction of pesticide use or risks in specific areas, including protected areas under the Water Framework Directive.

See http://www.pesticides.gov.uk/environment.asp?id=1980#authorisation_regulation_and_sustainable_use_directive for further information.

How this Directive will be implemented

The Directive will be implemented into UK legislation by late 2011. The Chemicals Regulation Directorate of the Health and Safety Executive (formerly Pesticides Safety Directorate) is the competent authority for overseeing implementation of UK Regulations (including an anticipated public consultation in 2009).

The Directive is expected to establish a framework which will promote 'best practice' in the storage, use and disposal of pesticides, and their packaging. Key features will include: the establishment of national action plans; compulsory testing of spray machinery and certification of spray operators, distributors and advisors; a ban (subject to derogations) on aerial spraying; special measures to protect the aquatic environment, public spaces and special conservation areas; minimising the risk of pollution through handling, storage and disposal; and the promotion of Integrated Pest Management.

Further information is available at http://www.pesticides.gov.uk_authorisation_regulation_and_sustainable_use_directive

xxiii) Surface Water Abstraction Directives

These two Directives were repealed in 2007, and the related regulations in England and Wales repealed subsequently.

- Directive 75/440/EEC concerning the quality of surface water abstracted for use as drinking water

This aimed to make sure that surface water abstracted for use as drinking water reached certain standards and was adequately treated before being put into public supply. It aimed to improve rivers or other surface waters used as sources of drinking water. Surface waters were classified by the water's general suitability for abstraction and level of treatment required before the water is suitable for public supply:

  - A1 - simple physical treatment and disinfection;
  - A2 - normal physical/chemical treatment and disinfection;
  - A3 - intensive physical/chemical treatment, extended treatment and disinfection.

- Directive 79/869/EEC concerning the frequency of sampling and analysis of surface water intended for abstraction for drinking

This laid down the minimum standards, established the analytical methods to be used in measuring the parameters in 75/440/EEC, with minimum limits of detection, accuracy and precision, and set out the required sampling frequency.

How these Directives were implemented

The Directives were implemented through:

- The Surface Waters (Abstraction for Drinking Water) (Classification) Regulations 1996 (SI 1996/3001);
- The Surface Waters (Abstraction for Drinking Water) Direction 1996.

You can find further information on the Environment Agency's website at http://www.environment-agency.gov.uk/business/regulation/31949.aspx

Controls implemented under the Water Framework Directive, including for example through use of Drinking Water Protected Areas (see F4 below), will ensure that at least the same level of protection is afforded to drinking water and its sources.

xxiv) The Urban Waste Water Treatment Directive

The Urban Waste Water Treatment Directive (91/271/EEC) regulates the collection and treatment of waste water from homes and industry. It protects the environment from the negative effects of urban waste water and discharges from certain industrial sectors, such as food and drink processing plants (some of which produce waste that has a similar polluting effect to untreated sewage). Most waste water must have at least secondary treatment (biological treatment). 'Sensitive' receiving waters are identified where sewage requires extra treatment before discharge into them. One type of sensitive area is 'eutrophic waters', where additional nutrients (mainly nitrate or phosphate) stimulate the growth of algae and other plants, damaging the natural environment. Another type of sensitive area is where water is intended for abstraction for use as drinking water but nitrate levels are high. In these areas, larger sewage discharges must be treated to reduce their load of nutrients (tertiary treatment).

How this Directive is implemented

The Directive is implemented through the Urban Waste Water Treatment Regulations 1994. These identify the sensitive areas for controls on discharges of nutrients (see annex 11) and ban the disposal of sludge at sea. Powers to consent discharges, with conditions to protect the receiving waters, are available under the Water Resources Act 1991 (see F.6 below).

Sewerage undertakers have to develop a programme for improving discharges every five years. This programme, which is approved by Water Services Regulation Authority, the Environment Agency, Drinking Water Inspectorate and Defra**,** provides the mechanism for funding and implementing the changes necessary to implement the Urban Waste Water Treatment Directive.

Associated mechanisms and resulting actions include:

- Codes of practice developed in partnership with UK Water Industry Research and the water industry;

- Financial incentives for sewerage undertakers to comply with permit conditions established under the Water Services Regulatory Authority operator performance assessment scheme, which links overall service provision to the price that customers pay.

You can find further information on Defra's website at:
http://www.defra.gov.uk/environment/quality/water/waterquality/sewage/uwwtd/index.htm

xxv) Veterinary Medicinal Products

Veterinary and human medicinal products in the European Union (EU) are regulated by the European Medicines Agency under Regulation (EC) No. 726/2004

How the Regulation is implemented.

The competent authority is the Veterinary Medicines Directorate which is an executive agency of Defra (http://www.vmd.gov.uk/).

Assessments and authorisation, decisions are made by the Committee for Medicinal Products for Veterinary Use (http://www.emea.europa.eu/htms/general/contacts/CVMP/CVMP.html).

CVMP prepares scientific guidelines, in consultation with the competent authorities of the EU Member States, to help applicants prepare marketing-authorization applications for medicinal products for veterinary use.

Environmental impacts assessment are carried out in two phases. In phase I the potential for environmental exposure is assessed based on the intended use of the VMP. Where a potential environmental risk is identified a detailed procedure of environmental risk assessment is carried out under Phase II. This provides a common basis for testing of veterinary medicinal products between the European Union, Japan, USA, Canada, Australia and New Zealand.

xxvi) Waste Framework Directive

The Directive 2008/98/EC on waste deals with the protection of human health and the environment against harmful effects caused by the collection, transport, treatment, storage and tipping of waste. Regulation under this legislation includes a system of permits and plans which set out the essential factors to be taken into consideration in respect of the various waste disposal and recovery operations. The Directive will be repealed and replaced by a revised Waste Framework Directive (2008/98/EC) from December 2010.

How the Regulation is implemented.

Waste operations that give rise to point and diffuse sources of pollution are controlled through the Environmental Permitting (England and Wales) Regulations 2007. The carriage of waste is regulated by the Control of Pollution (Amendment) Act 1989, Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations 1991, the Hazardous Waste (England and Wales) Regulations 2005 and the Hazardous Waste (Wales) Regulations 2005, which include a system of registration and waste transfer notes.

Part II of the Environmental Protection Act 1990 includes a prohibition on the general deposit of waste or knowingly causing or permitting such waste to be deposited in or on any land except in accordance with an appropriate environmental permit. This is reinforced by the waste duty of care which includes a duty on those producing waste to ensure that it is only passed to an authorised person and to take appropriate reasonable measures to prevent the escape of waste from their control or that of another person.

You can find further information:

- On waste management generally at http://www.environment-agency.gov.uk/business/sectors/32320.aspx
- On agricultural wastes at http://www.environment-agency.gov.uk/business/sectors/32777.aspx

F.3 Efficient and sustainable use of water

Under the Water Framework Directive water must be used efficiently and in a way that can sustain future supplies. The mechanisms in this annex all help to meet these aims. Particular mechanisms that are available include:

Table F.1: **Mechanisms for efficient and sustainable use of water**

Mechanism	What this does
Water Resources Act 1991 Part II	Sets out controls for abstraction and drought management
Water Industry Act 1991 Part IIIA	General duties for protecting, managing the quality and sufficiency of supplies and promoting efficient use of water.
Water Act 2003 s 81-83	Duty for the SoS and Welsh Assembly to encourage water conservation, public authorities (including local authorities and statutory undertakes) to take into account, where relevant, the desirability of conserving water supplied or to be supplied to premises. This would include promoting water efficiency through exercise of their land use planning functions – production of development plans and control of development.
Planning and Compulsory Purchase Act 2004	Establishes principle of contributing to sustainable development for spatial planning system and the new framework of Regional Spatial Strategies and Local Development Frameworks for England. For Wales there is the Wales Spatial Plan and Local Development Plans.
Planning Policy Statement 1 and Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1 Planning Policy Wales	These expand on the sustainable development duty, prudent use of natural resources and higher standards of sustainability if justified.
Environment Act 1995 s 6(2)	Provides a duty on the Environment Agency to conserve, redistribute or augment water resources and to secure their proper use
Pollution Prevention and Control Regulations 2000	Include provision to encourage water conservation, through installation of water-efficient appliances.

Spatial planning has a clear principle that it should contribute to sustainable development (as required by S39 of 2004 Act) and the need for prudent use of resources, including water, particularly through the design of development (see Planning Policy Statement 1). Planning Policy Wales states that local planning authorities should promote increased efficiency and demand management of water resources, particularly in those areas where additional water resources may not be available.

Planning Policy Statement 1 and the planning and climate change supplement requires Regional Spatial Strategies to take into account the availability of water resources to support development.

Local Development Frameworks have to take account of capacity of water resources infrastructure when selecting sites for development or considering whether to go beyond national standards for sustainability where, without such requirements (for example water efficiency) development would be unacceptable for that location.

Where there is a locally justified need to go beyond minimum standards, the Government's Code for Sustainable Homes introduces higher standards for water efficiency for new development. In these instances, use of these standards can be initiated through Development Plan policies and through conditions on planning permission, and also by negotiation with Government for sustainable development initiatives, for example Ecotowns and growth points in England.

Several water companies have established land management schemes in catchments to their public supply sources, funded through the periodic review process, to reduce diffuse pollution. These schemes can also help to reduce downstream flooding and enhance biodiversity.

F.4 Protection of waters used for abstracting water

The mechanisms in this annex which protect the quality or quantity of water also protect water bodies that have abstractions for drinking water. These mechanisms include statutory protected areas (see Annex D) and their related requirements under the Water Framework Directive. The Environment Agency's Groundwater Protection Policy also provides a range of guidance on activities in advisory source protection zones around groundwater abstractions.

More formal mechanisms that are in place for protecting waters abstracted for drinking water are shown in Table F.2:

Table F.2: **Mechanisms for protecting drinking water**

Mechanism	What this does
Water Resources Act 1991 s93	Provides the legislation for establishing statutory Water Protection Zones (WPZs). Work is currently underway to amend the legislation so that WPZs may be more readily applied to address pollution of drinking water catchments.
Surface Waters (Abstraction for Drinking Water) (Classification) Regulations and Direction 1996	Sets objectives and minimum standards for water to be abstracted for drinking water.
Water Industry Act 1991 Part III dealing with water supply	General duties for protecting and managing the quality and sufficiency of supplies.

Mechanism	What this does
Water Supply (Water Quality) Regulations 2000 as amended	Establishes a risk-based approach to the assessment and monitoring of water intended for public supply, requiring water supply operators to consider issues in the environment.
Private Water Supplies Regulations 1991 (administered by local authorities)	Sets objectives and minimum standards for drinking water from private supplies. Defra have consulted on new regulations which would introduce powers for local authorities and a risk based assessment element for protection of larger private supplies.
Water Framework Directive 2000 – Article 7	Requires the identification of Drinking Water Protected Areas and sets objectives for these. Allows for the creation of Safeguard Zones within which necessary protection measures can be focused.

i) Drinking water protected areas

Drinking water protected areas are water bodies that are used now, or may be used in the future, for abstracting water for drinking, cooking, preparing food, or in food production businesses. A drinking water protected area is defined if the water body provides more than an average of 10m^3 a day in total or serves more than 50 people.

Existing mechanisms for dealing with diffuse and point sources of pollution are used to protect water quality in these protected areas (see F.6 and F.7) but are not always sufficient to provide the protection needed, particularly from diffuse sources of pollution. The Environment Agency has carried out risk assessments of drinking water protected areas. Protected areas and more specifically the associated safeguard zones will provide a focus for reinforcing existing measures or implementing additional measures where these may be needed so that Water Framework Directive objectives can be met. (See Annex D on Protected Areas for details).

The Environment Agency is adopting a tiered, risk-based, approach to drinking water protection, with:

i) a general level of protection for all drinking water sources (existing measures maintained);

ii) safeguard zones around sources at particular risk where existing measures can be strictly enforced and additional new voluntary measures can be focused; and

iii) in England the use of Water Protection Zones for sources at particular risk where existing and voluntary measures have failed or are unlikely to prevent failure of WFD objectives. Here new statutory measures will be sought. A small number of Water Protection Zones will be promoted in England in the first river basin management cycle.

Drinking water protected areas and safeguard zones are shown in Annex D. Any Water Protection Zones that are proposed in the Anglian River Basin District will be subject to a separate public consultation process.

Implementation in the Anglian River Basin District

There are 37 surface water bodies designated for drinking water protection in the Anglian River Basin District.

All the groundwater bodies in the Anglian River Basin District are Drinking Water Protected Areas. There are 560 existing groundwater source protection zones in the Anglian River Basin District that form the first general level of protection noted above.

Annex D highlights the groundwater safeguard zones in this district (see figures D2 and D3). The additional measures in these zones will address the specific contaminants and activities of concern in these zones.

F.5 Abstraction and impoundment of water

Under the Water Resources Act 1991 s.24 no abstraction is permitted without a licence, except for certain exemptions (see below). Table F.3 summarises the mechanisms to control abstraction and impoundment of water (that is, storage of water for later use).

Table F.3: **Mechanisms to control abstraction and impoundment**

Mechanism	What this does
Water Resources Act 1991 • Abstraction and impoundment licensing system Chapter II of Part II (as amended by Water Act 2003) • Agreements under s20, 20A &158 • Drought orders and drought permits under Chapter III of Part II	• Conditions applied to abstraction and impoundment licences to manage impacts on the environment. e.g. flows, resources, saline intrusion • Make operational arrangements with water companies and other abstractors to reduce the impact of abstractions, for example river support schemes. • Provides further controls on authorisations for abstraction and impoundments during droughts
Habitats Directive Review of Consents,	Can revoke or amend licences to reduce unacceptable impacts of abstraction.
Water Resources Management Plan Regulations 2007 and Water Resource Management Plan Directions 2007 and 2008	Water companies produce water resources plans to say how they propose to manage water supply and demand and related environmental issues.

Time limited licences were introduced in many cases in the 1990s and are compulsory for all new licences under the changes to the Water Resources Act 1991 brought about by the Water Act 2003. Before then, licences were granted with no time limit, and some licences in the past may have had unacceptable impacts on the environment. Although the Environment Agency has powers to amend or revoke these licences under the Water Resources Act 1991, we may have to pay compensation to the licence holder.

The Water Act 2003 extends the abstraction licensing system to include previously exempt uses and areas. For example the uses now include trickle irrigation, quarry dewatering, transfers of water. The areas previously exempt include mid-Wales and parts of Northumbria. These provisions have not yet been implemented. Some further exemptions are also being considered, such as transfers of water within water meadows.,

Abstractions of fresh surface water or groundwater in England and Wales of 20 m3 per day or less has been exempted from requiring prior authorisation being deemed to have no significant effect on water status.

Other plans and programmes

Abstraction licences are being reviewed to determine whether they are having an unacceptable impact on the environment. This is being done as part of the review of consents required by the Habitats Regulations and included within the programme for Restoring Sustainable Abstraction. The mechanisms for funding compensation payments have been under discussion with Defra and the Welsh Assembly Government.

The Environment Agency has developed Catchment Abstraction Management Strategies to help ensure a consistent approach in managing water resources and balancing the needs of water users and the environment. They also help inform the public on water resources and licensing practice and involve them in managing water resources in their area
Under the Water Resources Management Plan Direction 2007 and Water Recourses Management Plan Direction 2008 (England Only), water companies have to prepare water resources plans to say how they propose to manage water supply and demand over the following 25 years. These have to show how they will protect the environment from unnecessary damage caused by taking too much water for people to use.

The National Environment Programme is the water companies' five-yearly environmental improvement programme. Successive water company improvement programmes since privatisation of the industry have resulted in substantial benefits to the water environment.

Other approaches

A variety of mechanisms can be used to protect water resources that are used for abstraction. The Environment Agency's Groundwater Protection: Policy & Practice provides guidance on activities involving abstraction of groundwater. Voluntary agreements, permits, economic incentives (water pricing) water-saving campaigns etc. can be used to manage demand. Direct action can be taken to maintain or improve flows, for example river restoration schemes.

Implementation in the Anglian River Basin District

In 2007 there were 443 licensed impoundments in the Anglian River Basin District. The largest impoundments are regulated under the Reservoir Act 1975 in relation to public safety alone. There are 10 reservoirs on the register for the Anglian River Basin District.

In 2007 there were 5,059 licensed abstractions in the Anglian River Basin District, authorising abstraction of 2,368,807 Ml of water a year, from surface waters, groundwater and tidal waters. Further information is provided in table F.4.

Table F.4: **Summary of licensed abstractions in the Anglian River Basin District**

Sector	Licensed volume (Ml[1]/ year)	Actual volume abstracted (2007 data	Number of licences
Water supply	978,237	721,285	324
Agriculture	160,681	56,016	4,193
Fish and aquaculture[2]	52,226	21,632	43
Electricity production[2,3]	760,428	67,572	7
Industry	411,678	294,766	464
Other	5,557	677	28
Total	2,368,807	1,161,948	5,059

[1] 1Ml is equivalent to 1000 m^3

[2] Electricity and fish/aquaculture normally return the water close to the point of abstraction.

[3] The figures for Electricity production also include data for the production of Mechanical Non Electrical Power.

Information on abstraction and impoundment licences, including licence applications, appeals, and transfers, is provided in public registers, which you can inspect in the Environment Agency office at Kingfisher house, Goldhay Way, Orton Goldhay, Peterborough, PE2 5ZR. Abstractions and impoundments which are exempt from licensing requirements are not included in these registers.

F.6 Point source discharges

This section provides a summary of mechanisms for controlling discharges from identifiable point sources by limiting or preventing pollutants entering the water through prior authorisations, general binding rules and emission controls.

Point source discharges are controlled as follows:

Table F.5: Mechanisms to control point source discharges

Mechanism	What this does
Water Resources Act 1991	
• Prosecution under s85	• It is an offence to pollute controlled waters by causing or knowingly permitting entry or discharge of polluting matter.
• Discharge consents, s88	• Requires conditional consents for point source discharges to water
• Prohibition Notices under s86	• A Notice can be served to prohibit the discharge of any effluent onto or into land
• Enforcement Notices under s90B	• A notice to remedy contraventions of consents
• Works Notices under s161A	• Any activity polluting or likely to pollute controlled waters can be served a 'works notice' to stop the activity or require certain improvements
• Water Protection Zones under s93	• Can be used to implement specific point source controls within a formally designated zone.
Environmental Permitting Regulations (England and Wales) 2007, which replace	• Require permit with conditions to control

Mechanism	What this does
• Pollution Prevention and Control (England and Wales) Regulations 2000 • Waste Management Licensing Regulations 1994	deliberate emissions and minimise accidental losses from major installations; conditions prevent, minimise or render emissions harmless using the best available technologies as directed in guidance notes. • Requires licence with conditions to control waste management operations.
Groundwater Regulations 1998 (prevent or limit discharges to groundwater) Note: new Groundwater Regulations are due to be in place in Autumn 2009 and will replace the 1998 Regulations.	• Require authorisation for disposals/discharges that might lead to inputs to groundwater of substances listed under the Groundwater Regulations (or from Autumn 2009, WFD pollutants). Such authorisations include Water Resources Act discharge consents and Environmental Permitting Regulations permits. • Notices to prohibit any activity that might lead to an input of a listed substance/WFD pollutant to groundwater through Regulation 19 Notice.
Silage Slurry & Agricultural Fuel Oil Regulations 1991	Cover the design, siting, construction and maintenance of Silage, Slurry and Agricultural Fuel Oil stores.
The Control of Pollution (Oil Storage) (England) Regulations 2001	Sets minimum design standards for new and existing above ground oil storage facilities
Water Industry Act 1991 s166	Requires permit for operational (construction or maintenance) discharges relating to water abstraction and treatment.
Town and Country Planning Act 1990, Planning and Compulsory Purchase Act 2004, Planning guidance provided through Planning Policy Statements in England and Planning Policy Wales and Technical Advice Notes in Wales	Planning policy contributes to the protection and improvement of the environment. In particular, planning should seek to ensure that development does not produce irreversible harmful effects on the natural environment.
Environmental Protection Act 1990, Part 2A	Controls point source discharges from contaminated land sites (local authorities lead, with Environment Agency regulating 'special sites').

Plans and programmes

Spatial planning

The spatial planning system and particularly the development plan system as required by the 2004 Compulsory Purchase Act sets the framework for controlling development within England and Wales. The planning system makes a major contribution to protecting and improving the environment, the quality of life, and local and global ecosystems.

Urban development is planned up to 20 years ahead through Development Plans. Under the Planning & Compulsory Purchase Act 2004 these consist of Regional Spatial Strategies and Local Development Frameworks in England and in Wales, the Wales Spatial Plan and Local Development Plans. Planning Policy Statement 11 (Regional Spatial Strategies) and Planning Policy Statement 12 (Local Development Frameworks) and Planning Policy Wales set out more detailed guidance on the preparation of development plans in England and Wales.

In England Planning Policy Statement 1 specifically states that planning authorities should ensure that infrastructure and services are provided to support new and existing economic development and housing. Planning Policy Statement 23 also identifies the availability and capacity of waste water infrastructure as considerations in producing development plans and controlling development.

In Wales, guidance notes that planning authorities should "play an appropriate role in securing the provision of infrastructure (including water supplies, sewerage and associated waste water treatment facilities….)" It goes on to state that in preparing development plans, development should be planned and located to enable the sustainable provision of water services infrastructure and that in the control of development, the adequacy of water supply and the sewage infrastructure are material in considering planning applications and appeals. This enables planning authorities and utility providers to anticipate future demand for wastewater treatment, the adequacy of existing infrastructure and headroom in existing consents. Where it is justified, Development Plan policies can link the rate of planned development to the available capacity of wastewater treatment infrastructure and require planning authorities to investigate further through, for example, Water Cycle Strategies

Water industry planning.

Urban development is planned up to 20 years ahead through Development Plans. This enables planning authorities and utility providers to anticipate future demand for wastewater treatment, the adequacy of existing infrastructure and headroom in existing consents. Where it is justified, Development Plan policies can link the rate of planned development to the available capacity of wastewater treatment infrastructure and require planning authorities to investigate further through, for example, Water Cycle Strategies.

Discharges from the water industry can be improved by modifying discharge consents. The investment required to improve treatment facilities is decided by the Water Services Regulation Authority through the price review process. The latest of these is the Periodic Review in 2009 (PR09). This price review covers the period from 2010 to 2015. The mandatory requirements for the Water Framework Directive and other Directives have been included in this process.

The Periodic Review 2009 has also been used as a mechanism to investigate discharges from sewage treatment works and potential treatment solutions. A list of sewage treatment works has been prioritised for investigation and these have been included in the companies' draft business plans.

Other approaches

Defra have produced several groundwater protection codes:

- Use and Disposal of Sheep Dip Compounds (August 2001)
- Petrol stations and other fuel dispensing facilities involving underground storage tanks (November 2002)
- Solvent Use and Storage (2004)

These support the Groundwater Regulations 1998, and deal with design, construction, operation, management and decommissioning of the relevant facilities.

The Highways Agency has established a register of soakaways and priority outfalls across the strategic road network in England and ranked these in accordance with the risk they may pose to underlying groundwater. This will help direct pollution prevention work.

The Environment Agency's Pollution Prevention Guideline, Refuelling facilities (http://publications.environment-agency.gov.uk/pdf/PMHO0804BIDG-e-e.pdf), provides the background information to protect the environment through the correct delivery, storage and dispensing of fuels. The Environment Agency has signed an operating agreement with TOTAL for its petrol filling stations that ensures the company's capital investment is in line with related environmental risk. Other companies are considering similar agreements.

Pollution Prevention Guidelines also exist for a range of activities that have the potential to pollute surface waters, including:

- Above ground oil storage tanks (PPG02);
- Use and design of oil separators in surface water drainage systems (PPG03);
- Treatment and disposal of sewage where no foul sewer is available (PPG04);
- Working at construction and demolition sites (PPG06);
- Garages and vehicle service centres (PPG 19).

The full list is available at:
http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx

The Environmental Permitting Regulations will be implemented in 2010. These Regulations apply in England and Wales and will expand the current permitting regime to include permits, standard rules and a registration scheme. This will mean that all existing and new small sewage discharges have to be registered, which will enable us to identify clusters that may be contributing to the pollution load, particularly in relation to ammonia, biological oxygen demand and nutrients.

Implementation in the Anglian River Basin District

In the Anglian River Basin District there were in 2007:

- 21,673 consents under the Water Resources Act (including treated effluent and site drainage);
- 1,054 of these were from water company owned sewage treatment works, with a total volume of 1,383,188 cubic metres per day;
- 536 were for trade effluent (including site drainage), with a total volume of 6,108,194 cubic metres per day;
- 304 controlled landfills, of which 246 had non-inert wastes, with particular controls to manage the risk of pollution;
- 1460 authorisations under the Groundwater Regulations.

Information on the controls for point source discharges is provided in public registers. These are available from Environment Agency area offices at Kingfisher house, Goldhay way, Orton Goldhay, Peterborough, PE2 5ZR and on our website (http://www2.environment-agency.gov.uk/epr/?lang=_e) and include lists of all discharges for which a permit or authorisation has been granted, the conditions in these permits, and the results of monitoring action taken in respect of samples.

F.7 Diffuse source pollution

Diffuse pollution results from scattered or dispersed sources that together have a significant effect, but individually limited environmental impact. Examples of diffuse pollution include:

- The cumulative effect of many individual and ill-defined events, such as poor management practice in storage and handling of sewage or farmyard manure. Although individually they can be small and hard to detect, at a catchment scale they can have a significant impact on groundwater and surface water quality.
- The dispersal of pollutants over an area, for example nitrate from the atmosphere, or leaching of fertilisers and pesticides from soils, including sediment loss.

Water Protection Zones

Water Protection Zones can already be designated under the Water Resources Act and additional statutory provisions can be used to prevent water pollution. To date this has been used only once in England & Wales to deal with point source pollution. There are well developed proposals to amend how Water Protection Zones can be used so that they can more readily deal with diffuse pollution and hydromorphological pressures. Both Defra and Welsh Assembly Government will be issuing statutory guidance to the Environment Agency on the use of Water Protection Zones.

Before designating a Water Protection Zone, the Environment Agency would have to make an appropriate case to the Secretary of State. The Environment Agency would also carry out a 12 week public consultation, which will include assessments of the costs and benefits of any proposed measures to be used within a zone.

Water Protection Zones may then be used as a mechanism where evidence shows that existing statutory or voluntary measures have been or are unlikely to be sufficient to meet Water Framework Directive objectives. It will then be possible to enforce prohibition or management of polluting activities within those zones. Their size and nature will be dependent on the location and the nature of the problem.

The Environment Agency intends that Water Protection Zones should be put in place in a phased, prioritised programme. Work is being carried out to improve certainty about the Water Protection Zone mechanism and the locations for designating them. To this end the Environment Agency is trialling their use in a limited number of “candidate” areas in England to prove their concept as a useful and efficient mechanism to meet the objectives of the Water Framework Directive. Following this the intention is to use Water Protection Zones in a limited number of cases focussing on where Protected Areas are failing, or likely to fail Water Framework Directive requirements.

i) Agricultural pollution

There is a range of mechanisms that can be used to manage diffuse pollution from agricultural sources, and key legislative controls are shown on table F.5 below.

Other mechanisms include voluntary initiatives, such as work with river trusts, and other partnerships (for example Sustainable Catchment Management Programme (SCaMP) with Royal Society for the Protection of Birds, United Utilities and the agricultural industry. The Professional Nutrient Management Initiative, and pollution prevention campaigns such as England Catchment Sensitive Farming Delivery initiative.

Part 4 of the Groundwater Protection Policy sets out the Environment Agency's policy on and approach to activities in advisory Source Protection Zones around groundwater abstractions, and also sets out good practice to protect the wider groundwater resource.

Catchment Sensitive Farming

The England Catchment Sensitive Farming Delivery Initiative is part of Defra's Catchment Sensitive Farming Programme, which aims to reduce diffuse water pollution from agriculture. The initiative was introduced in April 2006 in forty priority catchments in England and was further extended in 2008 to new target areas, including extensions of existing priority catchments and 10 new priority areas.

It includes encouraging farmers to follow good practice when using fertilisers, manures and pesticides; promoting good soil structure to maximise infiltration of rainfall and minimise run-off and erosion; protecting watercourses from faecal contamination (for example with fencing and livestock crossings), and from sedimentation and pesticides (for example with buffer strips); reducing stocking density or grazing intensity; reverting to grassland etc.

A small capital grants scheme runs alongside advice delivery in the priority catchments to assist farmers in making investments to reduce agricultural diffused pollution.

Table F.6: **Mechanisms for managing agricultural diffuse pollution**

Mechanism	What this does
Water Resources Act 1991 • Causing or knowingly permitting pollution, s85 • Anti-pollution Works Notices,-s161A • Water Protection Zones s93	• Allows prosecution for various offences where surface waters and/or groundwater is polluted • Requires a person to carry out works and operations to prevent or deal with the consequences of any poisonous, noxious or polluting matter or any solid waste entering controlled waters. • Restricts or prohibits activities in order to protect the water environment from entry of poisonous, noxious or polluting matter
Environmental Permitting (England and Wales) Regulations 2007 which replace • Pollution Prevention and Control (England and Wales) Regulations 2000 • Waste Management (England and Wales) Regulations 2006	• Permits for pig and poultry farms of certain size, with conditions to protect the environment • Makes sure that agricultural waste is recovered or disposed of without putting people's health at risk and without using processes or methods that could harm the environment.
Nitrate Pollution Prevention Regulations 2008	Require a code of good agricultural practice to be made for all farmers. In addition, on farms within Nitrate Vulnerable Zones farmers to follow an action programme that reduces nitrate entering the water,
Groundwater Regulations 1998 and associated statutory Codes of Practice	• Require authorisation for disposals/discharges that might lead to inputs to groundwater of substances listed

Mechanism	What this does
Note: new Groundwater Regulations are due to be in place in Autumn 2009 and will replace the 1998 Regulations.	under the Groundwater Regulations (or from Autumn 2009, WFD pollutants). Such authorisations include Water Resources Act discharge consents and Environmental Permitting Regulations permits. • Notices to prohibit any activity that might lead to an input of a listed substance/WFD pollutant to groundwater. • Codes of Practice to encourage better management/prevention of releases of pollutants to groundwater.
EU driven authorisation / approval mechanisms for the marketing and use of plant protection products, biocides and veterinary medicines. (These are enforced via equivalent UK Regulations covering plant protection products, veterinary medicines and biocides)	Require human health and environmental risk assessment of products and requirement for authorisation or approval by UK competent authorities before the products can be marketed or used.
Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) 'SSAFO' Regulations 1991	Encourages agricultural storage facilities to be managed better by setting minimum standards as general binding rules for constructing or changing them.
Environmental Protection Act 1990, Part 2A	Provides a system for identifying and improving land where contamination is causing unacceptable risks to people's health, crops and livestock or the environment.
Environmental Damage (Prevention and Remediation) Regulations 2009	Will require operators to carry out measures to prevent imminent or actual damage to the environment.
Wildlife and Countryside Act 1981 (as amended)	Allows consent to be refused for activities that may damage Sites of Specific Scientific Interest and action against third part damage to Sites of Specific Scientific Interest
Salmon and Freshwater Fisheries Act 1975	Takes action against polluters who harm or injure fish, spawning grounds or fish food.
The Sludge (Use in Agriculture) Regulations 1989	Makes sure that recycling sludge to agricultural land is carried out in a way that protects people's and animals' health and the environment.
Cross compliance	Requires farmers who receive the Single Payment to comply with environmental protection measures (e.g. Groundwater Regulations, Nitrate Vulnerable Zones, Sludge Regulations) and to achieve good agricultural and environmental condition

Plans and programmes

The Rural Development Programme for England (RDPE) is the mechanism Defra has for supporting rural development in accordance with European regulations and runs over the 6 year period from 2007 to 2013. It is administered by a number of organisations, including the Regional Development Agencies, Natural England and the Forestry Commission and

supports farming and rural businesses and heritage. The Environment Agency worked closely with Natural England in identifying the priorities for resource protection within Environmental Stewardship. There are a number of different strands which include land based skills, capital grants, advisory services and agri-environment schemes. All of these strands can also be used for promoting protection of the water environment. Agri-environment schemes that help deal with diffuse pollution from run-off and soil erosion can also be funded.

Other approaches

Other approaches for tackling agricultural pollution include:

- The Code of Good Agricultural Practice, which provides practical guidance to help farmers and growers avoid causing pollution
- The industry group (CLA, AIC, FWAG, LEAF, NFU) has launched a "Tried & Tested" nutrient management plan in England to help farmers and growers plan their fertiliser and manure use, meet increasing regulatory demands and protect the environment.
- In England, Voluntary Initiative (VI) measures aimed at minimising the environmental impacts from agricultural and horticultural use of pesticides (including annual sprayer testing and spray operator training, implementation of Crop Protection Management Plans and best practice advice on individual 'problem' pesticides). The voluntary industry group has also formed a national strategic partnership with Natural England to deliver a whole range of advice through the England Catchment Sensitive Farming Delivery Initiative.
- Other voluntary schemes such as:
  - British Agrochemical Standards Inspection Scheme - a certification scheme for staff handling pesticides and fertilisers;
  - Stop Every Drop pollution reduction plan for sheep dip
  - Farm assurance schemes, including the Red Tractor, run by an alliance of farmers, food processors, retailers and distributors who work together to maintain and raise production standard, including environmental standards; The LEAF (Linking Environment and Farming) Marque has a strong emphasis on environment in its assurance scheme
- Guidance such as the 'Think Soils Manual'; Sludge (use in agriculture) code of practice and Fertiliser recommendations for agricultural and horticultural crops (RB209).
- Groundwater protection code: Use and disposal of sheep dip compounds.

Implementation in Anglian River Basin District

Catchment Sensitive Farming

A number of catchments across the RBD have been identified as priority under Defra's England Catchment Sensitive Farming Delivery Initiative (ECSFDI). A total of 11 catchments have an appointed catchment sensitive farming officer identifying diffuse pollution issues and working with the agricultural community to reduce their impact on the environment. A range of issues have been identified, such as sediment (northern Anglia) and nutrients and pesticides (south Anglia). This initiative is a non-regulatory approach and offers opportunity for one to one advice and financial incentives to achieve better farming practices.

Soil Management Workshops

A series of workshops have been held across the RBD over the last few years which were aimed at farmers and advisors. The workshops concentrated on identifying good soil

structure so that informed decisions could be made as to the best cultivation practice to be carried out under these conditions. These initially looked at producing a simple risk assessment that the land manager could apply to each individual field which looked at inherent risks like slope, soil type etc, then managed risks such as crop type, cultivation timing. Workshops were also used as an opportunity to increase the understanding of the link between poor soil management resulting in lower yields and off site impacts, such as flooding, siltation, reduced aquifer discharge and diffuse pollution.

Environmental Stewardship

This falls within Natural England's remit, but it is also useful for the Environment Agency to have an understanding of the schemes available to farmers and the options within those schemes. In areas where soil runoff is a big problem the use of buffer strips and conservation headlands could significantly reduce this environmental impact. Loss of nutrient could be reduced by introducing low input systems and achieve reduced fertiliser use. Converting arable to grassland could also help in some risk areas but given the price of grain at the moment this will not be an option many farmers would consider.

Momenta XC workshops

This is an advice consortium under a Defra funded contract. It offers workshops and farm demonstrations to farmers and advisors (and anyone working the land) to learn in detail the requirements under cross compliance. Different farming systems have different requirements. Farmers and land managers must adhere to these if they are to continue to receive their single farm payment.

ii) Diffuse non-agricultural pollution

Run off from transport, on-street activities such as car washing, industrial estates, forestry and leisure industries, wrong connections into the surface water sewer network and discharges from contaminated land and disused mines all contribute to diffuse pollution from non-agricultural sources.

Formal mechanisms for managing diffuse pollution from non-agricultural sources are set out in table F.6 below. Spatial planning procedures and policies, supported by the planning consultation process are also valuable mechanisms for achieving controls on diffuse pollution. In addition, Defra and Welsh Assembly Government have published a consultation on measures and mechanisms to meet the requirements of the Water Framework Directive on non agricultural diffuse pollution.[1] Defra and Welsh Assembly Government are pursuing elements of the proposals including the removal of phosphate from laundry detergents and sustainable drainage systems and are looking at the case for further measures.

The Environment Agency's Groundwater Protection: Policy & Practice provides guidance on activities in advisory source protection zones around groundwater abstractions and promotes good practice to protect groundwater generally.

[1] Consultation on non agricultural diffuse pollution in England and Wales, Defra, Welsh Assembly Government, February 2007

Table F.7: **Mechanisms for managing non-agricultural diffuse pollution**

Mechanism	What this does
Water Resources Act 1991, • Anti pollution works notices s161A • Abandonment of mines s91A & B as amended by the Mines (Notice and Abandonment) Regulations 1998 • Causing or knowingly permitting pollution, s85 • Water Protection Zones s93	• Notices can be served on polluters or prospective polluters to prevent water pollution • Requires mine owners to notify the Environment Agency if they plan to abandon a mine and to produce a closure plan. • Allows prosecution for various offences where surface waters and/or groundwater is polluted • Restricts or prohibits activities in order to protect the water environment from poisonous, noxious or polluting matter
Water Industry Act 1991,s101A	Provision of first time sewerage as a solution where there may be pollution from multiple septic tanks or cesspools, providing certain conditions are met
Control of Pollution (Oil Storage) (England) Regulations 2001	Sets minimum design standards for new and existing above ground oil storage facilities
Groundwater Regulations 1998 and associated statutory Codes of Practice Note: new Groundwater Regulations are due to be in place in Autumn 2009 and will replace the 1998 Regulations.	• Require authorisation for disposals/discharges that might lead to inputs to groundwater of substances listed under the Groundwater Regulations (or from Autumn 2009, WFD pollutants). Such authorisations include Water Resources Act discharge consents and Environmental Permitting Regulations permits. • Notices to prohibit any activity that might lead to an input of a listed substance/WFD pollutant to groundwater. • Codes of Practice to encourage better management/prevention of releases of pollutants to groundwater.
EU driven authorisation / approval mechanisms for the marketing and use of plant protection products, biocides and veterinary medicines. (These are enforced via equivalent UK Regulations covering plant protection products, veterinary medicines and biocides)	Require human health and environmental risk assessment of products and requirement for 'authorisation' or 'approval' by UK competent authorities before the products can be marketed or used.
Environmental Permitting (England and Wales) Regulations 2007, which replace: • Pollution Prevention and Control (England and Wales) Regulations 2000 • Waste Management Licensing Regulations 1994	• Allows conditions to be set in the authorisation of a process that can include pollution prevention and other actions to prevent diffuse pollution, including air emissions that can lead to acidification. • Requirements for secure storage, safe transport and controlled disposal reduce the potential for waste materials of all kinds to enter the water environment.
Coal Industry Act 1994 as amended by Water Act 2003 and supported by Ministerial	Provides powers to the Coal Authority to clean up and prevent water pollution from coal mines in England and Wales together with a prioritised programme of

Mechanism	What this does
Statements and a Memorandum of Understanding with the Environment Agency	improvements required to minewaters in order to meet WFD objectives.
Trade effluent controls under the Water Resources Act 1991 and the Water Industry Act 1991	Applies to discharges and drainage arrangements from certain industrial sites.
Detergents Regulations 2005	Covers use of detergents by industry, institutions and consumers, as well as specifying the biodegradability of active ingredients of detergents (surfactants).
Environmental Protection Act 1990, Part 2A (remediation of contaminated land) and the Contaminated Land Regulations 2006	Provides for Notices to require remediation of contaminated land to improve the quality of groundwater and surface water.

Table F.8: **Local authority controls for managing non-agricultural diffuse pollution**

Mechanism	What this does
Public Health Acts 1936 and 1961 and the Building Act 1984	Gives local authorities powers relating to wrong sewer connections.
Building Regulations 2000 - Part H	Deals with sewers and encourages the Sustainable Urban Drainage Systems approach to surface water drainage.
Building Regulations 2000 - Part J	Deals with oil storage, and complements the scope of the Oil Storage Regulations (England) 2001.
Town and Country Planning Acts, supported by planning policy or guidance (Planning Policy Statements - PPSs)	In England, using the Sustainable Urban Drainage System approach to surface water drainage is promoted in PPS 23 - Planning and pollution control - and PPS 25 - Development and flood risk. Flood Risk Management policies in Development Plans identify the need for Sustainable Urban Drainage Systems to be used where local water management requires it. Conditions can be attached to development permission to require the use of Sustainable Urban Drainage Systems where it is appropriate. Planning agreements (s.106) may also be required. PPS 23 also requires clean up of land contamination. In Wales, chapter 13 (Minimising and Managing Environmental Risks and Pollution) of Planning Policy Wales covers flood risk, contaminated land, unstable land and improving the quality of water and air. Technical Advice note 15 (Development and flood risk - TAN15) supplements the policy in Planning Policy Wales - it promotes Sustainable Urban Drainage Systems but does not make it a requirement.
Town and Country Planning Act 1990, s215	Gives local authorities powers to serve a notice on the owner or occupier of amenity land, or adjacent land, in their area to improve the condition of the land.

Other approaches

Other approaches, such as voluntary mechanisms, include:

- In England, the Highways Agency is developing the Highways Agency Drainage Database Management System for the strategic road network. This will be used to identify and help manage pollution risks. The Highways Agency has invested in a new fleet of salt gritters which optimise salt spreading rates and limit the risks to the water environment. They are also carrying out research into alternative de-icing agents.
- General public awareness raising, such as the Oil Care campaign, and Netregs website (Environment Agency) environmental information to small businesses.
- Influencing developers to construct Sustainable Drainage Systems in new developments, and retrofit in existing developments where practicable;
- Education and training, for example including environmental issues in Construction Industry Training Board sponsored National Vocational Qualifications.
- Joint regulator/operator agreements/memoranda of understanding, such as the Network Rail/water companies herbicide agreements, the Environment Agency/Fire Service emergency response agreements and the Environment Agency/Coal Authority Memorandum of Understanding.
- Voluntary codes of practice, such as the Timber Treatment Code of Practice, Forest and Water Guidelines, a Metal Finishers code, a photo-imaging code and the British Marine Federation/Royal Yachting Association Environmental Code of Practice and the Charter for Sustainable Cleaning (December 2004) which is driven by the detergents industry and includes key performance indicators in order to monitor progress; United Kingdom Water Industry Research Limited common framework for capital maintenance planning, and sustainable drainage systems code of practice; interim code of practice on sustainable drainage systems (published by Construction Industry Research & Information Association).
- Industry initiatives such as the Amenity Forum, which is concerned with promoting best practice in using pesticides in the amenity sector, and measures identified within the UK Strategy for the Sustainable Use of Plant Protection Products to deal with amenity and home and garden use of pesticides.
- Guidance, for example:
    - The Code for Sustainable Homes;
    - Industry sector guides, such Building a Cleaner Future and the Construction Industry Research & Information Association's control of water pollution from construction sites guide;
    - Regulator guidance, such as the Pollution Prevention Guidance notes from the Environment Agency;
- Supply chain controls - for example including environmental requirements in construction contracts.
- Best practice and design manuals - such as the Highways Agency's Design Manual for Roads and Bridges.

Implementation in Anglian River Basin District

Delivery of Guidance for construction sector through Anglian Region SITEwise II project – providing information & advice for management of on-site construction waste - covering good practice on handling & storing materials on site, ensuring up-to-date drainage plans for site, installing and maintaining silt traps to prevent soil and other sediments from polluting

watercourses, ensuring storage areas and containers for chemicals and oils are sited away from watercourses, drains & unsurfaced areas.

F.8 Morphology - physical modifications

Hydromorphology is a term used in the Water Framework Directive to describe the processes operating within, and the physical form of, a water body, which could be a river, lake, estuary or coastal water. The term encompasses both hydrological and geomorphological characteristics that, in combination, help support a healthy ecology within these freshwater and marine environments. The Directive requires that these water bodies are managed in such a way as to protect or improve hydromorphological conditions so that the ecology is protected or enhanced. In doing so, the Directive recognises the key role that water resources and habitats play in supporting healthy aquatic ecosystems.

The sections below provide an overview of mechanisms to deliver physical improvements to the morphology of surface water bodies and to control morphological pressures with the aim of preventing deterioration of ecological status or potential:

- Inland navigation
- Spatial planning
- Land drainage and dredging of inland waters
- Flood and coastal erosion risk management
- Dredging, disposal and development in estuaries (transitional waters) and coastal waters
- Other controls, plans and programmes

i) Inland navigation

British Waterways has general environmental duties under section 22 of the British Waterways Act 1995, which include conservation of flora and fauna.

The Association of Inland Navigation Authorities has prepared the report, 'Management strategies and mitigation measures for the inland navigation sector in relation to ecological potential for inland waterways'. This formed part of the UKTAG project to develop a methodology to classify good ecological potential (GEP) for artificial water bodies (AWBs) and heavily modified water bodies (HMWBs).

Appendix A to the report gives details of the pressures and impacts associated with inland navigation, including boat movement and dredging, and Appendix B has the measures which the inland navigation sector can use to mitigate these impacts (see http://www.aina.org.uk/work_programme/WFD-RH.html).

In addition to this work, the report, “Environmental impacts of boats: a review of possible mitigation strategies for inland waterways”, produced by the Green Blue initiative, provides information on mitigating the impacts of recreational boating on inland waterways. The Green Blue was set up by the Royal Yachting Association (RYA) and the British Marine Federation (BMF) to inform and educate the recreational boating sector on how to improve their environmental performance.

ii) Spatial planning

There is a sustainable development duty under the spatial planning system and

environmental protection and enhancement must be considered. The statutory processes of Sustainability Appraisal (incorporating Strategic Environmental Assessment), Habitats Regulation Assessment and individual Environmental Impact Assessment processes (or other relevant assessments) provide the means for screening for potential impacts of plans, programmes and individual proposals.

Any hydromorphological impacts identified in England have to be considered in line with Planning Policy Statement 9 which states that plans, policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests. Planning decisions should seek to prevent harm in the first instance and where this cannot be achieved, be satisfied that the development cannot reasonably be located on or provided for on any alternative sites that would result in less or no harm. In the absence of any such alternatives, adequate mitigation measures must be put in place with appropriate compensation measures sought for any unavoidable residual impacts. If this is not possible, then planning permission should be refused.

To achieve this, planning policies at regional and local scale, that help control both principles and detail of development, are needed that set out specific measures or criteria to be met to address any hydromorphological impacts and to encourage hydromorphological improvements.

This is particularly important where new development requires new or changed flood defences or improved coastal defences as these can often be designed to combine improving ecological quality with providing recreation facilities ('green infrastructure') for the local community. In England, growth funding may be available from Government or from development-related funding for these projects.

Influencing the final planning decision

The Environment Agency is a statutory consultee for regional spatial strategies, local development Frameworks (England) and Local Development Plans (Wales) and is also a statutory consultee under the Strategic Environmental Assessment Directive.

Under the provisions of The Town and Country Planning (General Development Procedure) (Amendment) (No. 2) (England) Order 2006, the Environment Agency is a statutory consultee for all planning applications where flood risk is an issue and for development on, in or within 20 metres of a main river or which include culverting or controlling its flow.

In Wales Consultation with the Environment Agency on flooding issues is promoted through Welsh Assembly Government Planning Policy Wales and TAN15.

Statutory consultee status provides the means for the Environment Agency to influence the planning policy framework and the control of developments at the local level.

Overarching Planning Policy Statements such as PPS1 (Delivering sustainable development), 9 (Biodiversity and geological conservation), 25 (Development and flood risk) will be important for protecting and enhancing the hydromorphological conditions of waterbodies. They support sustainable development and require that development proposals look to enhance the environment as part of development.

Policies dealing with hydromorphology need to be included as part of the identified priorities for the environment in Regional Spatial Strategies. Waterbodies also need to be considered in regard to the proposed scale and distribution of new housing and infrastructure in the region. Regional Spatial Strategies set the overall scale of development in each region of England for a 15-20 year period. Plans must be assessed in terms of their potential

environmental consequences, including any resulting from a hydromorphological change under the SEA Directive.

These are supported by Local Development Frameworks, which include the 'portfolio' of statutory local development documents setting out the spatial planning strategy for a local authority or unitary authority area. It is important to ensure that such plans and frameworks have clear policies in respect of hydromorphology since they establish the principle of what use is proposed for a piece of land before a planning application for the detailed development is received and how that application is considered.

The Environment Agency is a statutory consultee for all planning applications where flood risk is an issue. This is a key delivery mechanism for improving the hydromorphological condition of water bodies and regulates development which has the potential to cause deterioration of a water body. Conditions can be required to mitigate the flood risk impacts of proposed development and we already work with local planning authorities and developers to achieve these aims.

Where new development requires flood storage areas or improved coastal defences these often combine improving ecological quality with providing recreation facilities ('green infrastructure') for the local community. Growth funding may be available from Government or from development-related funding for these projects.

Table F.9: **Mechanisms for managing spatial planning and hydromorphological pressures**

Mechanism	What this does
Town & Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999	Requires an Environmental Impact Assessment for certain activities (listed in the Schedules of the Regulations) to determine the likelihood that a proposed project (development or other activity) will have significant environmental effects. Consenting authorities can modify or reject proposals that would significantly impact on hydromorphological conditions and can secure additional conservation gains as a condition of project approval.
Environmental Assessment of Plans and Programmes Regulations 2004	Ensures the environmental implications are taken into account before certain plans and programs are adopted. The strategic environmental assessment process is integrated throughout the development of a plan or programme, notably during data gathering, feasibility of options, development of the preferred option, and monitoring its implementation. The Environment Agency is a statutory consultee to Environmental Assessments (Strategic Environmental Assessments and Environmental Impact Assessments) produced by other public bodies and developers.
The Town and Country Planning (General Development Procedure) (Amendment) (No. 2) (England) Order 2006	Establishes the Environment Agency as a statutory consultee for any planning application for development which involves the carrying out of works or operations in the bed of, or within 20 metres of the top of a bank of, a main river which has been notified to the local planning authority by the Environment Agency as a main river for the purposes of this provision; or the culverting or control of flow of any river or stream

Mechanism	What this does
Planning and Compulsory Purchase Act 2004 s39	Establishes the sustainable development duty of spatial planning and establishes the principles of and need to produce Regional Spatial Strategies and Local Development Frameworks

iii) Land drainage and dredging of inland waters

Land drainage

The Environment Agency can carry out various actions on main river to cleanse, repair or otherwise maintain existing watercourses. It can improve any existing watercourse or drainage by deepening, widening, straightening, raising or otherwise improving, or by removing or altering mill dams, weirs or other obstructions. It can make any new watercourse or drainage or do any other act required for the efficient drainage of any land. Local authorities and Internal Drainage Boards have similar powers to act on ordinary watercourses.

Land drainage works undertaken by the Environment Agency, local authorities or Internal Drainage Boards can only be undertaken to maintain or improve the efficient working of drainage systems. These powers cannot be used to undertake works for the sole purpose of improving the physical condition or conservation interest of rivers, although in some cases it can be possible to realise these benefits additionally.

The Natural Environment and Rural Communities Act 2006 gave the Environment Agency and other drainage authorities amended byelaw-making powers power to ensure that the broader effects of drainage systems on the environment can be taken into account when considering land drainage consent applications under byelaws. The Environment Agency is intending to use these powers to replace regional land drainage byelaws with a single set of national byelaws. By taking greater account of the environmental impacts of land drainage activities these proposed new byelaws will help reduce impacts to hydromorphological conditions in main rivers.

The Natural Environment and Rural Communities Act 2006 provides similar byelaw-making powers to local authorities and Internal Drainage Boards. This power could be used by these authorities to redraft their byelaws to help reduce impacts to hydromorphological conditions in ordinary watercourses.

Dredging

The Environment Agency's land drainage byelaws can be used to some extent to control dredging activities, and in some areas the Environment Agency has the power to control dredging under specific local legislation.

Dredging undertaken by public bodies (including the Environment Agency) for the purposes of land drainage, flood risk management or navigation in ordinary watercourses is exempt from land drainage consenting. Control of potentially damaging activities is limited to the development of and adherence to good practice guides and memoranda of understanding.

Table F.10: **Mechanisms for managing land drainage works**

Mechanism	What this does
Water Resources Act 1991, s109	Provides Environment Agency with regulatory control (through land drainage consenting) of the construction, alteration or repair of structures in, over or under any main river. Power is also given to Environment Agency to alter or remove any works in contravention of section 109 and recover the costs of this. Conditions can be imposed only in relation to the time and manner in which work can be carried out. Limited power to achieve WFD's hydromorphological objectives.
• Water Resources Act 1991, s165 • Land Drainage Act 1991 s14(2)	Empowers Environment Agency to maintain or improve existing drainage works or to construct new works on main river. Power also extends to maintain, improve or construct drainage works for the purpose of defence against sea water or tidal water. Work can only be undertaken to improve flow conveyance and ensure the efficient working of the drainage system, though other conservation benefits may also be achieved. Equivalent powers are conferred upon Internal Drainage Boards and local authorities through section 14(2) of the Land Drainage Act 1991. Any work carried out by third parties that may impact on flow conveyance is subject to a land drainage consent from the relevant authority (Environment Agency, Internal Drainage Board or local authority) – see below
• Water Resources Act 1991 s107	Provides Environment Agency power to serve a notice in regard to main river to ensure that necessary works to improve flow conveyance are carried out, or to undertake the works and recover reasonable costs.
• Land Drainage Act 1991, s21 and s25	Provides Internal Drainage Boards and local authorities powers to serve a notice in regard to ordinary watercourses to ensure that necessary works to improve flow conveyance are carried out, or to undertake the works and recover reasonable costs.
Land Drainage Act 1991, s23	Provides Environment Agency and Internal Drainage Boards a regulatory control (through land drainage consenting) of the erection, raising or otherwise altering of mill dams, weirs or other like obstructions to flow. Written consent is also required for the erection or alteration of any culvert that is likely to affect the flow in ordinary watercourses.
Water Resources Act 1991, Schedule 25 as amended by s 00 of the Natural Environment and Rural Communities Act 2006	Provides power to the Environment Agency to make byelaws necessary for the efficient working of any drainage system and for regulating the effects of any drainage system on the environment
Land Drainage Act 1991s 66 as amended by s100 of the Natural Environment & Rural Communities Act 2006	Confers byelaw-making powers on Internal Drainage Boards and local authorities that are deemed necessary for the efficient working of the drainage system and for regulating the effects of any drainage system on the environment. Powers for Internal Drainage Boards only extend to ordinary watercourses.

Mechanism	What this does
Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999	Requires an Environmental Impact Assessment for certain activities (listed in the Schedules of the Regulations) to determine the likelihood that a proposed project (development or other activity) will have significant environmental effects. Consenting authorities can modify or reject proposals that would significantly impact on hydromorphological conditions and can secure additional conservation gains as a condition of project approval.

iv) Flood and coastal erosion risk management

The Environment Agency, local authorities and Internal Drainage Boards manage flood and coastal erosion risks within England and Wales.
The Environment Agency's flood risk management activities, and how they can benefit river basin management through the use of particular mechanisms, are guided by the following plans and strategies:

- *Making Space for Water* – the Government's strategy for sustainable flood risk management in England for the next 20 years and beyond.
- *Welsh Assembly Government Environment Strategy* – the Government's strategy for the environment in Wales which includes flood risk management.
- *Catchment Flood Management Plans* – are prepared by the Environment Agency and set long term policies for sustainable flood risk management within a catchment.
- *Shoreline Management Plans* – are prepared by coastal local authorities and the Environment Agency, and promote sustainable management policies for the coastline over a 100 year period.
- *Delivery Plans* - specific 'delivery' plans will be developed to determine the best measures to deliver the policy intents of Shoreline Management Plans and Catchment Flood Management Plans. These plans could include for example Water Level Management Plans, System Asset Management Plans, Local Flood Warning Plans, and Multi-Agency Response Plans for flooding.

Any flood and coastal erosion risk management strategies or schemes which are promoted in accordance with policies in Shoreline Management Plans and Catchment Flood Management Plans will have to be assessed against the requirement to prevent deterioration in ecological status or potential and will have to comply with Article 4.7 of the Water Framework Directive. Project Appraisal Guidance for flood and coastal erosion risk management schemes is being revised to take account of Government policy, the Water Framework Directive and other relevant legislation.

Flood risk management grant in aid can legally fund the provision of environmental benefits, such as river restoration work, where it is integral to a flood or erosion risk management scheme. This expenditure remains subject to Government spending rules and priorities, such as Project Appraisal Guidance and Outcome Measures.

v) Dredging, disposal and development in estuaries (transitional waters) and coastal waters

The existing legislative mechanisms for licensing works in estuaries and coastal waters provide varying levels of control. Currently, some works may require a number of licences while others are not regulated at all. The licensing system is being completely revised through the Marine and Coastal Access Act 2009.

The Environment Agency does have some remit in estuaries and coastal waters for regulation through land drainage consents and discharge consents. Most works in estuaries and coasts however are not licensed by the Environment Agency. While the Environment Agency is not a statutory consultee in the process it is standard practice for it to be consulted on applications made for licenses issued by the Marine and Fisheries Agency and the Welsh Assembly Government. Many marine works are also subject to Environmental Impact Assessment and hydromorphological impacts will be assessed as part of this. Important environmental considerations for regulators are the potential hydrological effects, interference with other marine activities, the possibility of turbidity, noise, drift of fine materials smothering seabed flora and fauna, and the risk of impact to designated conservation areas. In this way new physical modifications can be assessed to see if they will cause deterioration of the hydrological and morphological conditions. This will also highlight opportunities to make improvements, where this is possible.
In England the Marine and Fisheries Agency has statutory control over marine works, which were previously the responsibility of Defra and CLG, including construction, coastal defenses, dredging, marine aggregates extraction and the disposal of waste materials in the sea. Coast Protection Act (1949, Part II) licences will remain with the Marine and Fisheries Agency until they are also replaced by the marine licence being introduced by the Marine and Coastal Access Act 2009.

Table F.11 provides an overview of mechanisms for managing dredging in estuaries, coastal and marine waters.

Table F.11: **Mechanisms for managing dredging in estuaries, coastal and marine waters**

Mechanism	What this does
Food and Environment Protection Act 1985	Controls the deposit of dredged material and construction on the sea bed
Coast Protection Act 1949	Controls any capital dredge and any dredging for navigation where there are no harbour controls
Marine Works Environmental Impact Assessment Regulations 2007	Requires an Environmental Impact Assessment for certain activities (listed in the Schedules of the Regulations) to determine the likelihood that a proposed project (development or other activity) will have significant environmental effects. Consenting authorities can modify or reject proposals that would significantly impact on hydromorphological conditions and can secure additional conservation gains as a condition of project approval.
Environmental Impact Assessment and Natural Habitats (Extraction of Minerals by Marine Dredging) (England and Northern Ireland) Regulations 2007	Marine Minerals regulations were introduced in 2007 to replace the Government View procedure and establish a scheme of regulation for marine minerals dredging.
Harbour Orders/local powers	Controls the dredging of materials within a set area associated with a port or marine

The Marine and Coastal Access Act 2009 makes provision for one marine licence combining the requirements of Food and Environment Protection Act (1985), Part 2 of the Coast Protection Act (1949) and the previous non-statutory procedure for marine minerals extraction. Importantly, the Act includes the provision for all types of dredging to be included

in the marine licence, although Defra are consulting on whether maintenance dredging that has no or little impact on the environment might be exempted under the subsequent exemptions order. However, any exemption made would not compromise the objectives of the Water Framework Directive. Renewable energy schemes will need consent under section 36 of the Electricity Act 1989 and a marine licence, but will have both applications considered together under one set of procedures. The Marine Management Organisation will administer the new marine licence

The separate requirement to seek an Environment Agency land drainage Consent under the Water Resources Act 1991 and its byelaws can also be disapplied by the Environment Agency where a marine licence is also needed for a particular activity, although we would be part of this licence process. This is an area where we can influence development and protect or try to enhance the ecology of a water body by looking at the impacts on hydromorphology.

Harbour authorities need to take account of the Water Framework Directive. The Environment Agency will continue to work with navigation authorities so that they can prepare and implement maintenance dredging plans that support river basin management. The Water Framework Directive should also be taken into account as part of their harbour orders or marine licences. The Marine and Coastal Access Act 2009 contains a power to delegate the harbour order making functions of the Secretary of State to the Marine Management Organisation to enable applications for new harbour orders and a marine licence to be considered together through one set of procedures by one body and to ensure all issues are addressed by one or the other authorisations.

Many estuaries have Natura 2000 sites and under the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended), works likely to have a significant environmental impact will be subject to an appropriate assessment. Alternatively, under the voluntary Maintenance Dredging Protocol participating port and harbour authorities will need to produce a baseline document which will review whether the proposals will impact on the protected site. Where the works are then aligned with the objectives of the Natura 2000 site it may also be possible to protect hydromorphological conditions.

The on-line guide (http://www.estuary-guide.net/) sets out how to assess and manage morphological change in estuaries, coastal habitat creation, restoration and recharge schemes.

vi) Other controls, plans and programmes

The management of activities that have potential to have an impact on hydromorphological conditions is of relevance across many different sectors and, within the Environment Agency, is a requirement for many different functions. As such the management of hydromorphological pressures requires an integrated catchment management approach. This section and Table F.12 below lists other relevant mechanisms for managing hydromorphological pressures.

Table F.12: **Mechanisms for managing hydromorphological pressures**

Mechanism	What this does
Salmon and Freshwater Fisheries Act 1975Part II	Requires that new obstructions to the passage of salmon and migratory trout (or the raising or repair of existing obstructions) be fitted with appropriate fish passes. Includes powers to serve notice (under section 9) to require these works to be undertaken. Section 2(4) of this Act makes it an offence to wilfully disturb any river or lake

Mechanism	What this does
	bed, bank or shallow on which any spawn or spawning fish may be. Proposals to extend the powers in this Act to allow passage of all fish species are outlined in the January 2009 Defra consultation on modernisation of salmon and freshwater fisheries legislation; new Order to address the passage of fish.
Water Act 2003, s 3 and 4	Empowers the Environment Agency to licence existing unlicensed impounding or remove or else modify existing unlicensed impoundments where necessary for the protection of the environment by serving notice under section 4.
Conservation (Natural Habitats, & c.) Regulations 1994 (as amended)	The legislative framework (along with the Wildlife & Countryside Act 1981) through which the Habitats Directive and Birds Directive are implemented. Regulations 3(3), 3(4), 48 and 50 provide a conservation duty for Natura 2000 sites that overrides all other statutory regimes. Powers are employed to assess new and existing consents and permissions for significant adverse impacts and to provide compensatory habitat if required. Habitats Directive objectives are reflected in Water Framework Directive Protected Areas objectives and so the requirements of Habitats Directive have to be met under Water Framework Directive. The Review of Consents process does not include land drainage consents
Wildlife & Countryside Act 1981, s 28G	Places a duty on public bodies (including Environment Agency) in exercising their functions to take reasonable steps to further the conservation and enhancement of the special features of Sites of Special Scientific Interest. Limited geographical application
Wildlife & Countryside Act 1981, s 28J	Gives Natural England and Countryside Council for Wales powers to put in place a management scheme to conserve or restore the flora, fauna, geological or geophysical features of Sites of Special Scientific Interest. May need Environment Agency (or other drainage authority) consent for the works. Limited geographical application
Wildlife & Countryside Act 1981 s 28K	Gives Natural England and Countryside Council for Wales powers to serve a management notice to ensure that conservation or restoration works are implemented. Also empowers Natural England to carry out the works itself and recover the costs from the owner or occupier. May need Environment Agency (or other drainage authority) consent for the works. Limited geographical application.

Diffuse pollution control measures have significant potential to control activities that cause deterioration of hydromorphological conditions, and offer great potential to restore water bodies to a more natural condition. These mechanisms are discussed in section F.7.

Several Environment Agency plans and strategies can also be used to guide the extent (and location) of application of the mechanisms outlined in this section, including:

- Fisheries Action Plans
- Salmon Action Plans
- Eel Management Plans
- National (England and Wales) Trout and Grayling Strategy
- Sea Trout and Salmon Fisheries Strategy
- Biodiversity Action Plans

- Species action Plans
- Habitat Action Plans
- Local Biodiversity Action Plans
- Water Resources Strategy

Many restoration and enhancement projects are undertaken in partnership with, or in some cases solely by, Natural England and other conservation bodies such as the Rivers Trusts. Many projects are undertaken through voluntary agreements at local level.

The Wetland Vision

The Wetland Vision has been developed in partnership between Natural England, the Environment Agency, English Heritage, Royal Society for the Protection of Birds and the Wildlife Trusts. It sets out the need for strategic action to restore the wetland environment, mainly for nature conservation and the preservation of the historic environment, but with significant benefits for society through flood mitigation, groundwater recharge and storage of carbon. Maps have been prepared that help visualise the action needed to ensure sustainable wetland biodiversity and provide other benefits. The Vision will be implemented through existing mechanisms and partnerships, such as agri-environment schemes, remedial work to Sites of Special Scientific Interest (SSSIs), the Environment Agency's Regional Habitat Creation Programme and nature reserve acquisition.

Catchment Restoration Fund

Defra is in discussion with the Environment Agency, Welsh Assembly Government and key environmental NGOs on the potential establishment of a Catchment Restoration Fund. Such a fund would be used to deliver morphological improvements across all water body types for the purpose of helping to achieve Water Framework Directive environmental objectives.

A Defra-led project began in early 2009 to investigate the potential sources of funding for a Catchment Restoration Fund and to explore options for its administration for both England and Wales. This project has produced a report that provides a summary of regional, national and European sources of funding that currently are used by the Environment Agency and Water Framework Directive co-deliverers for hydromorphological improvements. A further draft report from this project assesses the potential benefits and limitations of a number of different administrative models for a potential Catchment Restoration Fund. This report makes recommendations for preferred options as discussed by this group of stakeholders.

Working towards delivery of new mechanisms

The Environment Agency has identified a number of gaps in, or limitations of, existing legislation that weaken the ability of the Environment Agency and other public bodies to deliver the environmental objectives of the Water Framework Directive. These limitations principally relate to the ability of the Environment Agency and other public bodies.

The Environment Agency has been working with Defra and the Welsh Assembly Government to find ways to improve the ability to limit or prevent deterioration in water body status and secure improvements to water body status. Several proposals were included in Defra consultations on the draft Flood and Water Management Bill (April 2009) and Water Protection Zones (December 2008). A summary of these is provided in table F.13 below.

Table F.13: **Possible new mechanisms for managing hydromorphological pressures**

Mechanism	What this would do
Consenting Works Affecting Water Courses	The draft Flood and Water Management Bill contains a draft clause that would enable the Environment Agency, local authorities and Internal Drainage Boards to make consents subject to reasonable conditions. Such provision would ensure that flood and coastal erosion risk management authorities are able to impose conditions on consents to prevent, limit or mitigate damage to hydromorphological conditions in line with WFD requirements.
WFD Duty on Drainage Authorities	The draft Flood and Water Management Bill contains a draft clause that would place a duty on all flood and coastal erosion risk management authorities to act in accordance with WFD requirements. This is intended to ensure that the operational and regulatory flood and coastal erosion risk management activities of these authorities are undertaken so as to secure compliance with the requirements of the WFD.
Power to Improve Hydromorphological Conditions	The draft Flood and Water Management Bill consults on proposals for the provision of a permissive power for the Environment Agency to enter land and undertake works for the purpose of improving hydromorphological conditions as necessary to achieve WFD environmental objectives. Such a power would be employed in cases where the existing suite of delivery mechanisms had failed to deliver necessary improvements to hydromorphological conditions.
Water Protection Zones	The Defra/ Welsh Assembly Government consultation on Water Protection Zones (December 2008) proposed legislative change to section 93 of the Water Resources Act 1991. This would allow the Environment Agency to use WPZs to manage or prohibit a specific set of high risk activities causing direct or indirect damage to the hydromorphological condition of the bed, banks and riparian zone of surface water bodies.
Works Notices and Emergency Works	The Defra/ Welsh Assembly Government consultation on Water Protection Zones (December 2008) proposed legislative change to section 161 and 161A of the Water Resources Act 1991. The proposed changes would allow the Environment Agency to issue a Works Notice, in cases where damage has been caused to the morphological condition of controlled waters, to require restoration of those waters to their state immediately before the damage occurred. The Environment Agency would also be empowered to act itself to restore controlled waters where damage has been caused or to investigate the cause of damage, with cost recovery.

F.9 Fishing and fish stocking

The Environment Agency's responsibility for the management of fisheries covers England and Wales and extends out to 6 nm from the baselines. In carrying out its functions, the Environment Agency's principle aim is to protect and enhance the environment and take the appropriate steps towards achieving sustainable development. With regards to fisheries, the Agency is required to maintain, improve and develop migratory and freshwater fisheries. This includes:

- Ensure conservation and maintain diversity of fish and conserve the aquatic environment
- Enhance the contribution that salmon and freshwater fish make to the economy
- Enhance the social value of fishing

The Environment Agency is also required to maintain healthy fish populations, and ensure that inappropriate fish species are not introduced and that the diseases or parasites they may carry are adequately controlled.
In most recreational fisheries it has become popular to practise catch and release (almost 100% for coarse fish and more than 50% for salmon) or to re-stock to maintain the fish population. The main commercial fisheries that remove fish are those for inshore fisheries, salmon/sea trout and eel, and the 4000 consents to crop coarse fish that we regulate each year.

Formal mechanisms that help the Environment Agency to conserve protect fish populations are set out below.

Table F.14 **Mechanisms for managing fisheries**

Mechanism	What this does
National spring salmon byelaws	Prohibits the killing of salmon before 1 June each year
Fisheries byelaws	Controls on fishing activities, such as bans on use of live bait and restricting the fishing methods used.
Fish Health Directive	Requires fish farms, suppliers and fisheries to be registered or authorised so that the transfer of fish diseases is better controlled
Import of Live Fish Act (ILFA) 1980	Controls spread of non-native species. ILFA regulates the import, keeping and release of non native fish in England and Wales, by means of Orders relating to specific listed species.
Prohibition of Keeping or Release of Live Fish (Specified Species) Order 1998 (as amended in 2003)	Prohibits the keeping or release of listed non-native species except under licence.
Prohibition of Keeping of Live Fish(Crayfish) Order 1996	Prohibits, with one exception being signal crayfish (*Pacifastacus leniusculus)* in areas where it has become established, the keeping of any non-native crayfish except under licence.
Wildlife and Countryside Act 1981	Prohibits the releasing to the wild of scheduled invasive-non-native species or allowing them to escape into the wild.
Salmon & Freshwater Fisheries Act 1975, s30	Prohibits the release of fish into inland waters without consent.
Salmon and Freshwater Fisheries Act 1975	Provides various powers for the protection and management of fisheries, including the introductions of orders that limit the number of nets fishing in a public fishery.
Water Resources Act 1991	Sets out the responsibilities of the Environment Agency in relation to water pollution, resource management, flood defense, fisheries, and in some areas, navigation.

Mechanism	What this does
Environment Act 1995	Sets up the Environment Agency and set new standards for environmental management
Other related legislation	These include the Salmon Act 1986 etc.

In addition to these a number of informal mechanisms are available.

The Environment Agency works with national and local organisations to improve awareness of issues and to promote good practice. Accreditation schemes that promote fish welfare and conservation help with this and include schemes that relate to products used by anglers.

Fisheries action plans are local plans developed in partnership between the Environment Agency and local angling and fisheries groups, with input from conservation and other interest groups. They are based on river catchments, but cover canal and still-water fisheries as well as rivers. They may cover a wide range of issues from fish habitat through to angling promotion and land management. Each Fisheries action plan is different and reflects the concerns and priorities of local angling and fisheries interests.

Salmon and eel action plans have been prepared that identify a range of pressures that need to be addressed to improve salmon and eel stocks. The Environment Agency's strategy for the management of salmon fisheries in England and Wales requires the production of an individual Salmon Action Plan (SAP) for each principal salmon river. As well as updating these plans at regular intervals, they will be progressively integrated to the 6-yearly Water Framework Directive Planning Cycle. Whilst the strategy recognises the need to maintain a national overview of salmon conservation, the key component requires individual stocks to be managed effectively. Government has instructed the Agency to set Conservation Limits (CLs) for individual rivers and to refine these limits and the way they are used to take account of improvements in methodologies and new data. This approach is endorsed by the North Atlantic Salmon Conservation Organisation which is an inter-governmental body concerned with salmon conservation at an international level.

The Anglers Monitoring Initiative is a national scheme led by the Riverfly Partnership. Anglers use a simple technique, with reference to riverflies, to monitor river water quality. This complements the Environment Agency's invertebrate monitoring programme and helps ensure that water quality is checked more widely so that action can be taken at the earliest opportunity if problems are apparent. It is a good example of collaborative working between communities and the statutory bodies, which has widespread support. It deters casual polluters and helps identify waters for further investigation.

Future mechanisms that will be introduced to ensure more appropriate measures are in place is highlighted below:

In response to the collapse of the single European eel stock across Europe, the European Commission published Council Regulation No 1100/2007 introducing limits on eel fisheries. We have produced Eel Management Plans (EMPs) which set out the necessary measures and timescales to achieve 40% escapement of silver eel. Some of the measures needed includes: eel net limitations; close seasons; maximum size limits; regulation of eel traders; and traceability of imports and exports of eels.

The Marine and Coastal Access Act 2009 provides the Environment Agency with new powers and modernised tools for the effective management of fisheries and their enforcement, to enable the better protection of stocks and their habitats. Such powers include provisions to make emergency byelaws to respond effectively and promptly to unforeseen threats to fish stocks; modify the existing fishing licensing regime and introduce

an authorisation regime for some fishing activities; and they give powers for Ministers to introduce a new regulatory scheme to manage the movement of live fish in order to protect local and national biodiversity.

The Environment Agency have day-to-day responsibility for the regulation and management of migratory and freshwater fisheries in England and Wales, including the Border River Esk in Scotland, but excludes the English River Tweed.

The newly formed Inshore Fishing and Conservation Authorities (IFCAs) in England, previously Sea Fisheries Committees (SFCs),can introduce byelaws for the regulation of sea fisheries that have an impact on salmonids, in order to protect these species.

This arrangement exists currently and will continue under the Act. This is because salmon and other migratory species are included in the wider definition of the 'marine environment' and so byelaws to regulate sea fisheries (e.g. requirements to set a bass net at a certain level so that salmon can swim over) can continue. IFCAs will work with the Environment Agency – as SFCs do now - so appropriate measures can be taken to regulate sea fish for the protection of salmon and other migratory species.

Implementation in Anglian River Basin District

The Environment Agency issued 963 consents in 2007 to stock fish to freshwaters in the Anglian River Basin District.

F.10 Invasive non-native (alien) species

Non-native species (or alien species) are those species that are not native to this country, or to a particular water body. After being introduced accidentally or deliberately, they may become established and may have the ability to out-compete native species, taking over their new environments. They are commonly referred to as invasive non-native species (INNS) or invasive alien species (IAS).

Management of this problem will be led by the "Invasive Non-native Species Framework Strategy for Great Britain", Defra, May 2008. (available at the GB Non-Native Species Secretariat website http://www.nonnativespecies.org/

Key measures in the strategy include:

- Developing ways to educate people on the risks from invasive non-native species, and how to help avoid introducing these species.
- Developing a web-based shared Non-Native Species Information Portal that will show the distribution of non-native species and more detailed fact sheets for 300 species
- Developing expertise for early identification of potential problem species that may already be here or on their way, and the best ways to handle them.
- Developing a clear framework for rapid responses when invasive species are detected for the first time in Britain.
- Encouraging a partnership approach to managing invasions.
- Supporting research on cost-effective methods to address established invasions.

An action plan has been developed by the GB Programme Board to implement this strategy which sets set out actions to tackle the problems of non-native species across England and Wales.

Some of the formal mechanisms already available include the following:

Table F.15: **Mechanisms for managing invasive non-native species**

Mechanism	What this does
Import of Live Fish Act (ILFA) 1980	Controls spread of non-native species. ILFA regulates the import, keeping and release of non native fish in England and Wales, by means of Orders relating to specific listed species.
Prohibition of Keeping or Release of Live Fish (Specified Species) Order 1998 (as amended in 2003)	Prohibits the keeping or release of listed non-native species except under licence.
Prohibition of Keeping of Live Fish(Crayfish) Order 1996	Prohibits, with one exception being signal crayfish (*Pacifastacus leniusculus)* in areas where it has become established, the keeping of any non-native crayfish except under licence.
Wildlife and Countryside Act 1981	Prohibits the sale of, and releasing to the wild of scheduled invasive-non-native species or allowing them to escape into the wild.
Salmon & Freshwater Fisheries Act 1975, s30	Prohibits the release of fish into inland waters without consent.
Fisheries byelaws	Controls on fishing activities, such as bans on use of live bait (or by using the licence schemes described above).

Guidance on good practice to avoid introducing invasive non-native species, or to detect and/or eradicate these is given in national codes of practice, such as “The knotweed code of practice” for managing Japanese knotweed on development sites (Environment Agency, 2006) and the Horticultural Code of Practice (Defra, 2005).

Partnerships between ports authorities and other interested groups have introduced guidance under the International Convention for the Control and Management of Ship’s Ballast Water and Sediment (to be ratified).

Direct action to detect and eradicate invasive non-native species may be taken locally, often in partnership with others (for example a local “Invasive non-native species forum” and as part of Local Biodiversity Action Plans. Flood risk river management programmes often include actions to manage non-native plant species where they have an impact on flood risk. Areas of high biodiversity value, or of high risk from plant-induced flooding, may benefit from plans to prevent invasive non-native species from becoming established.

Implementation in Anglian River Basin District

In Anglian River Basin District there are several of locally-led measures including:

- Infestations of pennywort are being managed, the Environment Agency has led removal initiatives on the River Chelmer and Blackwater in Essex and the River Waveney in Norfolk.
- American Signal Crayfish numbers are being managed by The Environment Agency on the River Stour at Wixo pumping station with a trap removal scheme.

F.11 Direct discharge of pollutants into groundwater

The direct discharge of pollutants into groundwater is discouraged but can be allowed in some locations and in specific circumstances. Any direct discharge must still comply with the overall objectives of the Water Framework Directive and Groundwater Daughter Directive. That is, the discharge does not cause pollution, the input of hazardous pollutants is prevented, the status of the groundwater body is not reduced and there is no significant rising trend of pollutants that needs to be reversed. Direct discharges of List I substances are already prohibited by the Groundwater Directive, which is put into effect through the Groundwater Regulations 1998 and other legislation noted under F.2 ix above, subject to certain exemptions.

F.12 Priority substances

The Water Framework Directive provides for the identification of priority substances (PS) for which the objectives are a progressive reduction of discharges, emissions and losses and, for a subset of priority hazardous substances (PHS), a cessation or phasing-out of discharges, emissions and losses within 20 years. It also requires the determination at European Union level of environmental quality standards (EQS), which will be used as criteria for the assessment of 'good chemical status' for surface water bodies. The 'priority list' of dangerous substances was agreed by co-decision (Decision 455/2001/EC) in 2001. Priority substances were selected on a risk-based prioritisation process which identified both priority substances and priority hazardous substances using monitored and modelled data demonstrating EU-wide significance, and taking into account their persistence, bioaccumulation and toxicity.

There are 33 priority substances (or groups of substances), of which 13 have been identified as priority hazardous substances. Environmental quality standards for these substances were published in December 2008 in the Priority Substance Daughter Directive (2008/105/EC). All the standards in that Directive must be met for a surface water body to be classified as being of 'good chemical status'

The Priority Substance Daughter Directive reiterates that the objectives and provisions of Water Framework Directive Article 4 apply. Therefore the objectives to achieve 'good chemical status' and for a progressive reduction of priority substances and cessation of priority hazardous substances are subject to disproportionate cost and technical infeasibility considerations.

A further objective of the proposal is for Member States to take measures aimed at ensuring, subject to Water Framework Directive Article 4, that concentrations of certain priority substances that tend to accumulate in sediment and/or biota do not significantly increase.

Member States are also to establish an inventory of emissions, discharges and losses of the pollutants listed in the Priority Substance Daughter for each river basin district.

Until June 2009, measures for priority substances were set out in European Community Council Regulation No 793/93 of 23 March 1993 on the Evaluation and Control of the Risks of Existing Substances. This legislation required risks to human health and the environment (including the water environment) to be assessed. Where risks were confirmed, risk reduction strategies were implemented. This legislation has been the main factor driving restrictions on certain chemicals (such as nonylphenol) due to their impact on the water environment and will be replaced and expanded by the REACH (Registration, Evaluation, Authorization and restriction of Chemicals) Regulations. REACH manages chemical substances produced or imported into the European Union in quantities over one tone a year. This includes registration and assessment of risks to human health and the environment. Substances of high risk to human health or the environment will be subject to high levels of control. The REACH Regulations came into force on 1 June 2009.

The competent authority for managing REACH in England and Wales is the Health and Safety Executive, working closely with the Environment Agency and other key partners.

Many of the mechanisms listed in F.6 (point source pollution) and F.7 (diffuse pollution) can be used to avoid or limit pollution from priority substances.

Other available mechanisms for managing priority substances are given in Table F.16.

Table F.16: **Measures for managing priority substances**

Mechanism	What this does
Controls on point or diffuse sources of pollution under: • Water Resources Act 1991 • Groundwater Regulations 1998 And under the Environmental Permitting Regulations (England and Wales) 2007, which replace: • Pollution Prevention and Control (England and Wales) Regulations 2000 • Waste Management Regulations 1994 • Landfill Regulations 2002 • Waste Management Regulations (England and Wales) 2006 (Agricultural Waste Regulations)	Place controls on discharges or disposals of priority hazardous substances; eliminates, reduces and renders emissions harmless. (See also Section F.6 on Point Source Discharges and Section F.7 on Diffuse Source Pollution)
Control of Pollution Act 1974 and Food and Environment Protection Act 1985	Bans use of tributyltin (TBT) on boats less than 25m long.
European Regulation 782/2003	Removal of tributyltin (TBT) from hulls by July 2003. No vessels in European Union waters by 2008 with TBT on their hulls.
Marketing and Use Restriction under Regulation European Community 850/2004	Bans use of particular substances in the European Union.
Marketing and Use Restrictions under the Control of Pesticides Regulations 1986	Bans or restricts use of priority hazardous substances used for pesticides.

Mechanism	What this does
World-wide treaty on Persistent Organic Pollutants	Bans marketing and use of these substances

The European Union mercury strategy and the work of the OSPAR Commission[2] have reduced the use of mercury in industry, including a ban on mercury thermometers.

The Environment Agency's Memorandum of Understanding with the Coal Authority deals with the prevention of new discharges and remediation of existing discharges from abandoned coal mines, exchange of information, research and to ensure (as far as possible) operators deal with potential pollution from closure of licensed coal mines

There are several national assurance schemes that help to minimise the environmental risks from sheep dip chemicals and prevent further environmental damage. These include Linking Environment and Farming, Local Environment Risk Assessment for Pesticides, voluntary agreements on use of pesticides and sheep dip, for example Pesticide Voluntary Initiative (in England) with Defra, WaterUK, and the Environment Agency.

Registration of users and certificates of competence under BASIS - minimises the environmental risks from sheep dip and other chemicals and prevents further environmental damage.

Pollution Reduction Programmes are also in place for the following substances:

Priority Substances: 1,2-Dichloroethane, Alachlor, Atrazine, Chlorfenvinphos, Diuron, Simazine and Trifluralin, Benzene, Chlorpyrifos, DEHP, Dichloromethane, Isoproturon, Lead, Naphthalene, Nickel, Octylphenol, Pentachlorophenol, Trichlorobenzenes and Trichloromethane.

Priority Hazardous Substances: Anthracene, Cadmium, Endosulfan, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclohexane, Mercury, Nonylphenol, PAHs, Pentabromodiphenyl ether, Pentachlorobenzene, Short chain chlorinated paraffins and tributyltin (TBT).

Specific Pollutants: 2,4-D, Cypermethrin, Diazinon, Dimethoate, Linuron and Mecoprop.

These provide information on probable sources, and possible measures together with their likely contribution to status and their cost-effectiveness.

These provide information on probable sources, and possible measures together with their likely contribution to status and their cost-effectiveness. They also set out how progress will be made towards stopping use of Priority Hazardous Substances and compliance with status objectives for other chemicals. Pollution Reduction Plans were released in September 2009.

The Environment Agency has published pollution prevention guidance, including guidelines on sheep dipping (PPG12).

Groundwater protection codes:

- Use and storage of solvents Prevents pollution from solvents.

[2] The 1992 OSPAR (Oslo-Paris) Convention is the current instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic

- Groundwater protection code: Use and disposal of sheep dip compounds - Minimises the environmental risks from sheep dip chemicals and prevents further environmental damage.

Implementation in the Anglian River Basin District

In the Anglian River Basin District, key locally targeted pollution prevention campaigns relevant for chemicals include:

River Welland (middle reaches)

There is evidence that biocides, almost certainly sheep dip, is entering the middle reaches of the River Welland. The freshwater shrimp population is almost nil in a river that should have abundant numbers. The situation is complex because there appears to be more than one point of entry although one particular farm has been identified as a probable source. Investigations are continuing and involve a mixture of field visits, further analysis of samples, the use of passive sampling devices and the deployment of caged shrimp populations.

Helpston

The Environment Agency is working to contain a mecoprop plume, from an old landfill, from contaminating local water supply.

Boston

The Environment Agency is working with a timber treatment company where there is historic sediment contamination of adjacent watercourses by creosote. During periods of heavy rainfall contamination has been released into watercourses. The work comprises trial remediation of watercourses by removing contaminated sediments.

F.13 Accidental pollution incidents

Mechanisms set out above in sections F.6 on point source discharges, F.7 on diffuse source pollution and F.11 on priority pollutants can also be used to help avoid or deal with the effects of accidental pollution. Educational programmes and raising public awareness are also valuable mechanisms.

The more specific measures to prevent or reduce the impact of accidental pollution incidents are set out in Table F.17.

Table F.17: **Mechanisms to prevent or reduce accidents**

Mechanism	What this does
Control of Major Accident Hazard Regulations 1999 in partnership with Health & Safety Executive	Minimises accidents from stored pollutants.
Environmental Permitting Regulations (England and Wales) 2007	Controls on process industries to minimize accidental emissions
Water Resources Act 1991 • Liability for sewage discharges from sewerage system, s87	• Makes sure sewerage undertakers (owners/operators) prevent illegal inputs to sewage treatment works

Mechanism	What this does
• Works notices, s161A • Storage of pollutants and use of Water Protection Zones, s93 • Flood warnings, s166	• To prevent/reduce pollution. • Minimises/Prevents accidents from stored pollutants. • Carry out flood defence functions, including flood warnings, by use of committees
Groundwater Regulations 1998 (due to be replaced in Autumn 2009 by new Groundwater Regulations)	Notices to prohibit any activity that might lead to an input of a listed substance/WFD pollutant to groundwater.
Control of Pollution (Oil Storage) (England) Regulations 2001	Minimises/Prevents accidents from oil storage.
The Environmental Damage (Prevention and Remediation) (England) Regulations 2009 The Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009	Prevention and remedying of environmental damage to habitats and species protected under EC law and to species or habitat on a site of special scientific interest. Environment Agency, local authorities, Natural England and Marine and Fisheries Agency

Planning for managing accidents can help prevent a spill becoming a pollution incident. Emergency Planning activities are carried out by a range of organizations, including central government and local authorities, and by industry and business.

An example is the Maritime and Coastguard Agency's National Contingency Plan which deals with pollution incidents in the marine environment. Owners and masters of ships and the operators of offshore installations have the responsibility for ensuring that they do not pollute the sea. Harbour authorities are responsible for ensuring that their ports avoid marine pollution and for responding to incidents within their limits. The Marine and Coastguard Agency will also provide national support to ships, offshore installations, harbour authorities and coastal local authorities where this is necessary.

Implementation in the Anglian River Basin District

In the Anglian River Basin District in 2007 there were:

- No category 1 and five category 2 incidents [3] affecting the water environment

Further information is available on the Environment Agency's website at http://www.environment-agency.gov.uk/research/library/data/34363.aspx

F.14 Marine waters

Much of the pollution in marine waters comes from the land and freshwater. Many of the measures listed in previous sections help to avoid marine waters becoming increasingly polluted. Particularly relevant are:

- Section F.6 on point source discharges;
- Section F.7 on diffuse source pollution;

[3] Category 1 incidents have a serious, and often persistent, effect on quality water, air or land, with and uses that are dependent on these, such as ecosystems, public supply abstractions. Category 2 incidents are significant but less severe.

- Section F.8 on hydromorphology, especially controls relating to managing sediment in estuaries by activities such as maintenance dredging (including disturbance of trybutyl tin accumulation), flood risk management and development;
- Section F.10 on invasive non-native (alien) species related to shipping and ballast waters;
- Section F.12 on priority hazardous substances particularly polyaromatic hydrocarbons (PAH), and agricultural pesticides;
- Section F.13 on accidental pollution.

There are also specific mechanisms used to avoid increased pollution in seas. These include:

Table F.18: **Mechanisms for managing pressures on marine waters**

Mechanism	What this does
Urban Waste Water Treatment Regulations 1994	Bans disposal of sludge to sea
Sea Fisheries (Regulation) Act 1966	Sea Fisheries Committees can make byelaws for managing and conserving their district's fisheries
Environment Act 1995	The Environment Agency regulates fishing for salmon, migratory trout and eels to 6 nautical miles. The Marine and Coastal Access Act 2009 adds smelt and lamprey to this list
Water Resources Act 1991	It is an offence to pollute controlled waters by causing or knowingly permitting entry or discharge of polluting matter. The WRA 1991 requires conditional consents for point source discharges to water - see section F4. These controls extend out to 3 nautical miles from the baseline.

- The Marine and Fisheries Agency regulate the marine consents and licensing work and marine aggregates extraction previously undertaken within Defra and CLG. This includes the Coast Protection Act (1949, Part II) licences and Food and Environment Protection Act (1985, Part 11) licences and marine aggregates extraction permissions.
- Sea Fisheries Committees can make byelaws for managing and conserving their districts' fisheries under the Sea Fisheries (Regulation) Act 1966 (out to 6nm). Byelaws can be used to control fishing activities to prevent bed sediments being disrupted, bed habitat being removed, flow/sediment dynamics being altered, contaminants being disturbed, and changes to water quality. These committees will be replaced by Inshore Fisheries and Conservation Authorities (England and Wales) under the Marine and Coastal Access Act 2009. They will cover a similar area but take over all estuaries in England including those for which the Environment Agency is currently responsible.
- The Marine and Fisheries Agency has responsibility for enforcing sea fisheries regulations within English and Welsh waters (out to 200nm or the median line with neighbouring states) under the European Union's Common Fisheries Policy. It also enforces national fisheries measures, including those implemented under the Sea Fish (Conservation) Act 1967 and associated regulations.
- Controls on the operators of shell fisheries and fish farming are available through - Centre for Environment, Fisheries, and Aquaculture Science register, seabed licence from the Crown estate, several regulating Orders.

The Marine and Coastal Access Act 2009 provides for a better system of achieving sustainable development of the marine and coastal environment is expected in the next parliamentary session. This will introduce:

- A new strategic marine planning system;
- Streamlined marine licensing;
- Improved inshore fisheries management, including Sea Fisheries Committee reform;
- Nature conservation legislation – including the creation of marine conservation zones.
- Clauses on coastal access;
- New migratory and freshwater fisheries legislation.

There will also be a new marine management organisation in England which will play a key role in protecting or ensuring 'good status' so that the aims and objectives of the Water Framework Directive are met. Marine planning will enable development in the marine environment to be better balanced and the environment to be fully considered, and this will be taken into account in making decisions on future licensing applications. It is important that River basin management plans inform the new marine planning system. The introduction of national marine protection areas 'Marine Conservation Zones' will help to protect nationally important biodiversity, which will help achieve Water Framework Directive objectives in protecting important parts of estuaries and coastline. In particular protection for areas which provide nursery grounds for juvenile fish would be proposed. This would not mean that all activities would need to be prohibited in these areas and some controls may only be necessary at certain times of the year. The new fisheries legislation and the new Inshore Fisheries and Conservation Authorities will provide better measures to protect and manage migratory and sea fisheries.

You can find further information, on the Marine and Fisheries Agency website at: http://www.mfa.gov.uk/

defra
Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan
Anglian River Basin District

Annex G: Pressures and risks

Contents

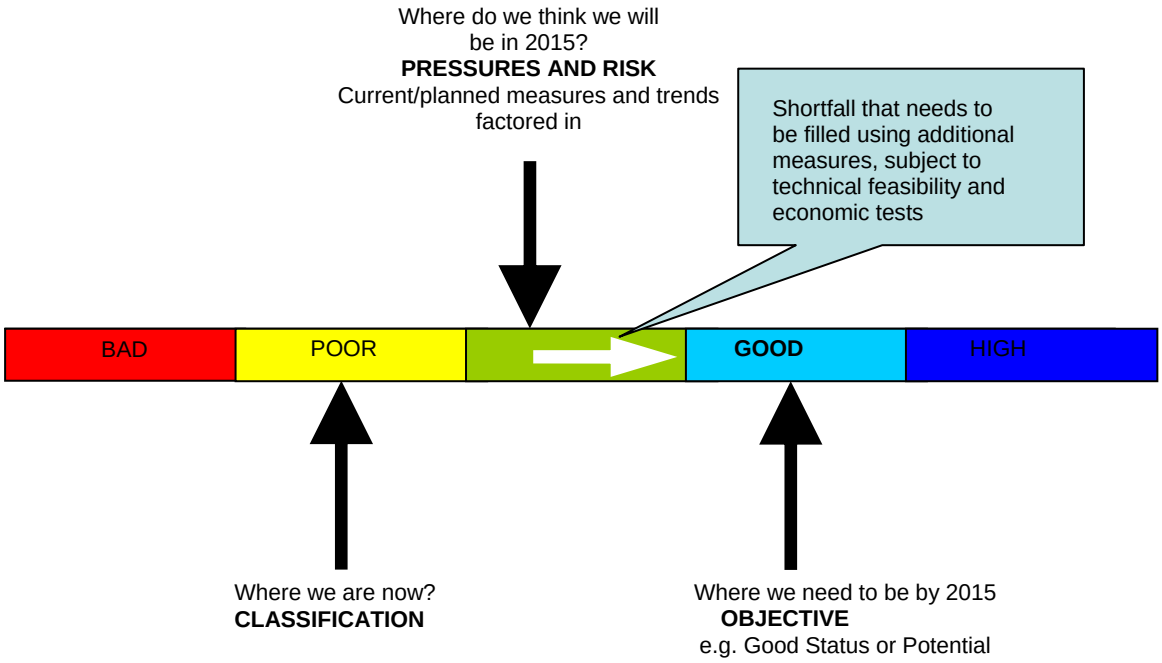
G.1 Introduction

This annex provides a summary of the significant pressures and the risks resulting from humans' activities on the status of surface water and groundwater. The Water Framework Directive requires the management of risk to the environment caused by anthropogenic pressures, not just their impacts. There is a fundamental difference in terms of the management approach required to meet these needs. Managing impact is 'reactive', whereas managing risk is 'proactive', requiring the ability to identify where an impact might occur (or is occurring) and prevent it from happening in the future. For example, the Environment Agency issues consents to discharge effluent to water or licences to abstract water that minimises the impact before it happens and is based on the risk to the water from the activity and the sensitivity of the water.

We need to assess the risks posed to the environment, in terms of failing to achieve the objectives of the Water Framework Directive (e.g. Good Status or Potential) either now or in 2015. Information on trends enables action to be taken to prevent water bodies being impacted in the future. This is critical given the timescales imposed by the Directive for achieving Good Status (see Figure G.1).

The measures in Annex C will aim, as necessary, to further reduce the current impact of pressures, ensure no deterioration and reduce the risks posed to the environment so that future impacts are less likely.

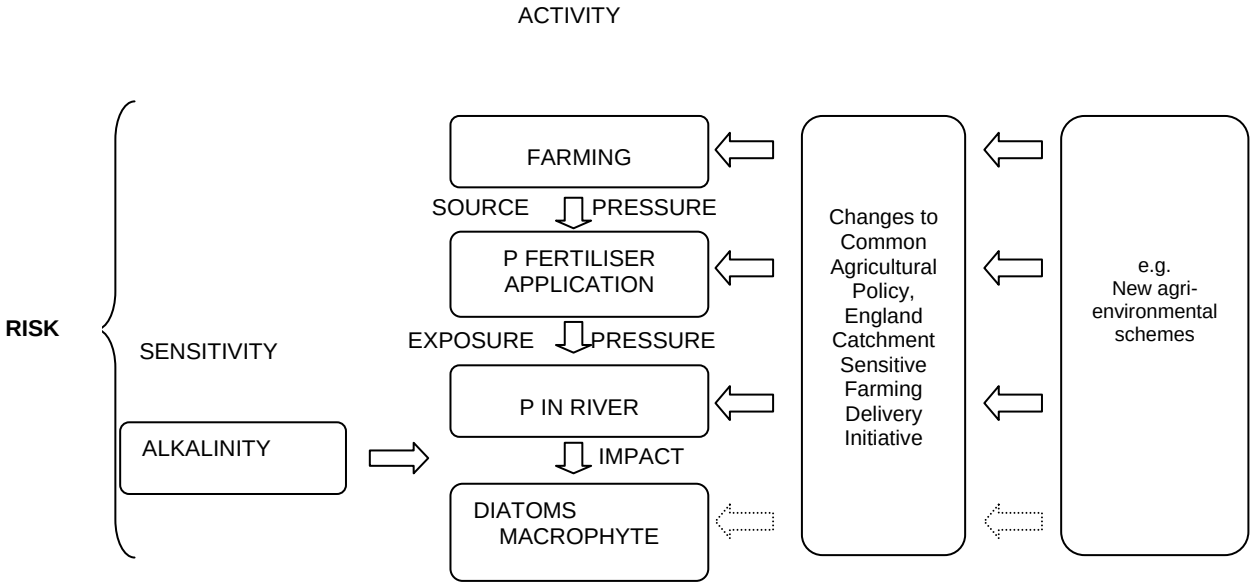
Figure G.1: **Simple overview of how classification and risk are used to define objectives and measures**



The consideration of pressures and risks (potential impacts) help build up an evidence base that can justify the objectives and the actions to deliver them (see Annex C - Programmes of Measures). Figure G.2 shows an example of the risk model used.

Further information on how the Environment Agency produced the risk assessments and the methods used can be found at http://www.environment-agency.gov.uk/research/planning/33238.aspx.

Figure G.2: **Example of conceptual risk model using example of the pressure from phosphate (P) fertilisers**



G.2 Information on significant pressures

Previously, pressures have been looked at in the context of:

- Estimating point source pollution.
- Estimating diffuse source pollution, including land use.
- Estimating pressures on the quantitative status of water including abstractions.
- Analysis of other impacts of human activity on the status of water.

Risk assessments to assess the risk of not achieving the default objectives of the Water Framework Directive have been produced for different sources of pressures under these headings and can be found at http://www.environment-agency.gov.uk/research/planning/33268.aspx.

For protected areas, assessments of compliance are presented separately in Annex D.

In the River Basin Planning: Summary of Significant Water Management Issues report for the Anglian River Basin District, a series of environmental pressures was considered; these are listed in Figure G.3.

Figure G.3: **Pressures affecting the water environment**

WFD PRESSURES	Specific pressures considered
Point source pollution	• Organic pollution - including ammonia and biochemical oxygen demand • Chemicals - including priority hazardous substances, priority substances, specific pollutants • Other Pollutants - faecal indicator organisms • Acidification • Nutrients - nitrate, phosphorus • Mines and minewaters
Diffuse source pollution	• Chemicals - including priority hazardous substances, priority substances, specific pollutants (including pesticides) • Oil and hydrocarbons • Sediments
	• Organic pollution - including ammonia and biochemical oxygen demand • Other Pollutants - faecal indicator organisms • Acidification • Nutrients - nitrate, phosphorus • Mines and minewaters
Pressures on the quantitative status of water	• Abstraction and other artificial flow pressures • Physical modification - morphology
Other impacts on the status of water	• Physical modification - morphology • Invasive non-native species • Biological pressures - including fish stocking, biota removal • Sediments • "Emerging" substances such as endocrine disrupters • Urban and transport pressures • Recreation (e.g. boating, fishing) • Saline Intrusion into groundwater bodies (resulting from abstraction pressures)

These are generalised categories and it is recognised that some pressures, such as ammonia, may be included in more than one category. It is also acknowledged that diffuse source pollution may also include unspecified point sources dispersed over a wide area.

The effects of climate change on the environment are another pressure that should be considered when understanding how to protect or improve the status of water bodies. Temperature changes in the environment may be linked to changes in species, habitat and water quantity and availability, for example. The source of local temperature changes may be traced to specific activities such as cooling water from power stations, as the by-product of power generation. We are still learning how we can monitor and predict the effects of temperature changes for the future. Annex H discusses the effects and impacts of climate change on the river basin scale in more detail.

For the Anglian River Basin District, a number of specific pressures were identified as significant water management issues:

- Abstraction and other artificial flow pressures
- Invasive non-native species
- Nitrate
- Phosphorus

- Physical modification
  - estuaries and coasts
  - rivers and lakes
- Sediment.

Pressures that were found not to represent significant water management issues at a district level in this river basin district, but may still have a significant effect at local level are listed as follows and described further in Section G.3:

- Acidification
- Commercial fisheries (estuaries and coastal waters)
- Endocrine disrupters
- Mines and minewaters
- Organic pollution (ammonia and biochemical oxygen demand)
- Faecal indicator organisms
- Metals
- Pesticides
- Chemicals including priority hazardous substances, priority substances & specific pollutants (excluding pesticides)
- Recreation (for example boating and angling)
- Urban and transport pollution

The next sections describe the significance and extent of the specific pressures which have been identified as significant water management issues in the Anglian River Basin District.

Understanding the maps

The results of our risk assessments are displayed through maps showing which water bodies are at risk of failing the Water Framework Directive objectives in 2015. These assessments do not reflect the current quality or status of a water body, rather the risk that they may fail objectives as a result of pressures acting on them.

The maps show the risk of failing Water Framework Directive objectives with the following colour key:

- Water body at significant risk of failing objectives - dark purple
- Water body probably at significant risk of failing objectives - light purple
- Water body probably not at risk of failing objectives - pink
- Water body not at risk of failing objectives - pale pink
- Water body not assessed – white.

A water body may be “not assessed” if the risk assessment has not been applied to it. For example, where large water bodies have been split into smaller water bodies late in the river basin planning process, the risk assessment may not have been subsequently applied to the smaller water bodies. These risk assessments will be updated during the first cycle of river basin management planning.

The statistics for river water bodies include rivers, surface water transfers and canals. Lake water body statistics include lakes and Site of Special Scientific Interest (SSSI) ditches.

i) Abstraction and other artificial flow pressures

Periods of naturally low flows are caused by extended periods of low rainfall (e.g. during droughts) and are part of the mechanism that supports bio-diversity. Low flows can be prolonged or made worse by unsustainable levels of abstraction for public water supply, industry, agriculture or domestic use. Unsustainable abstraction from groundwater can lower groundwater levels and affect dependent river flows or wetlands, or can induce the intrusion of poorer quality water from the sea or from deeper aquifers.

Other artificial influences on flow include the discharge of treated sewage, transfer of water between catchments and the storage and release of water from reservoirs. These influences may offset some of the impacts of abstraction, or result in flows being significantly higher or lower than they would naturally be.

Flow in surface water bodies is a supporting element to biological classification for all classes other than High status, for which it is an obligatory consideration. Outflow from groundwater bodies contributes to the surface water flows required to support the biological classification.

Unsustainable rates of abstraction reduce surface water flows and may result in lower flow velocities, reduced depths and reduced flow continuity that may limit ecological status. In addition, groundwater pumping may locally reduce spring flows and water levels important to retaining the ecological diversity and resilience of groundwater fed wetlands. Such impacts can be magnified in periods of reduced rainfall common in eastern England.

Ecological impacts can also arise from water being diverted for other uses. For example, fish farms can take a substantial amount of water out of rivers and return it further downstream. The ecology in the 'deprived reach' between the inlet and outlet can be significantly affected. Flow impacts can also arise from river channels being over widened or poorly managed.

By far the largest demand for water in the Anglian River Basin District comes from public water supply, although there are a large number of smaller abstractions across the district to supply agriculture and industrial users. In the face of these demands, and in order to reduce the pressure of abstraction on the water environment, abstractors in the Anglian River Basin District have been encouraged over a number of years to use water more efficiently.

Restricted or low flows can lead to higher residence time along some river stretches. These, combined with higher concentrations of nutrients such as phosphate and nitrate, may lead to algal blooms. More frequent periods of low summer rainfall are expected under current climate change scenarios, which may increase the environmental impact of flow problems.

There are 5,069 abstraction licences within the Anglian River Basin District authorising abstraction of 2,368,807 million litres of water a year. These abstractions cover water taken from rivers or the ground, both from freshwater and tidal reaches.

Figure G.4: **Summary of abstractions in the Anglian River Basin District**

Sector	Licensed volume (Ml/ year)	Number of Licences
Water Supply	978,237	324
Agriculture	160,681	4,193
Fish and Aquaculture	52,226	43
Electricity Production	760,428	7
Industry	411,678	464
Other	5,557	28

- Our latest assessments of the pressure show that:
- 1,593 km (21%) of river length are at risk or probably at risk from abstraction and flow regulation (see Figure G.5)
- 24 km^2 (18%) of lakes are at risk or probably at risk from abstraction and flow regulation (see Figure G.6)
- 14,577km^2 (87%) of groundwater are at risk or probably at risk from abstraction and flow regulation
- 12,181 km^2 (73%) of surface water is at risk from groundwater abstraction and flow regulation (see Figure G.7)
- 12,142 km^2 (23%) of water bodies are at risk or probably at risk from abstraction and flow regulation impacts on water balance (see Figure G.8)
- 11,358 km^2 (68%) of groundwater dependent terrestrial ecosystems are at risk from abstraction and flow regulation impacts (see Figure G.9)
- 9 km^2 (3%) of estuaries are probably at risk from industrial abstraction and artificial flow pressures (see Figure G.10), while no estuaries are at risk or probably at risk from catchment abstraction (see Figure G.11)
- 6,758 km^2 (40%) of groundwater are at risk or probably at risk from Saline Intrusion (see Figure G.12).

Figure G.5 **Abstraction and other artificial flow pressures (rivers)**

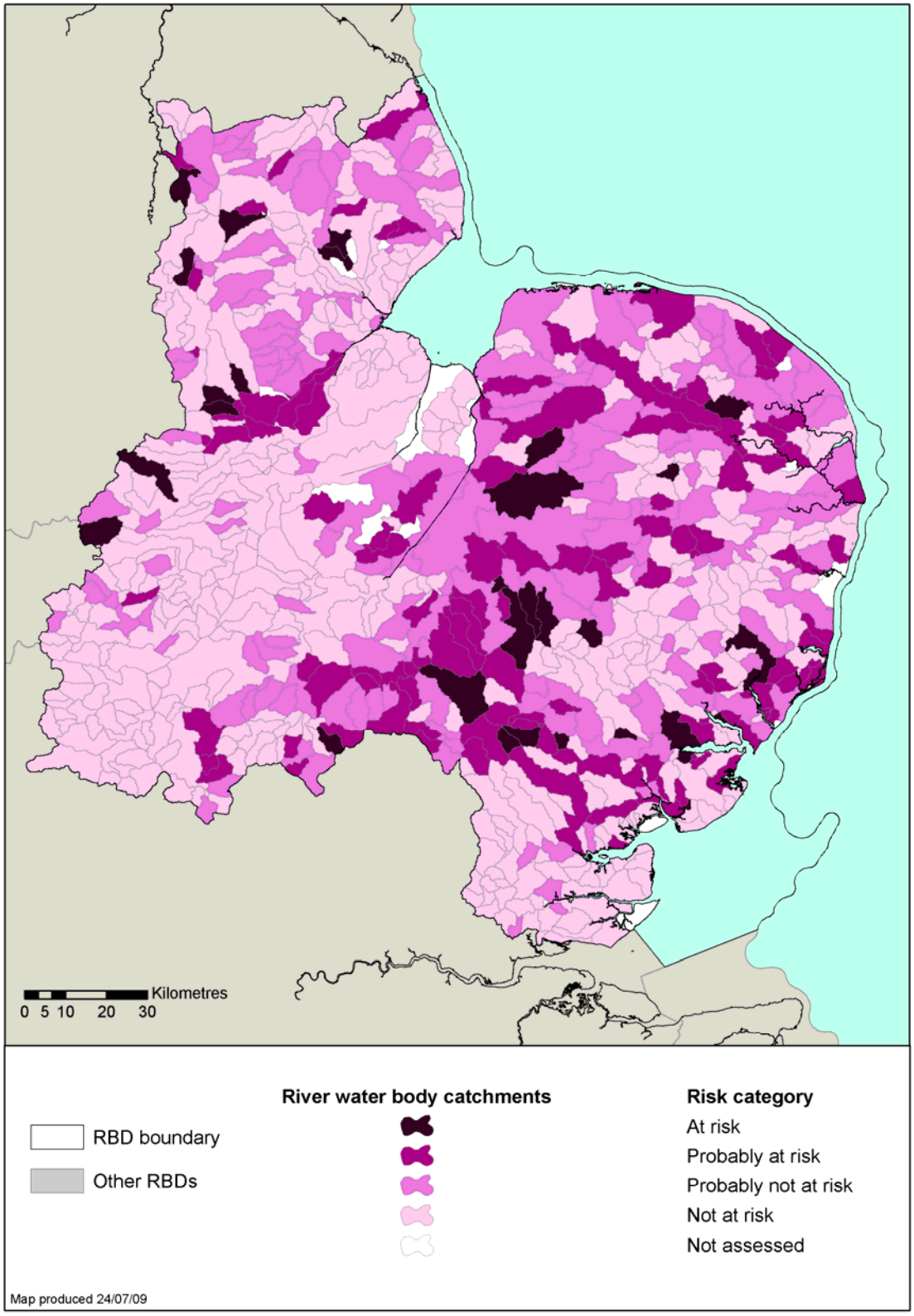


Figure G.6 **Abstraction and other artificial flow pressures (lakes)**

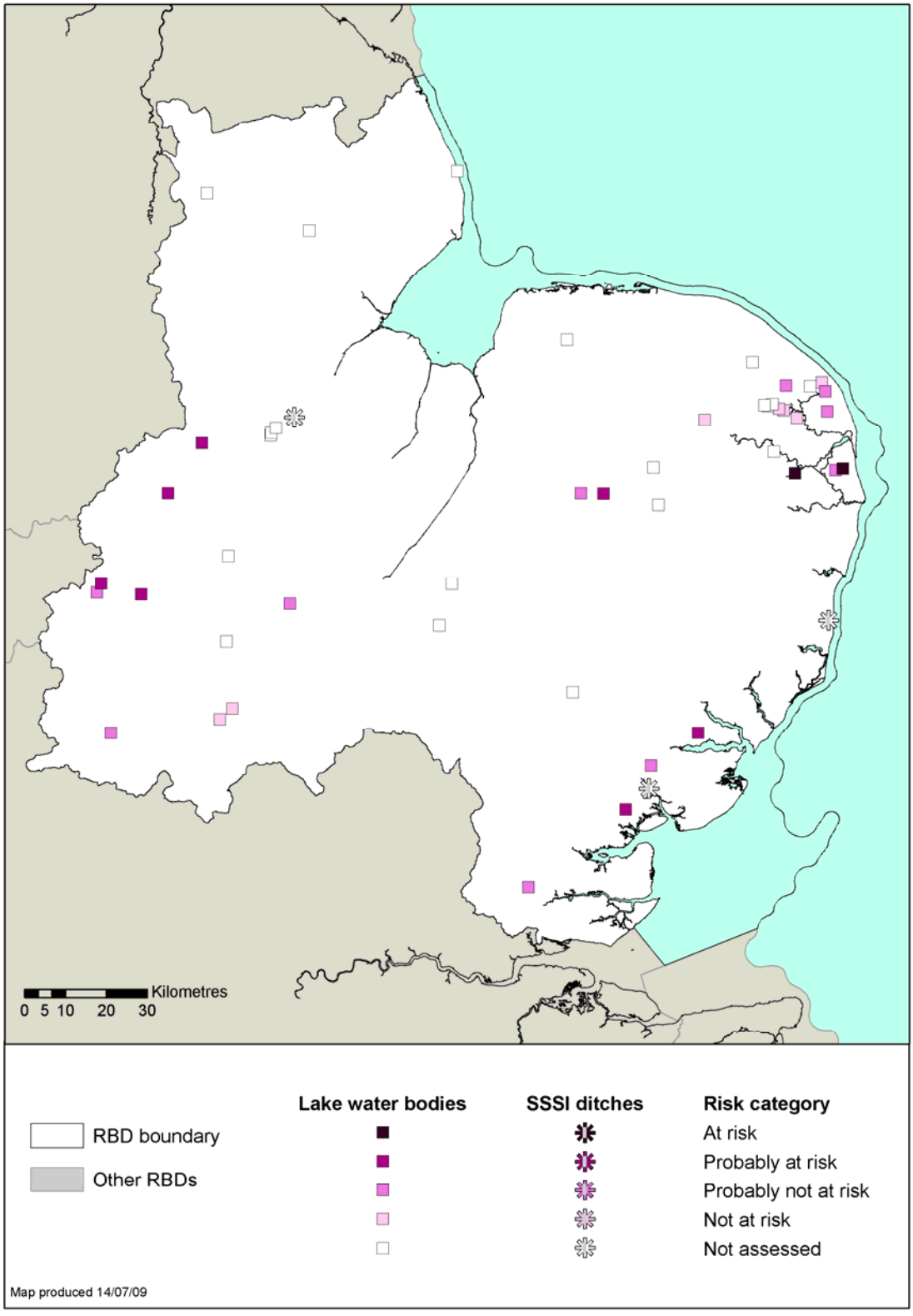


Figure G.7 **Abstraction and Flow Regulation - Impact on surface water (groundwater)**

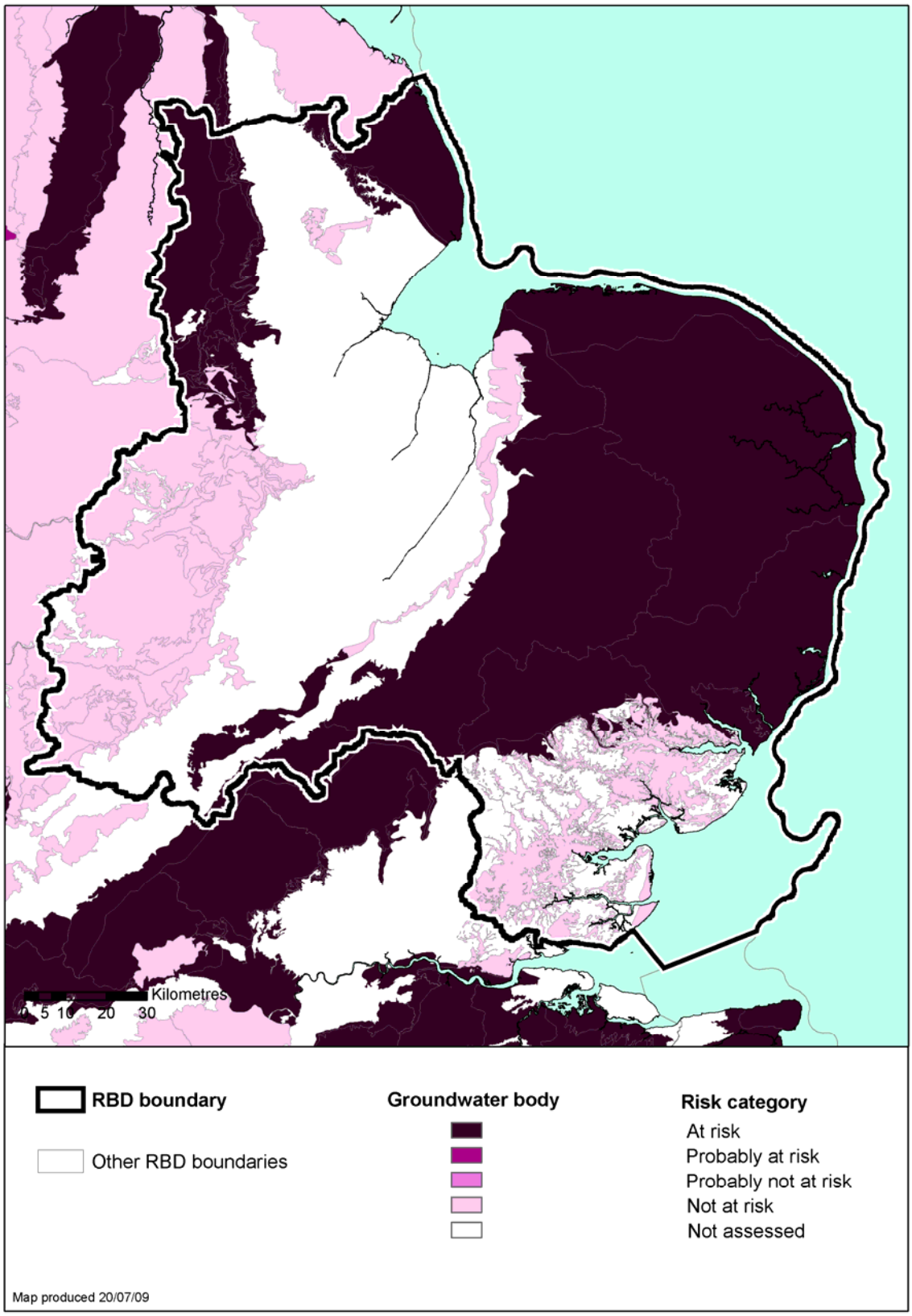


Figure G.8 **Abstraction and Flow Regulation - Impact on water balance (groundwater)**

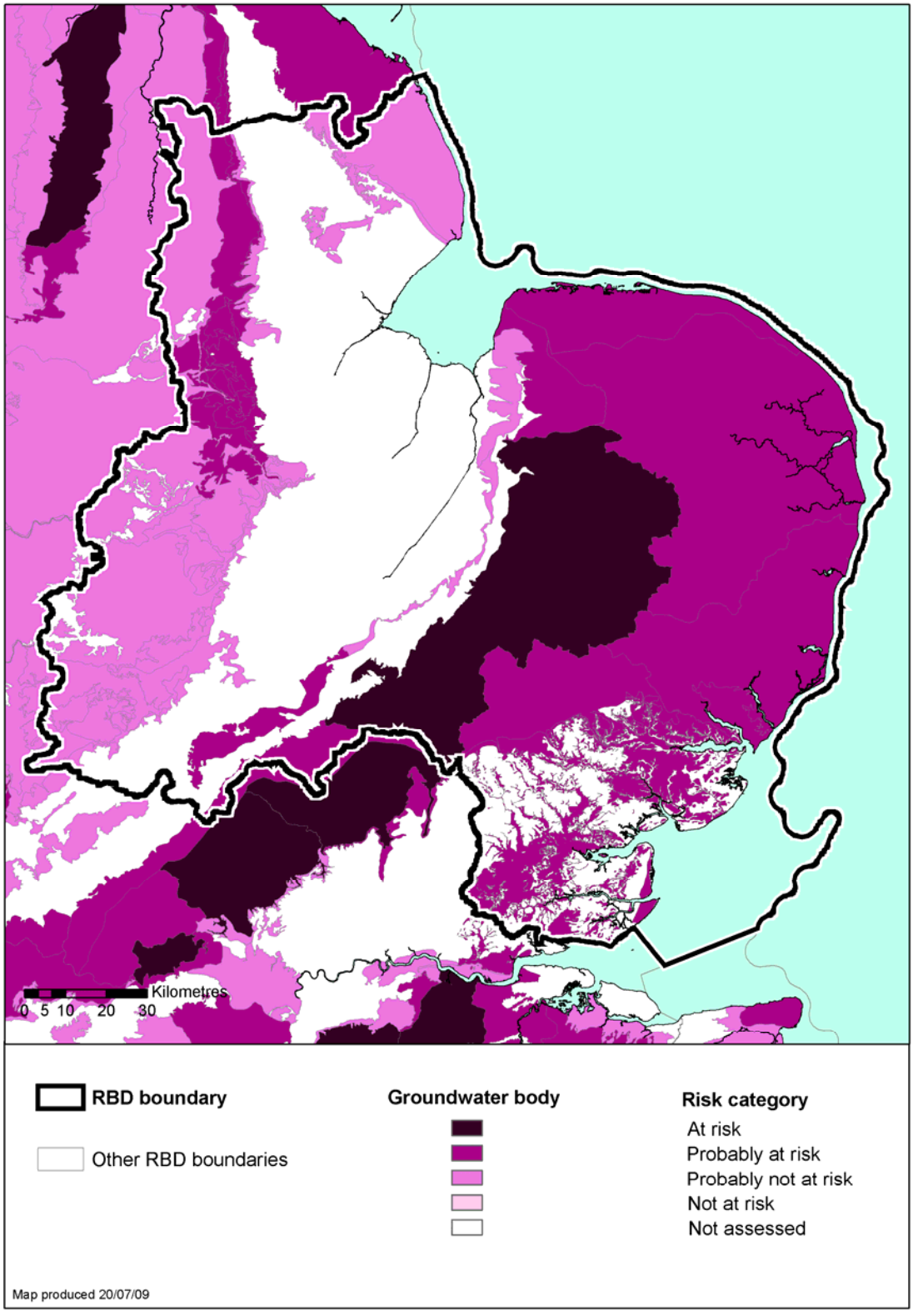


Figure G.9 **Abstraction and Flow Regulation - Impact on terrestrial ecosystems (groundwater)**

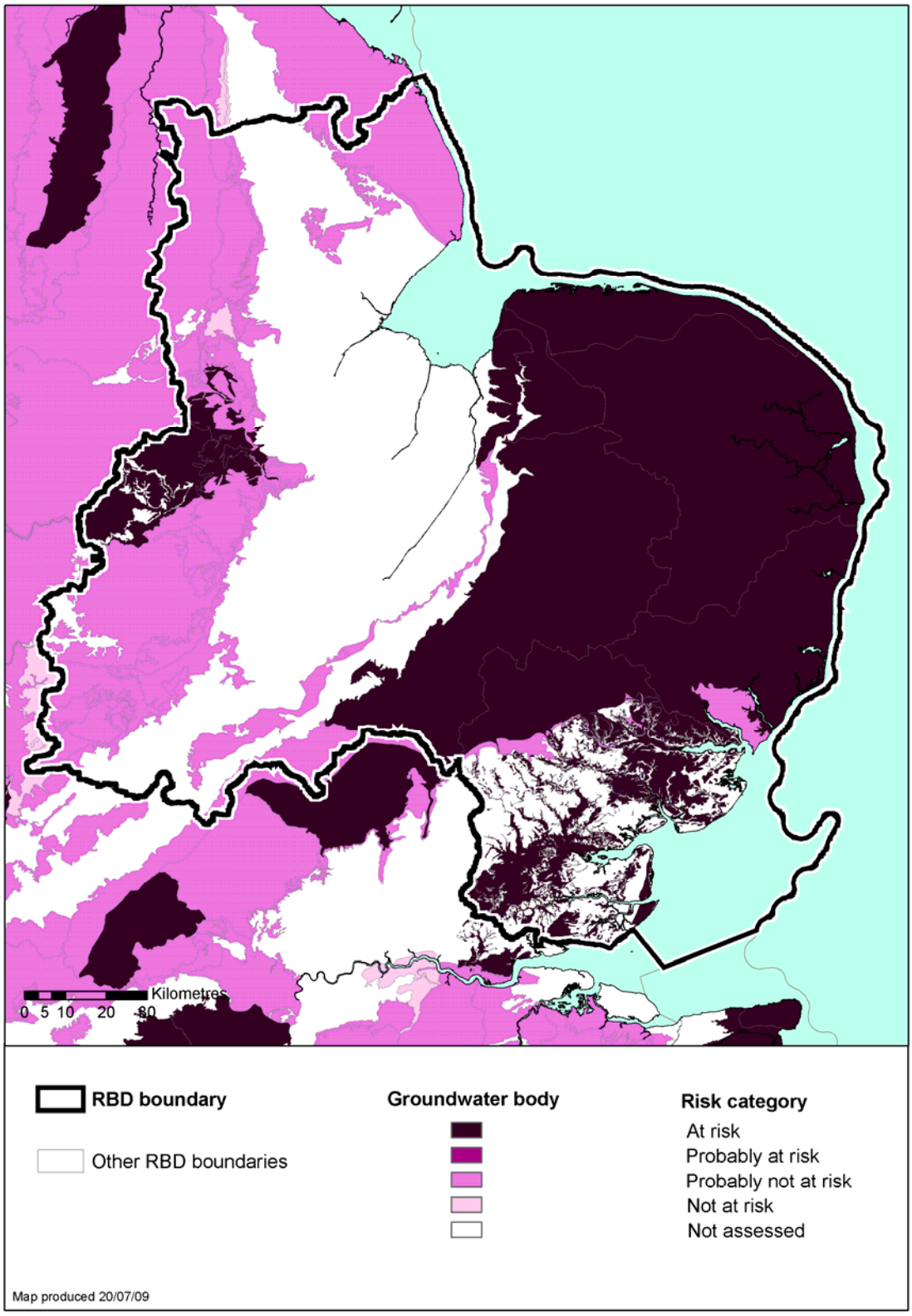


Figure G.10 **Abstraction and other artificial flow pressures - industrial abstraction (estuarine waters**)

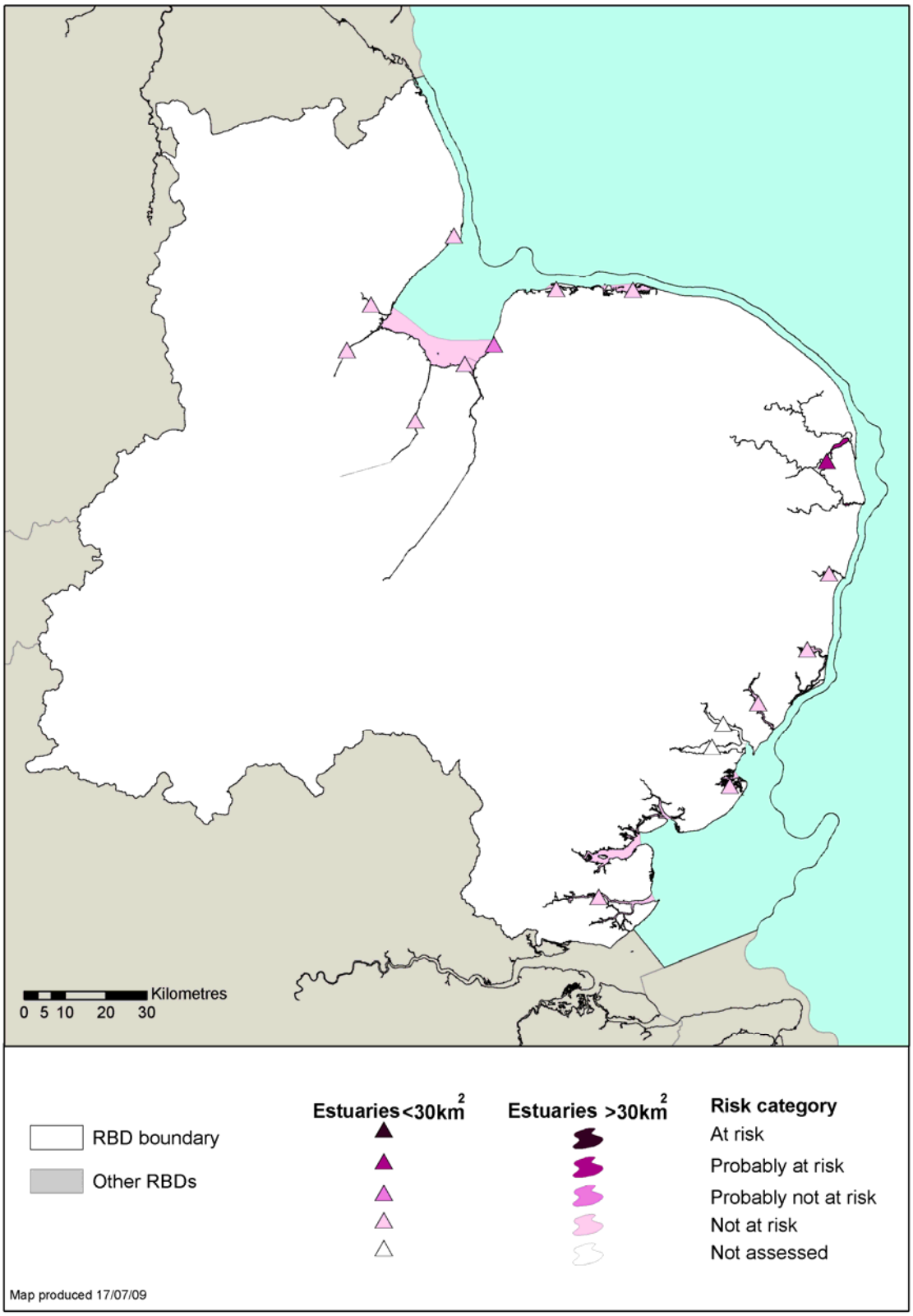


Figure G.11 **Abstraction and other artificial flow pressures - catchment abstraction (estuarine waters)**

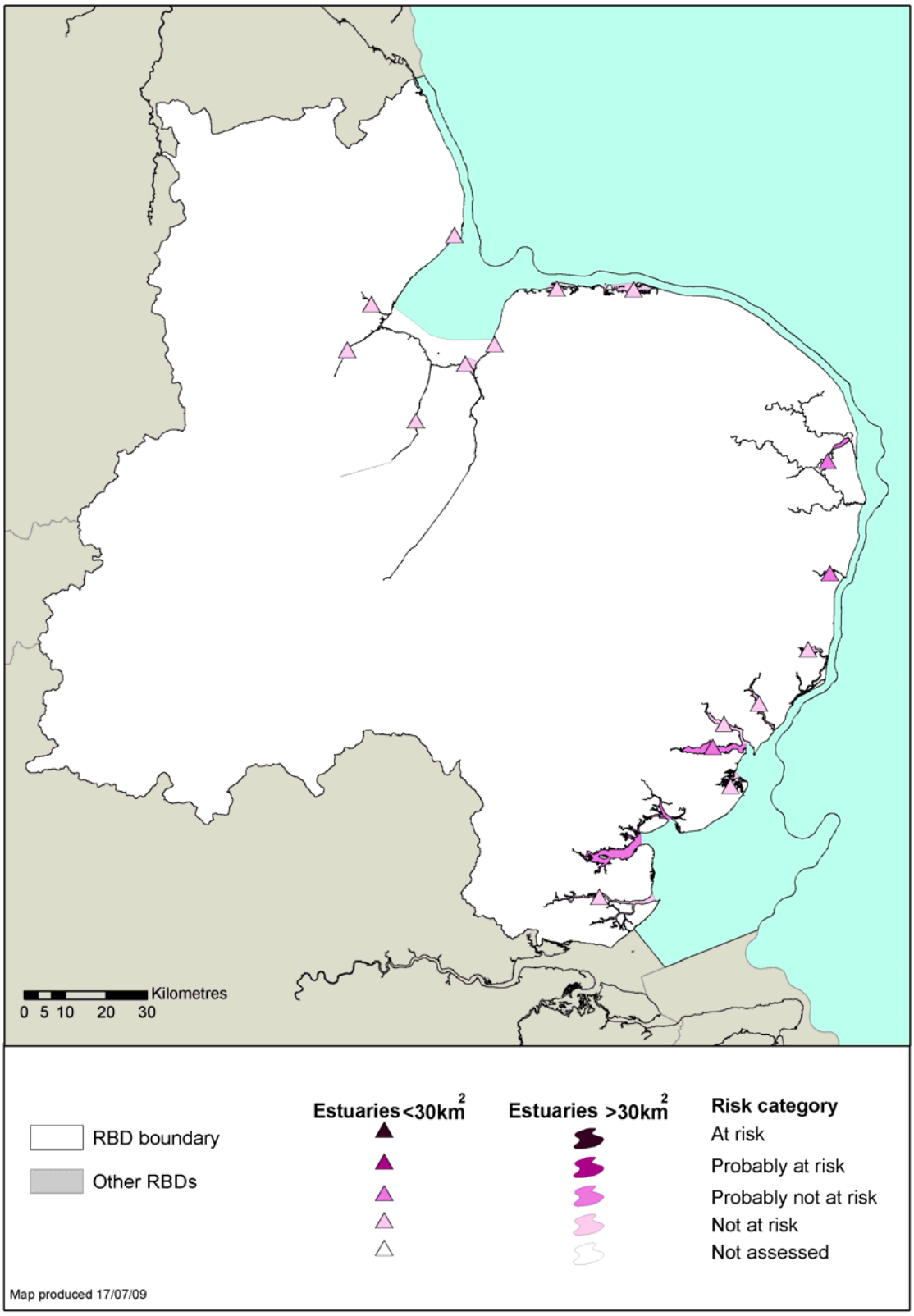
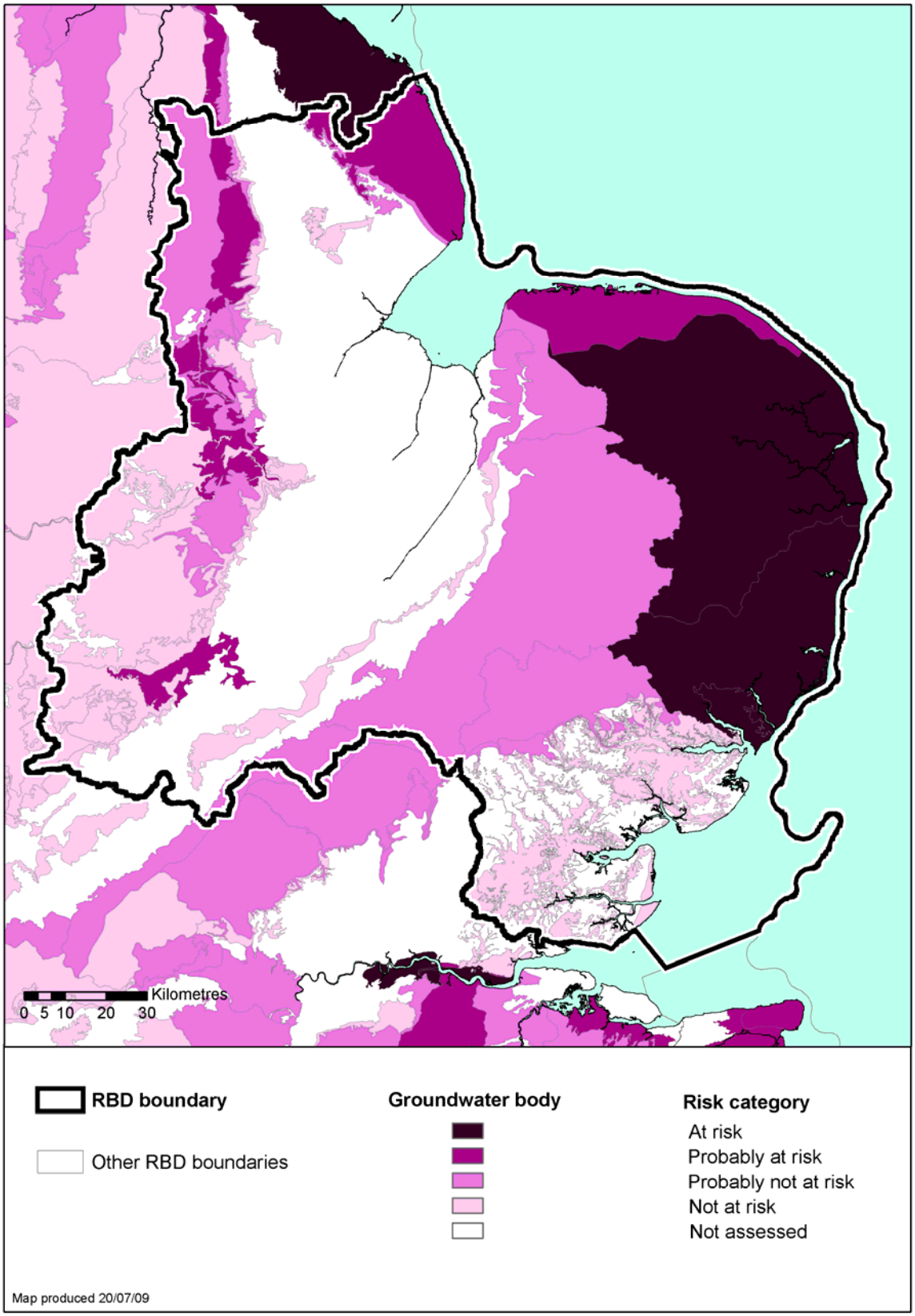


Figure G.12 **Abstraction and Flow Regulation - Saline intrusion (groundwater)**



ii) Invasive non-native species

Invasive non-native species are plants and animals that have deliberately or accidentally been introduced outside their natural range, and by spreading quickly threaten native wildlife and can cause economic damage.

Some species pose serious threats to our natural biodiversity and have economic impacts for example, for flood risk management, water transfer schemes, disposal of soil as waste and fisheries management. Their presence and unabated spread can represent an important pressure on the ecological status of many water bodies. Once established they are difficult or impossible to control. Examples include the plant Japanese knotweed, the mammal American mink, the fish topmouth gudgeon and the crustacean American signal crayfish.

A number of species introduced to the UK continue to cause local and regional problems. Within the Anglian River Basin District.

Specific problems in the Anglian River Basin District include:

- out-competing native populations of plants and animals e.g. Japanese knotweed and Himalayan balsam
- predation of native plants and animals e.g. mink on water voles
- carrying parasites and diseases which native species have little or no immunity to e.g. Signal crayfish carry crayfish plague
- blocking wildlife corridors, preventing the movement of native species e.g. Floating pennywort.

A River Basin workshop was held in April 2008 to ascertain the priority non-native species. The following were considered to be the most problematic:

- Floating pennywort
- Signal crayfish
- Topmouth gudgeon
- Mink
- Japanese knotweed
- Zebra mussel
- Giant hogweed
- Himalayan balsam

Water bodies that have a significant presence of invasive non-native species will not meet 'high ecological statuses under the Water Framework Directive. Their presence, however, will not always prevent achievement of good ecological status.

Our risk assessments show that of 757 river water bodies in the Anglian River Basin District, 248 (33%) are probably at risk of failing WFD objectives in 2015 due to direct effects of invasive non-native) species on the achievement of good ecological status (Figure G.13). Out of 46 lake water bodies eight (17%) are probably at risk (Figure G.14). Four out of 11 coastal water bodies (36%) and eight out of 18 estuaries (44%) are also probably at risk (Figure G.15).

Figure G.13 **Invasive non-native species (rivers)**

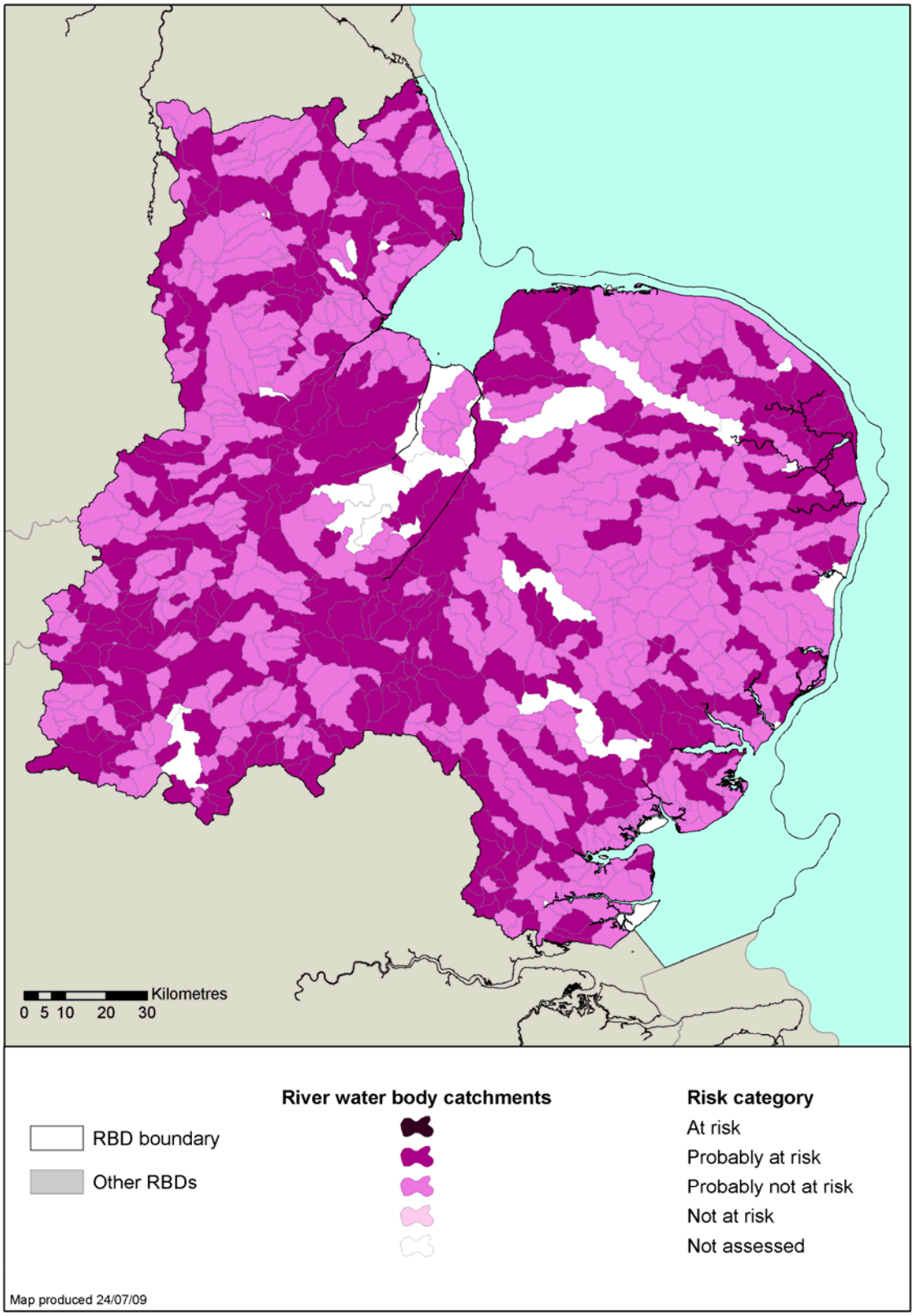


Figure G.14 **Invasive non-native species (lakes)**

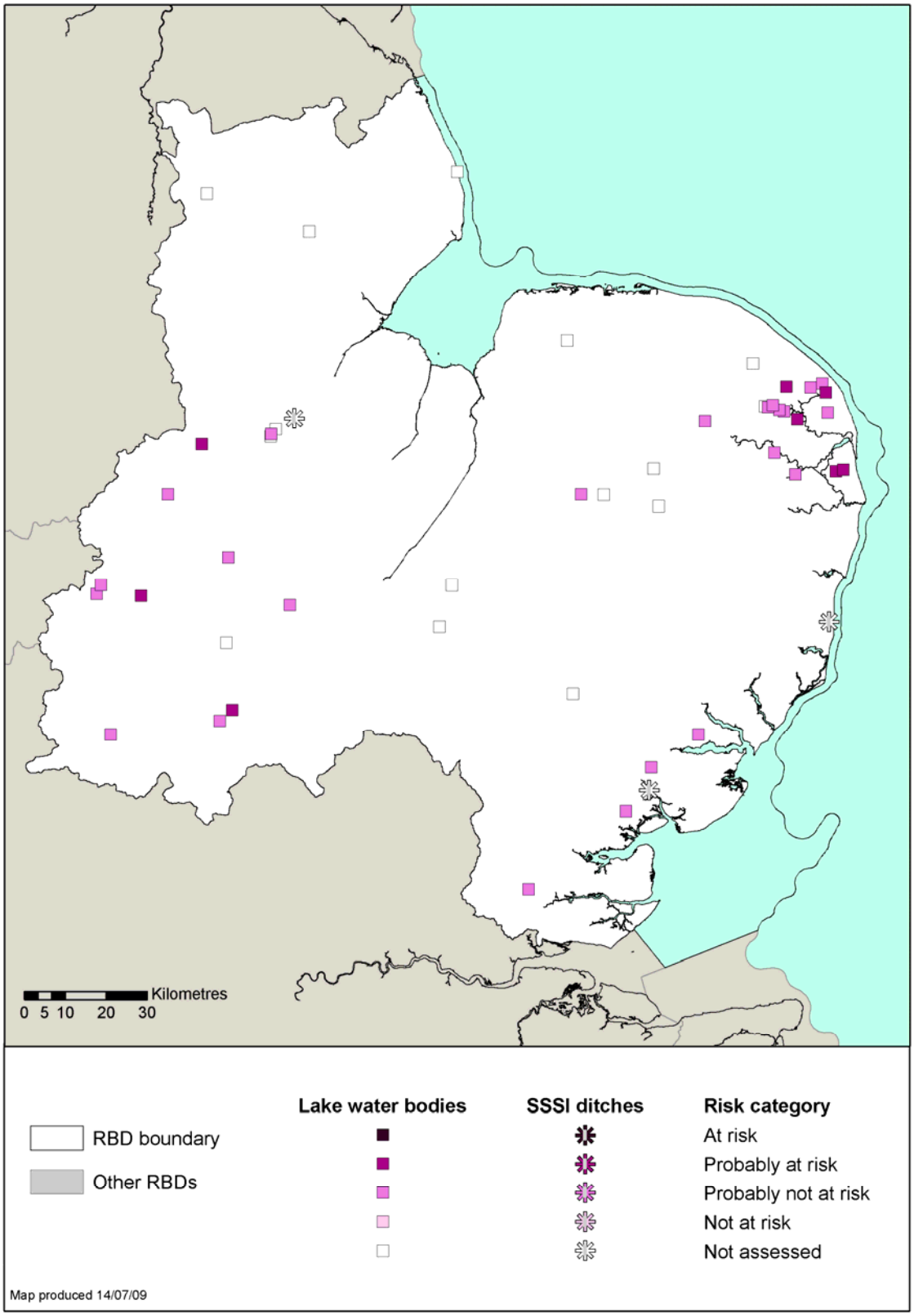
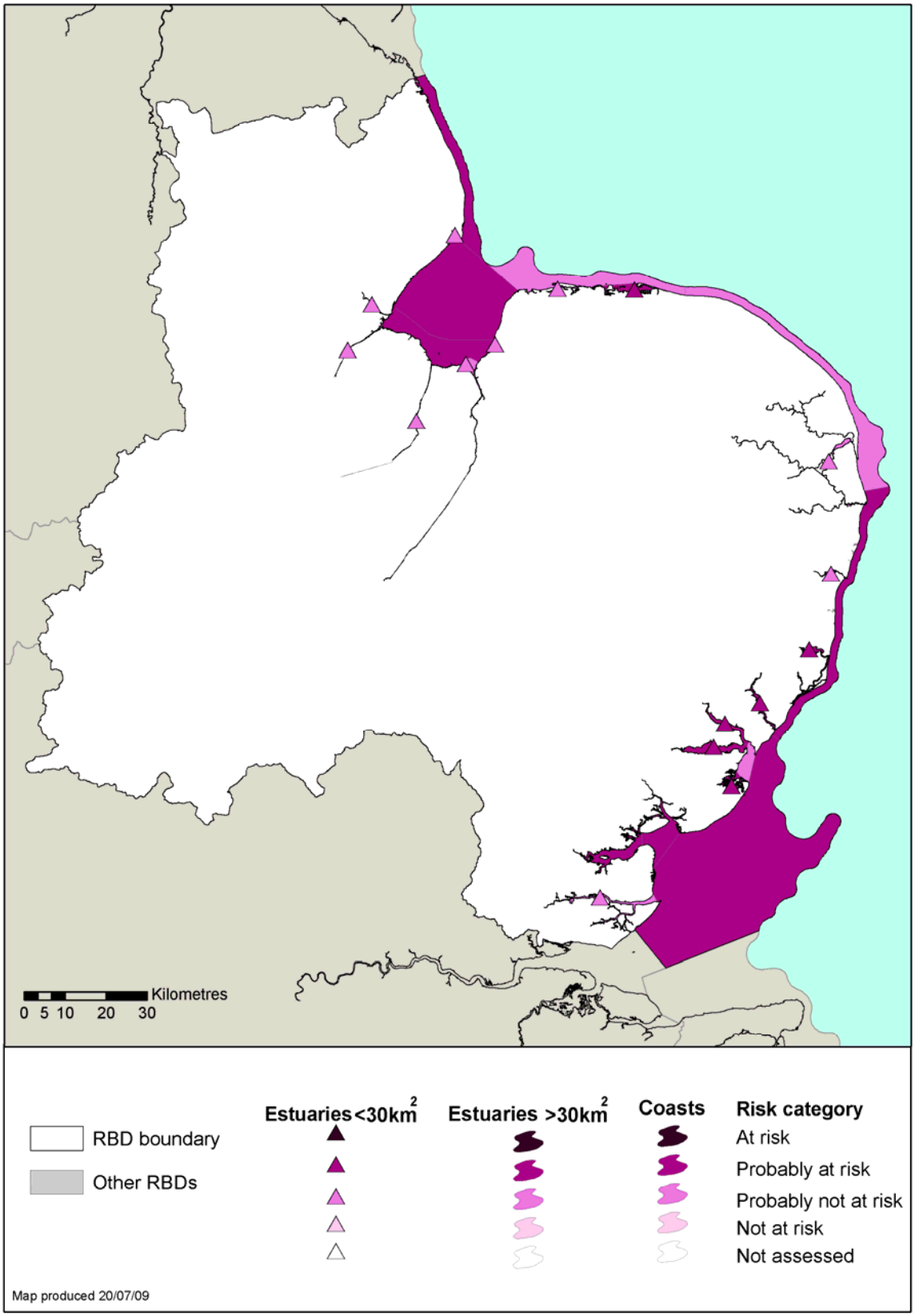


Figure G.15 **Invasive non-native species (estuaries and coastal waters)**



Additional evidence

The National Strategic Assessment flagged invasive non-native species as being a potentially significant issue requiring further research and more investigation. A robust evidence base could then be developed to support the assessment of objective impacts or targeting further measures at specific sectors. A risk-based approach is being adopted for the control of invasive non-native species. The Environment Agency is an active partner in the "Invasive non-native species framework strategy for Great Britain" (2008) which takes a risk-based approach to make the best use of available resources. The delivery of this strategy will rely on the work of local partnerships.

iii) Nitrate in surface water and groundwater

Nitrate pollution can impact on both surface water and groundwater and comes principally from agriculture (61%) and sewage treatment works discharges (32%) (figures for England and Wales, Defra 2004). In urban areas the main inputs are from contaminated land, leaking sewers and water mains. The magnitude and balance of diffuse and point sources vary across river basin districts, as will the extent of inputs to surface and groundwater.

High nitrate concentrations are thought to be the main cause of eutrophication in estuarine and coastal waters and may also contribute to eutrophication in certain types of freshwaters. Eutrophication is described as the enrichment of waters by nutrients, causing excess plant and algal growth and leading to undesirable effects on the ecology, quality and/or uses of the water. High nitrate concentrations can impact on terrestrial ecosystems, such as wetlands, for example through excessive nettle growth. High nitrate concentrations in drinking water are a threat to human health and are controlled by meeting the standards in the Drinking Water Directive (50 mg/l nitrate for water at the point of supply).

Defra has identified nitrate standards to support Good Ecological Status in saline waters. They will be applied such that targeted measures will be taken where eutrophication is occurring. There are no equivalent ecological standards for nitrate in relation to the ecological status of surface freshwaters - the 50 mg/l drinking water standard continues to drive action.

The most recent assessment conducted by the Environment Agency indicates that 6% of estuarine water bodies and 36% of coastal water bodies in the Anglian district are potentially at risk from diffuse source pollution, nutrient nitrogen (see Figure G.18).

The Environment Agency's risk assessments for the Water Framework Directive indicate that 61% of total river length or 47% of the total number of river water bodies are at risk of failing the 50mg/l threshold for nitrate in the Anglian River Basin District (see Figure G.17).

Nitrate levels in groundwater are of particular significance as around 40% of the drinking water within the river basin district comes from this source[1], and there are controls on the amount of nitrate that is acceptable in drinking water. All groundwater bodies have been designated as Drinking Water Protected Areas.

Few groundwater sources for public supply received more than simple purification treatment 30 years ago. Rising nitrates in drinking water taken from groundwater have previously been dealt with by blending water from different sources to achieve the drinking water standard. With the widespread rise in nitrate concentrations, low nitrate waters for blending are becoming very limited and water supply companies are now installing treatment plants. If the current trend in increasing treatment continues, then 83% of sources in England and Wales will need treatment for nitrates by 2029.

[1] Environment Agency 2007, River Basin Planning, Summary of Significant Water Management Issues, Anglian River Basin District, Consultation Document 2007.

The latest assessment shows that ten groundwater bodies within Anglian River Basin District are at risk of failing their environmental objectives as a result of nitrate (see Figure G.19). Two of the five tests used to assess groundwater chemical status directly consider nitrate impact – the General Chemical Test and the Drinking Water Protected Area test. Nitrate impact is also considered when carrying out the Groundwater Dependent Terrestrial Ecosystem test (wetlands). The current results of these tests are listed below:

Figure G.16 **Groundwater bodies failing the nitrate test in Anglian River Basin District**

Test	Number (and percentage) of groundwater bodies failing the test for nitrate in the Anglian River Basin District
General Chemical test	6 (19.4%)
Drinking Water Protected Area test	4 (12.9%)
Groundwater Dependent Terrestrial Ecosystem test	0 (12%)

Six groundwater bodies in the Anglian River Basin District (19.4%) had a significant and sustained increase in nitrate concentration in groundwater. This test is not part of status. There is a specific and separate objective to reverse environmentally significant upward trends in groundwater.

Figure G.17 **Combined source pressures - Total oxidised nitrogen (rivers)**

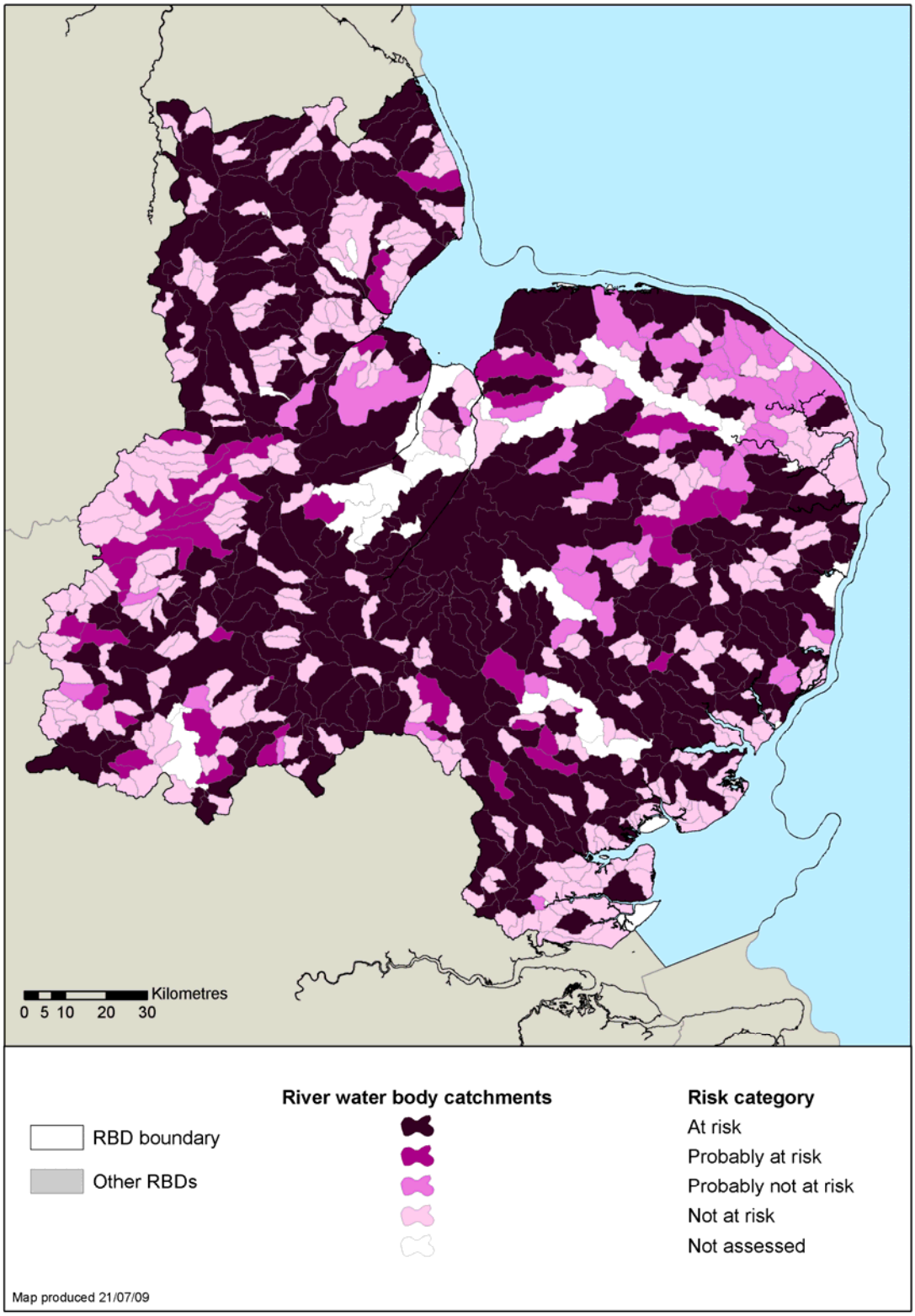


Figure G.18 **Diffuse source pressures - Nutrient nitrogen (estuaries and coastal waters)**

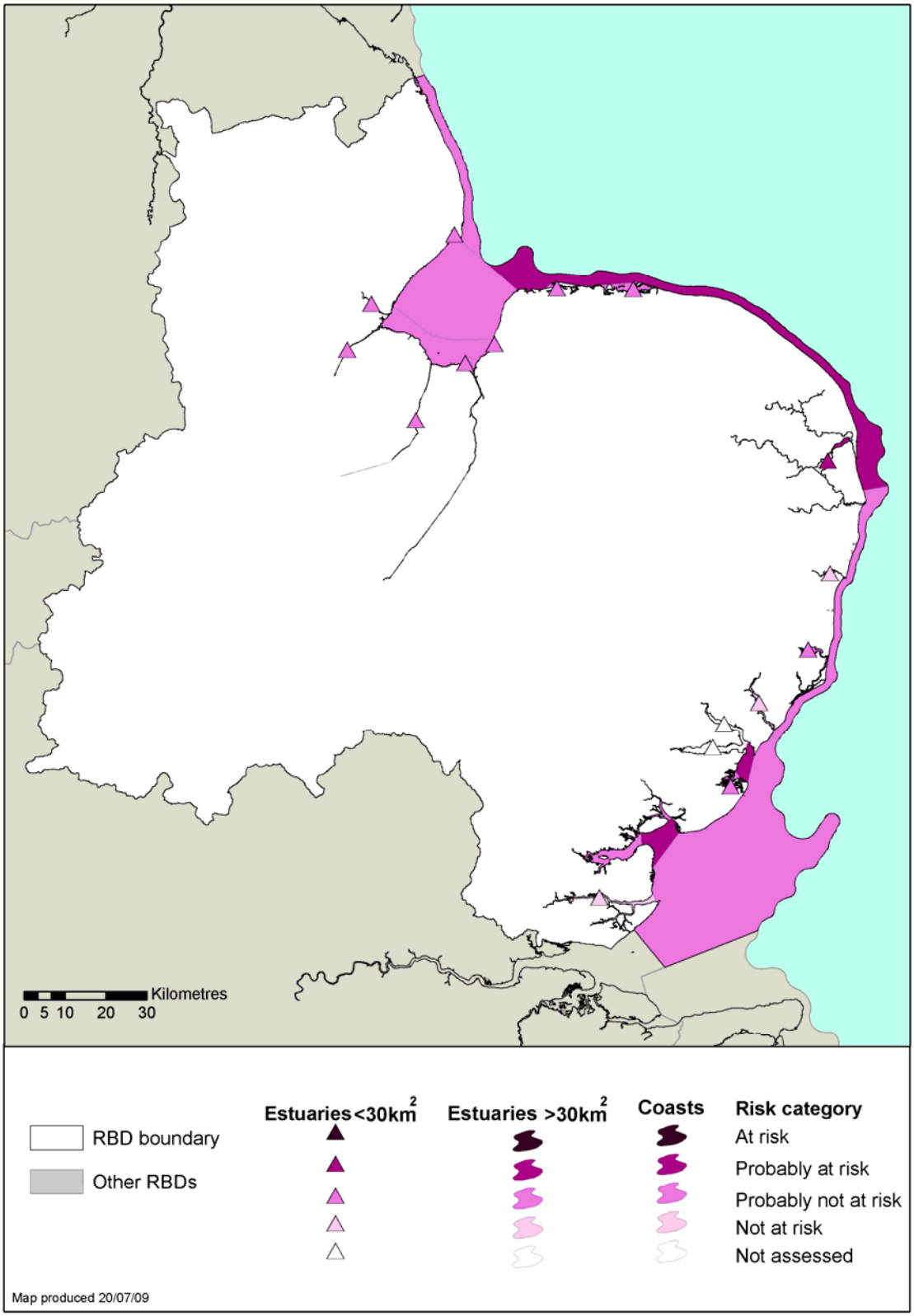
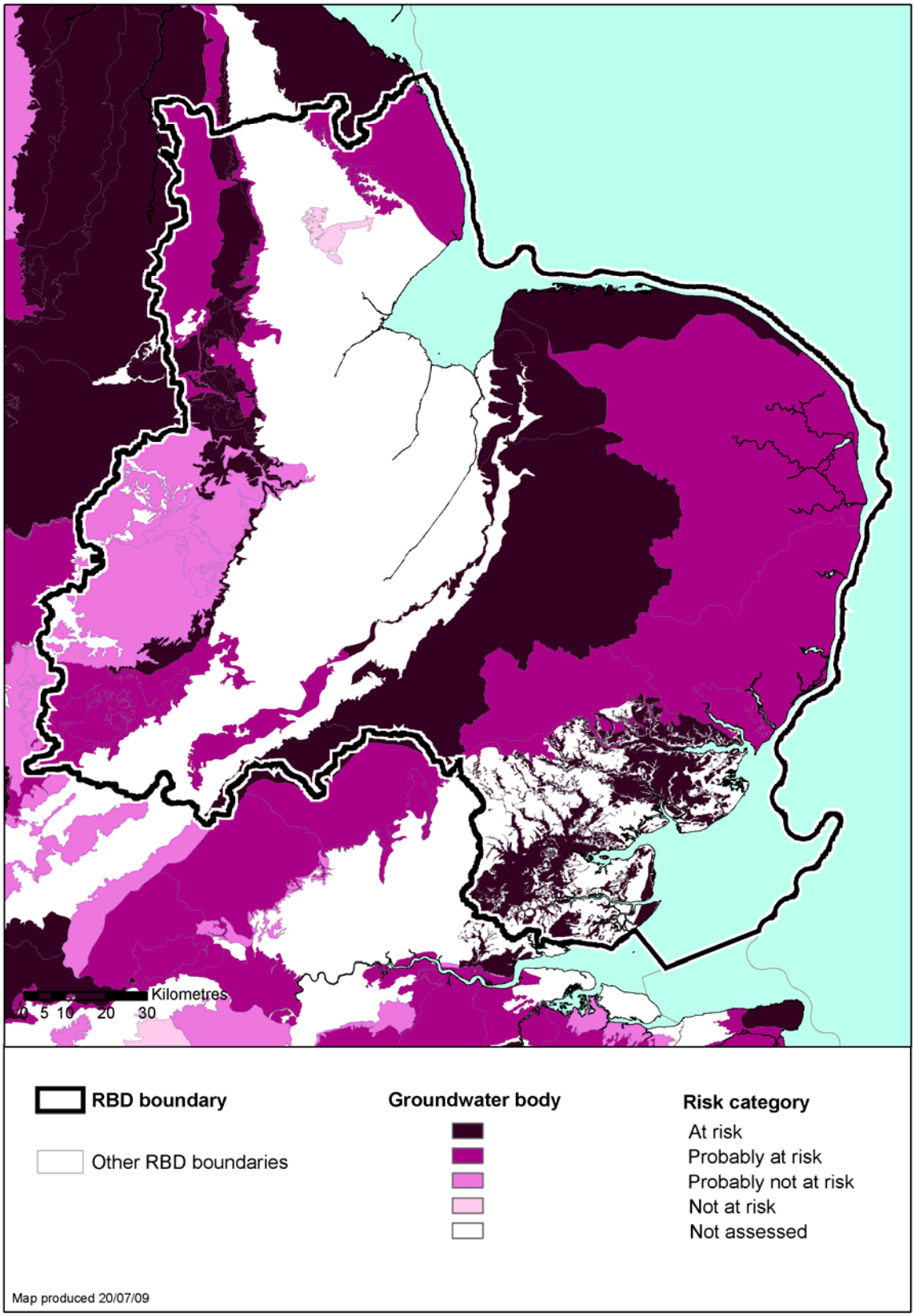


Figure G.19 **Diffuse source pressures - nitrates (groundwater)**



iv) Phosphorus in rivers and standing waters

High phosphorus concentrations are the main cause of eutrophication in fresh waters. Eutrophication is the enrichment of waters by nutrients causing excess plant/algal growth and leading to undesirable effects on the ecology, quality and uses of the water. Activities that can be affected include water abstraction, water sports, angling, wildlife conservation and livestock watering. In standing fresh waters, blue-green algal blooms can occur; many such blooms are toxic and pose a hazard to humans involved in water sports and to animals that drink the water.

Defra has identified phosphate standards to support Good Ecological Status in fresh waters. They will be applied such that measures will be targeted to water bodies where there is evidence that nutrient levels are causing undesirable ecological impacts. Benefits should be seen from the planned introduction of phosphate reduction at sewage treatment works discharging to waters identified as Sensitive Areas under the Urban Waste Water Treatment Directive.

There are predicted reductions in livestock by 2015 with a general move from farming in the uplands to the lowland areas of England, which is expected to reduce the amount of phosphate entering waters. Other changes in agriculture predicted in the Business as Usual Projections of Agricultural Outputs[2] work will need to be reassessed in the light of unexpectedly large changes in commodity prices, which together with reductions in set aside, are likely to increase intensity of arable production. Reducing phosphorus pollution is one of the aims of the England Catchment Sensitive Farming Delivery Initiative, particularly where related to designated sites such as SAC and SSSI rivers.

Phosphorus has been considered to be of far less significance to groundwater (see Figure G.20). Research is currently being carried out on the impact of phosphorus on surface waters and habitats that are sensitive to groundwater seepage and spring flows.

The control measures within Nitrate Vulnerable Zones under the Nitrate Directive, although primarily designed to reduce nitrate pollution, are likely to bring indirect benefits, through improved nutrient management, in terms of reduced agricultural phosphorus pollution.

The SIMCAT models used for the latest combined phosphorus assessment estimate that 72% of the rivers in the Anglian River Basin District are at risk from phosphorus enrichment. See Figures G.21

It is estimated that over 72% of the total length of river water bodies are at risk or probably at risk from diffuse phosphorus from agricultural pollution (see Figure G.22).

A range of tools have been used to assess the risk to rivers from phosphorus to provide a broad a picture as possible of the sources and impact of the pressure. However, in order to capture the broad range of potential sources the methodologies employed to develop the two risk assessments differ. As a result the outputs for Diffuse phosphorus from agriculture risk assessment and the Combined phosphorus risk assessments aren't directly comparable, but when considered separately the individual assessments highlight the likely relative risk from each pressure. Please refer to the method statements for each assessment for further details.

[2] Environment Agency: *Business as Usual Projections of Agricultural Outputs*
Centre for Rural Economics Research, University of Cambridge, Environment Agency, July 2004.
http://www.environment-agency.gov.uk/economics

Figure G.20 **Diffuse source pressures - phosphate (groundwater)**

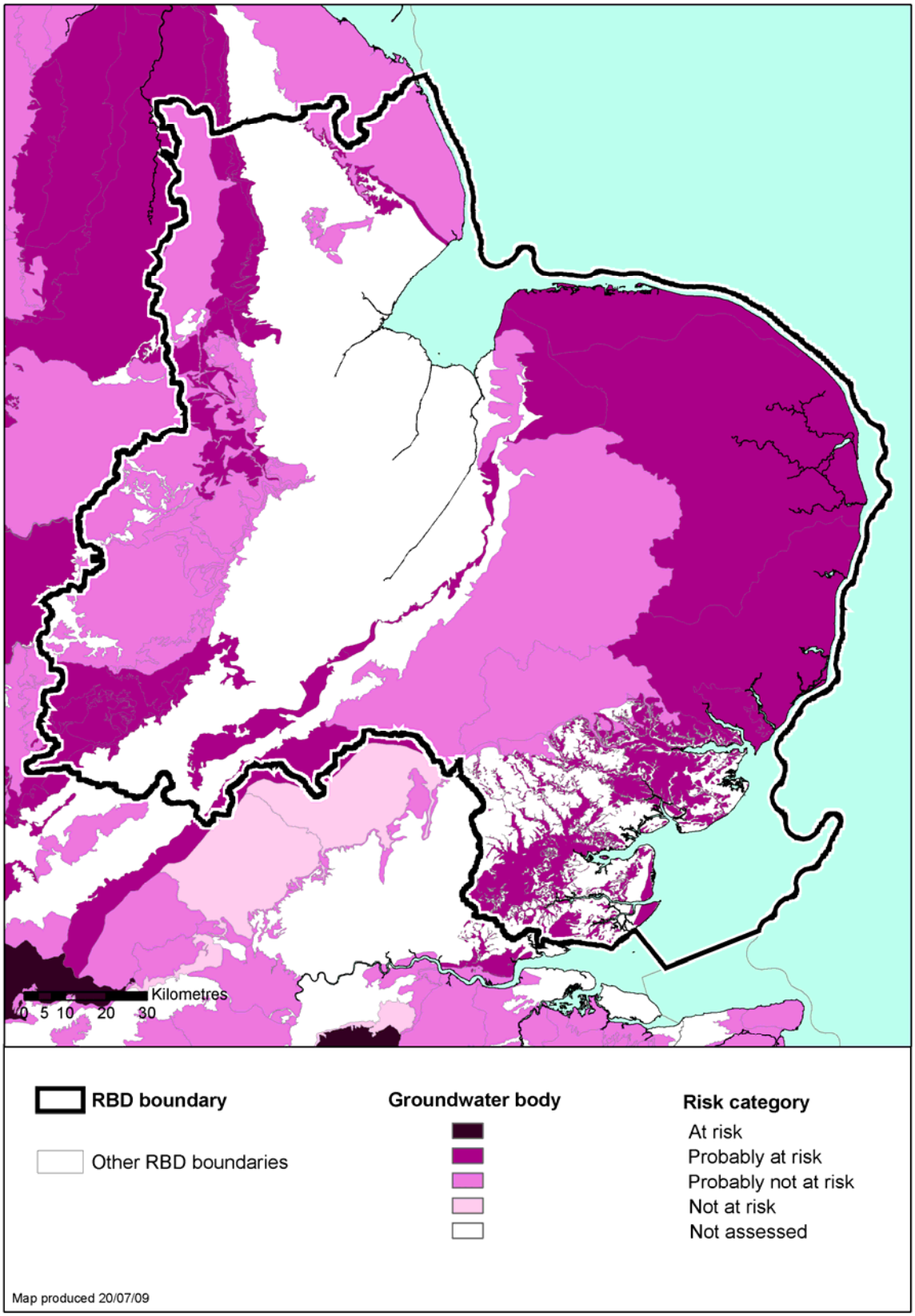


Figure G.21 **Combined source pressures - Phosphorus (rivers)**

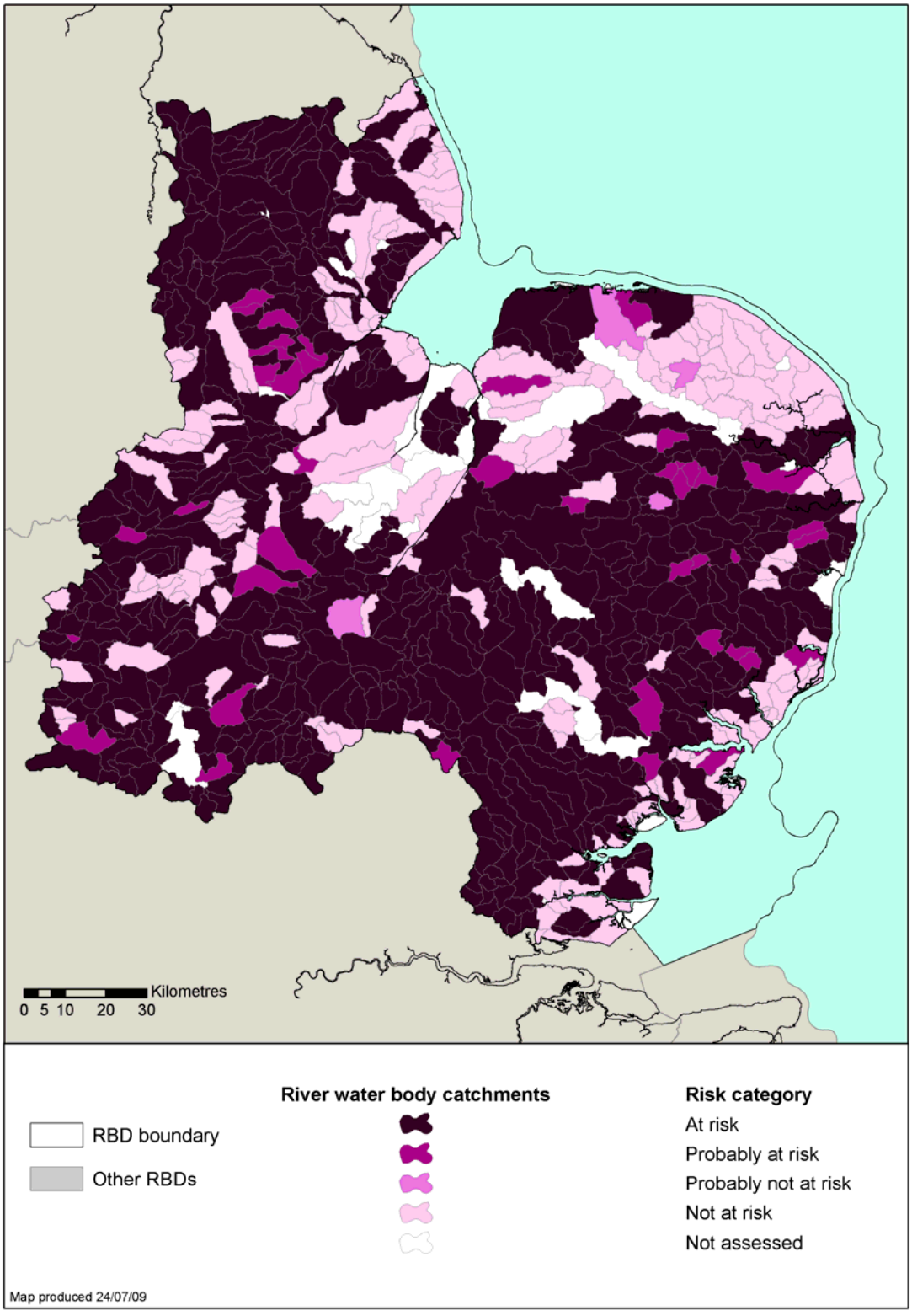
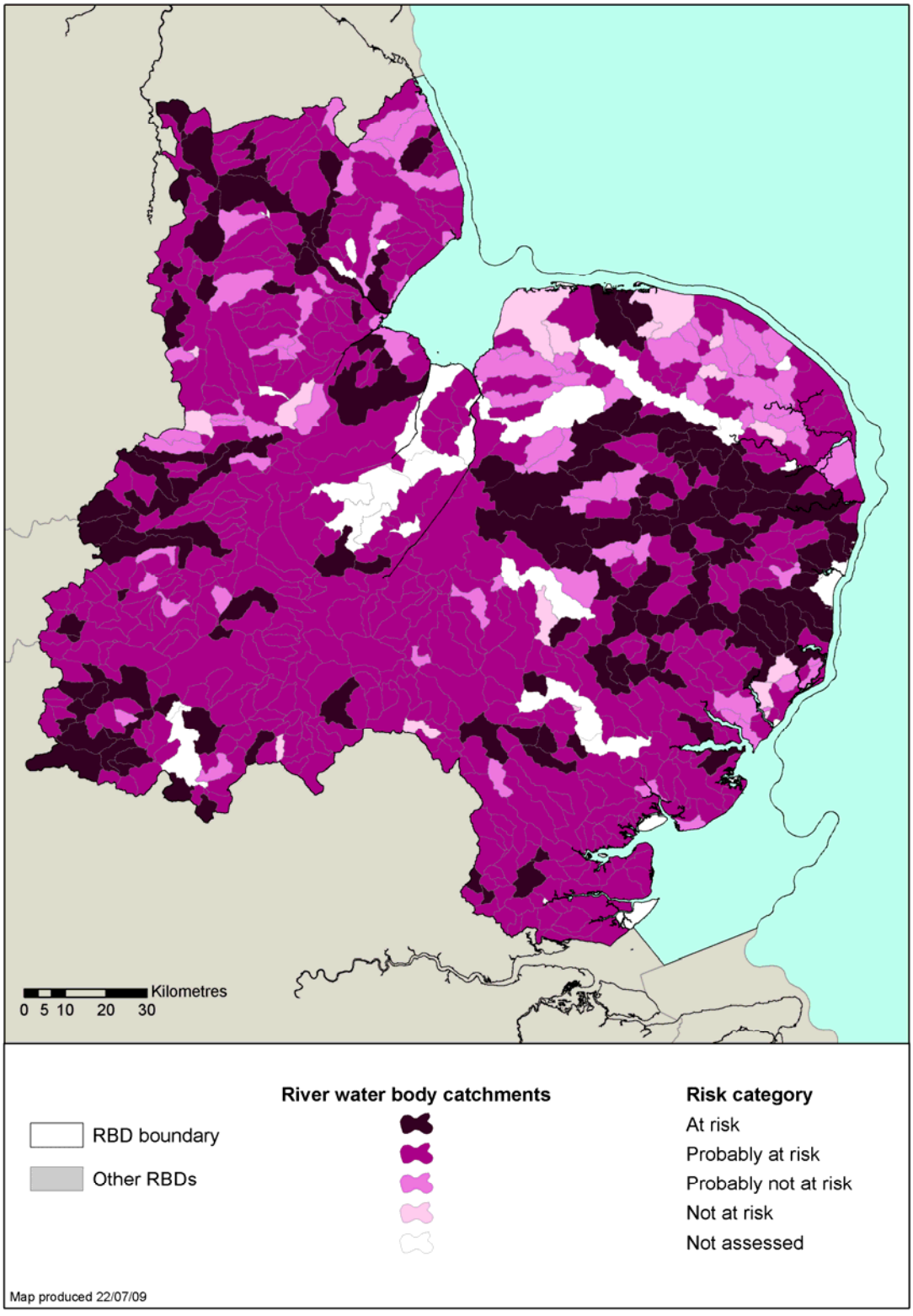


Figure G.22 **Diffuse source pressures - Phosphorus from agriculture (rivers)**



v) Physical modification (morphology)

The ecology of estuarine and coastal waters in the river basin district can be affected by a number of physical habitat pressures. These include land claim, shoreline reinforcement and dredging activities. The existence of weirs or tidal sluices can limit the migration of fish such as salmon, restrict sediment movement, promote siltation, and prevent natural mixing between fresh and saline waters with consequent impacts on transitional ecological communities. Coastal defences may inhibit the inland migration and maintenance of inter-tidal habitats squeezed by sea level rise as a result of climate change.

Many lowland rivers in England and Wales have also been subject to physical alteration[3]. These modifications include channel straightening, bunding, bank re-profiling and dredging for flood prevention, drainage or navigation purposes, as well as the creation of new channels for mill leats or irrigation. Weirs, sluices and other impoundments in the river network may restrict the migration of migratory and freshwater fish such as eels, salmon and trout, impede sediment movement, promote siltation, and disrupt the interconnections between accessible habitats, particularly during periods of low flow. Such pressures may result in ecological habitat damage or loss.

Many lakes and reservoirs have been subject to significant physical alteration, and the artificial manipulation of water storage and levels behind them. Some are wholly artificial, being constructed in a site where no water body existed before.

Further evidence is needed on how hydromorphological pressures influence ecology. There is extensive research being undertaken to look at this issue and also how different mitigation measures can improve the ecology of physical modifications[4].

Figure G.23: **Activities that include physical modifications to estuaries and coasts and rivers and lakes**

Significant Issue	Physical modification issues
Physical modifications	• Control structures • Dredging • Land claim • Aggregate extraction • Flood risk management • Impoundments

Our latest tests showed that for morphological pressure:

- 18 (100%) of all estuarine water bodies in the Anglian River Basin District are at risk or are probably at risk of failing Water Framework Directive objectives in 2015. Specific pressures include land reclamation, shoreline reinforcement, dredging and aggregate extraction.
- Eight (72%) coastal water bodies are also at risk or probably at risk from similar pressures. Figure G.24 shows all estuarine and coastal water bodies which have had physical or morphological alteration.
- 6,013 km (81% of total length) of rivers are at risk or probably at risk of failing Water Framework Directive objectives in 2015 due to morphological pressure; (see Figure G.25)
- 32 (65%) of lake water bodies are probably at risk from morphological pressures (see Figure G.26)

[3] Environment Agency 2007, River Basin Planning, Summary of Significant Water Management Issues, Supporting document, Anglian River Basin District, Consultation Document 2007.

[4] Environment Agency 2007, Management strategies and mitigation of measures for Heavily Modified Water Bodies & Artificial Water Bodies in relation to ecological potential , Summary of Projects: March 2007, Internal document.

Figure G.24 **Physical or morphological alteration (estuaries and coastal waters)**

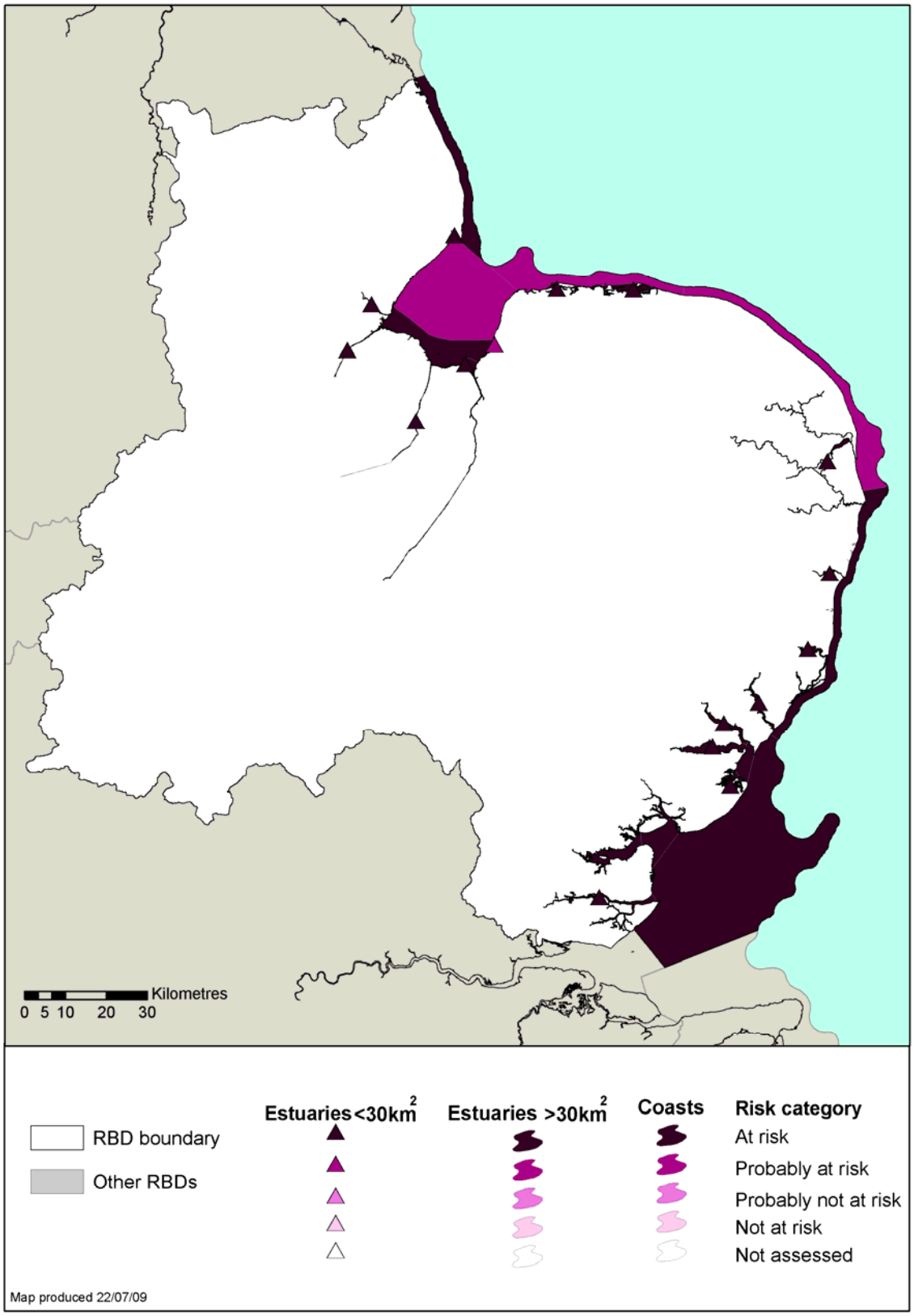


Figure G.25 **Physical or morphological alteration (rivers)**

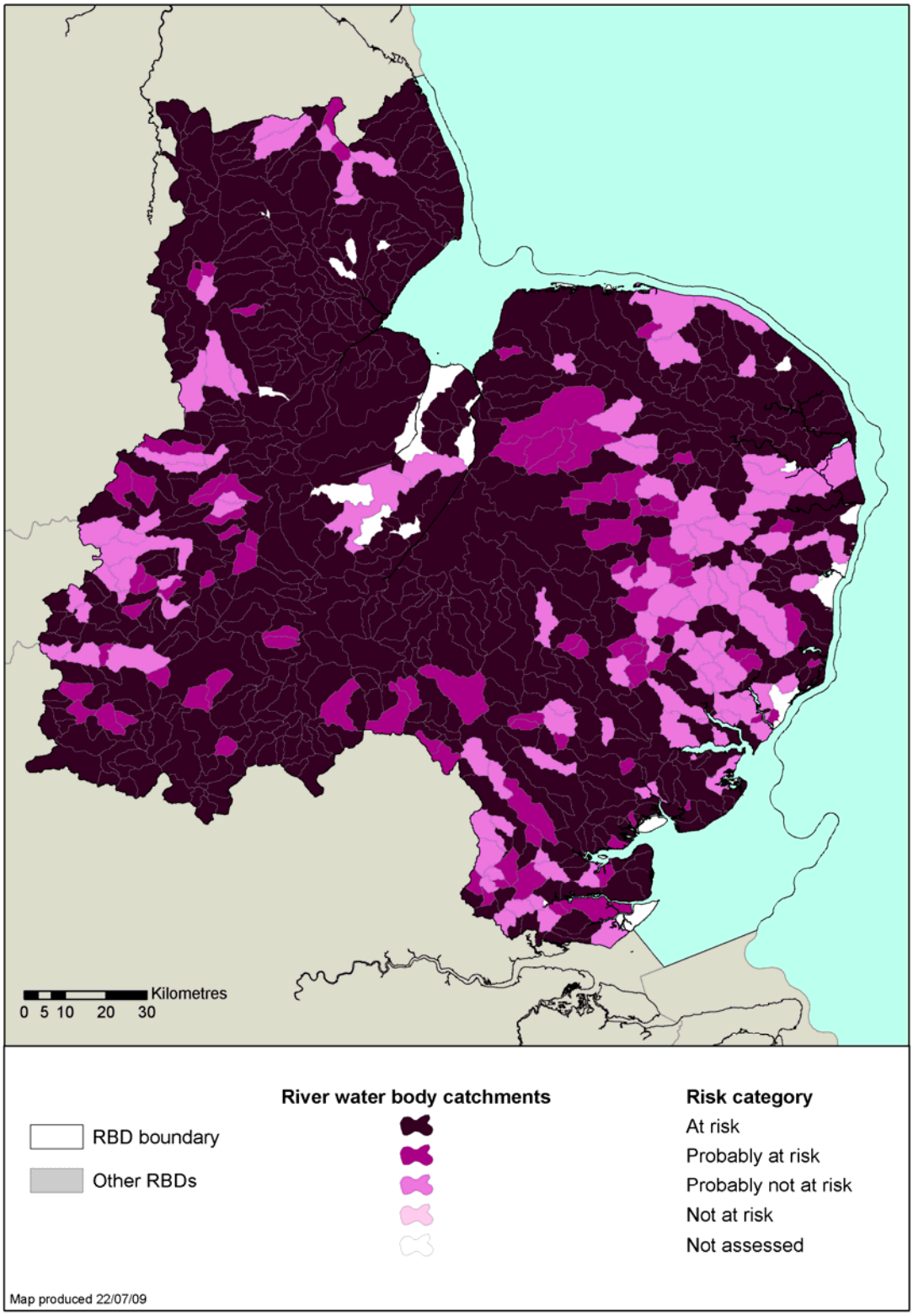
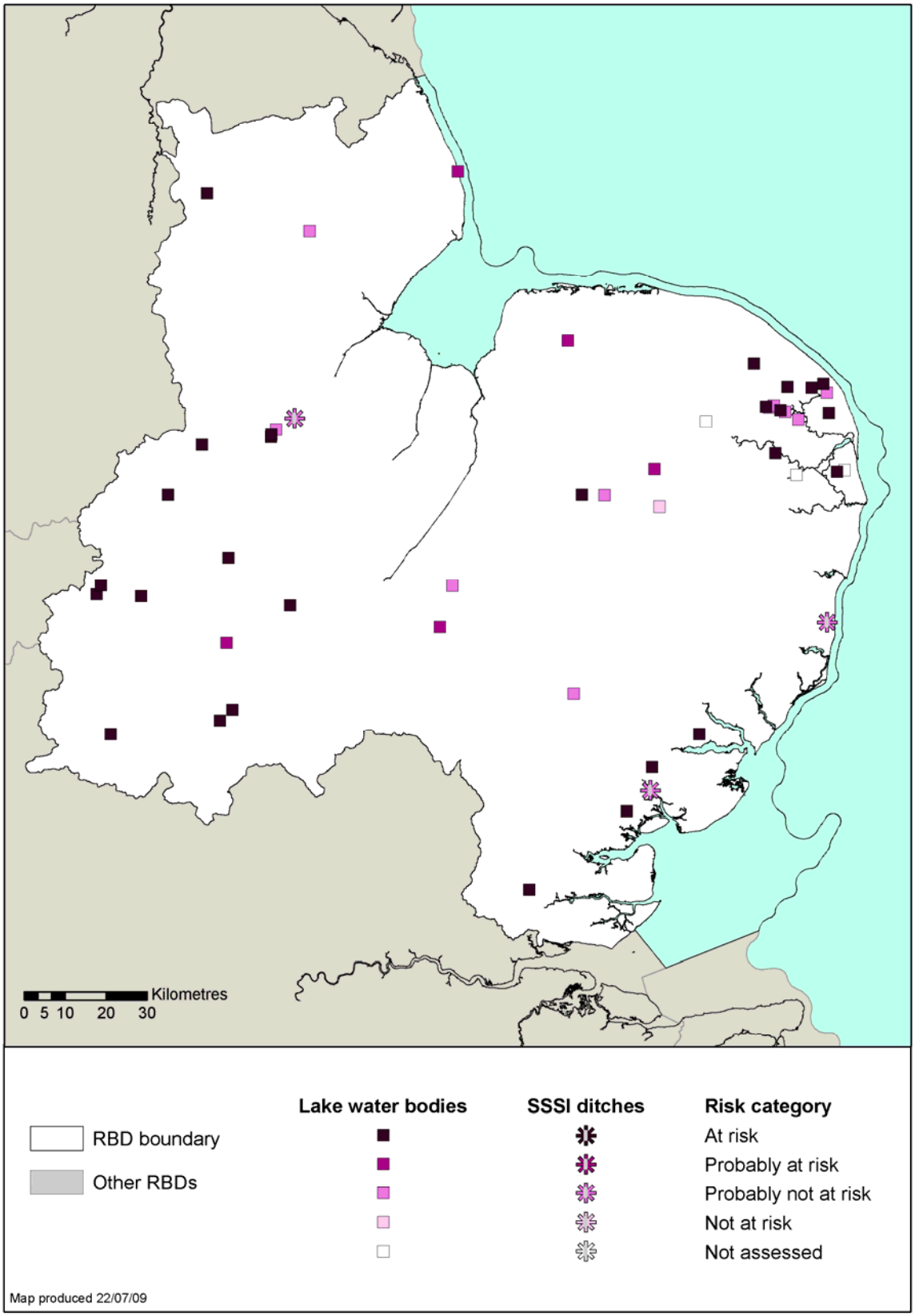


Figure G.26 **Physical or morphological alteration (lakes)**



vii) Sediment

The term 'sediment' refers to anything that is not dissolved or in solution and which filtration or settlement can remove. The term includes solids that are floating on top of, or suspended within, the water.

Much of the sediment we are concerned with is caused by the erosion of soil. Whilst there is a natural level of erosion, it is the increased rates of erosion – caused by land based activities such as forestry, construction and, particularly, agricultural cultivation and grazing practices - that need to be addressed. It is worth noting that phosphorus is often associated with sediment as it is bound to soil (unlike nitrates, which are more soluble). Metals and many toxic organic compounds can accumulate in sediments. However, in some cases (for example, estuaries) sediment is an essential component of the ecosystem to maintain mudflats and salt marsh habitats.

High concentrations of suspended solids can:

- Bury fish eggs in the stream bed or coat their surface if they are on vegetation, causing suffocation.
- Cause physical damage to fish gills which can result in death, a reduction in growth or cause a reduction in resistance to disease.
- Reduce the populations of river bed animals which are the food of fish.
- Suppress photosynthesis due to a reduction in light penetration and by coating.

Demonstrating evidence of ecological impact as a result of human influenced sediment load is, however, difficult.

The direct effects of sediment include: impairment of spawning gravels for fish; siltation of reservoirs and navigable waterways; obstruction of drains and river channels, and increasing flood risk. Sediment also increases turbidity, which reduces light penetration and oxygenation of water. This results in reduced productivity, direct damage to fish gills from suspended sediment and reduced organism survival, especially for fish.

Conversely insufficient sediment in rivers, estuaries, and coastal waters causes erosion of important or protected habitats such as wetlands, mudflats, salt marshes, and beaches. Erosion of riverbanks can occur, along with bank collapse and river profile degradation. There may be downstream erosion of the river bed, damaging infrastructure and resulting in morphological changes which can alter the ecology.

The indirect effects of sediment include those resulting from current and historic point and diffuse sources of pollution. Many pollutants (metals, nutrients and organic compounds such as poly aromatic hydrocarbons) can be held on and released from sediments. This can result in reduced growth and breeding success of the river bed animals (such as invertebrates) which form the basis of the aquatic food chain.

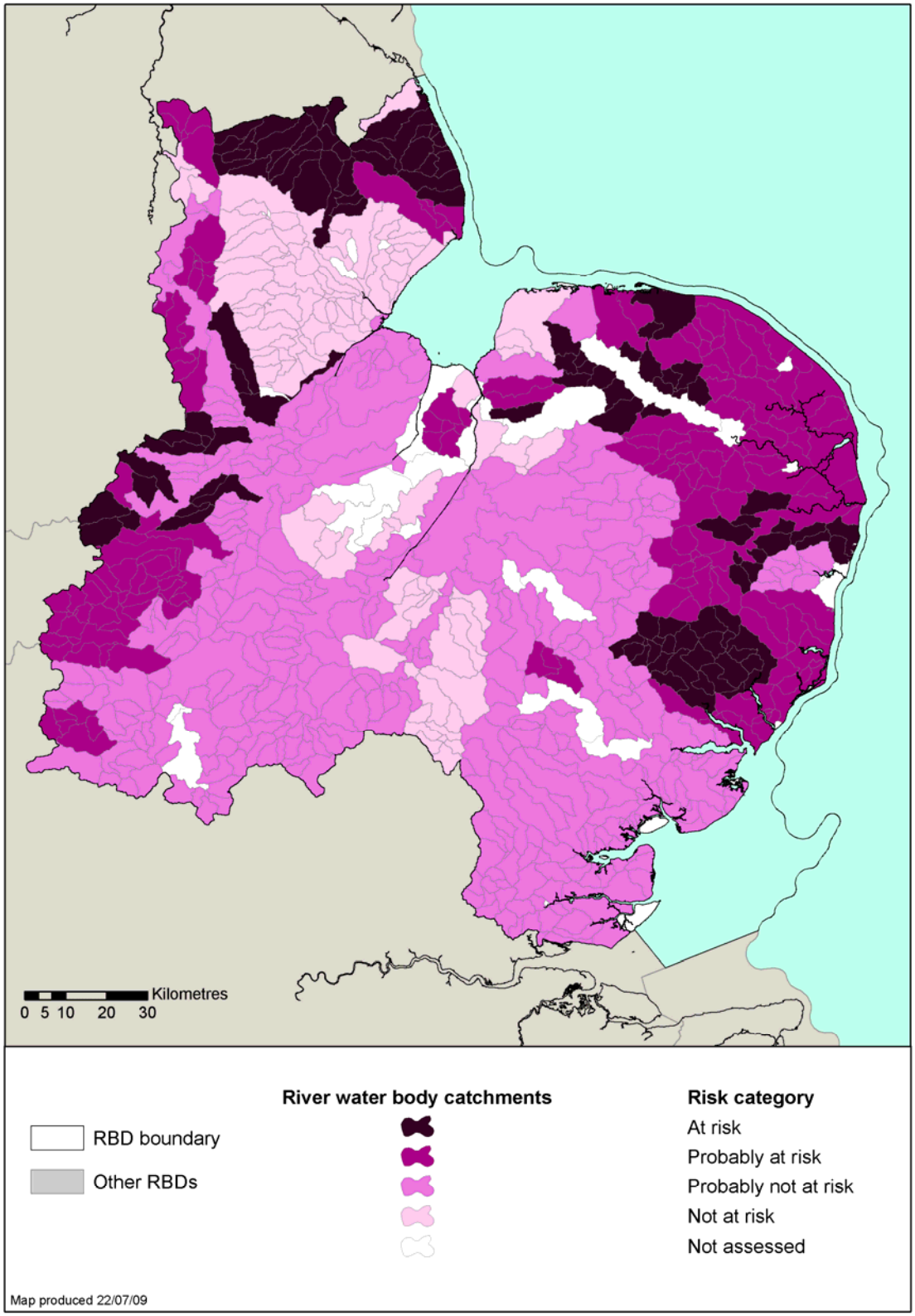
Indirect effects may be temporary in nature as contaminated sediments (for example, those contaminated with metals, nutrients, and organic compounds such as polycyclic aromatic hydrocarbons, polychlorinated biphenyl, and persistent organic pollutants such as pesticides) are re-suspended at times of high flows. This may happen more often in a changing climate. This can impact on the wider environment, for example when contaminated sediment settles on floodplains following flooding.

The latest characterisation maps show that 2,472 km of river water bodies (33 % of total length) are at risk or probably at risk from the direct effects of sediment (see Figure G.27). In addition, trout spawning beds in 57% of reaches surveyed across England have levels of fine sediment at which half the eggs and larvae would be expected to die. More than 40% of freshwater wetland Sites of Special Scientific Interest (SSSI) in England are in unfavourable condition, with sediment a contributory factor in most cases. The Salmon Stock

Conservation Review (2004) identified sedimentation as the first, or equal first, factor identified as cause of failure in 12 of the 22 Welsh Salmon Action Plan (SAP) river.

Note that the large water bodies that were split into smaller bodies at the end of 2008 have not yet had a new sediment risk assessment, and so have been reported as Not Assessed. However, the assessment made on the original smaller water body has been taken into account as part of a wider weight of evidence to appraise and determine appropriate measures. See Annex E for further information on the measures appraisal undertaken to manage sediment pressures.

Figure G.27 **Diffuse source pressures – Sediment (rivers)**



G.3 Other water management issues

Other water management issues were identified as affecting the water environment at a local level in the River Basin Planning : Summary of Significant Water Management Issues report for the Anglian River Basin District. These are described below.

- Acidification
- Commercial fisheries (estuaries and coastal waters)
- Endocrine disrupters
- Mines and minewaters
- Organic pollution (ammonia and biochemical oxygen demand)
- Faecal indicator organisms
- Metals
- Pesticides
- Chemicals including priority hazardous substances, priority substances & specific pollutants (excluding pesticides)
- Recreation (for example boating and angling)
- Urban and transport pollution

i) Acidification

Acidification is the process whereby nitrogen oxides, sulphur dioxide and ammonia released into the atmosphere are converted into acidic substances. Acidification can cause toxic metals to leach out of soils and enter surface or groundwater. Various land-use practices such as farming and forestry can lead to acidification of watercourses, causing loss of sensitive plants and animals. At present, there is no evidence of impact from acidification on the district's water bodies. Our latest view of river basin characterisation showed that of 757 river water bodies in the Anglian River Basin District, three (0.6%) are at risk or probably at risk of failing Water Framework Directive objectives in 2015 due to acidification.

ii) Commercial fisheries (estuaries and coastal waters)

Commercial fishing or shell-fishing can represent an important pressure on the ecological status of estuarine or coastal water bodies, including the condition of EC designated Shellfish Waters (Protected Areas incorporated within the Water Framework Directive). This may involve the direct capture and removal of fish or shellfish, or the wider habitat damage that can result from some types of fishing which drag the seabed or estuary substrate. Initial characterisation risk assessment (under Article 5 of the Water Framework Directive) focused on the potential for physical habitat damage associated with fishing activities but also noted the need for a more holistic consideration of the direct impacts of fish or shellfish removal. Commercial fishing or fish farming may also have a detrimental ecological impact in fresh waters - either through the large scale netting of migratory fish such as eels or salmon, or through the influence of fish stocking or farming on natural populations. Fish farming may also have associated abstraction or pollution pressures.

iii) Endocrine Disrupters

Hormones control essential processes in animals and plants, such as growth, metabolism, reproduction and the functioning of various organs. Some chemicals can disrupt the normal working of the hormonal system (or endocrine system), and these are referred to as 'endocrine disrupting substances'. These substances may mimic the action of natural hormones, block their action, interfere in feedback mechanisms or have other effects.

There is considerable evidence of impacts on fish development, growth and reproduction, demonstrated particularly where male fish have become feminised. The Defra EDCAT project is currently investigating effects on fish populations and this will be completed in 2010. The severity of the effects of endocrine disrupting substances depends on a range of variables which are not yet fully understood, but include exposure to these substances (possibly at particular stages in the life cycle and the duration of that exposure), the nature of the particular substance and the susceptibility of the biological receptor.

iv) Mines and Minewaters

Minewaters are usually acidic (low pH) and the main contaminants are metals, for example copper, iron, manganese and zinc. Minewater may also contain priority substances such as cadmium and lead. These contaminants are released when oxygen in the air or water reacts with minerals in the rock found near coal seams and mineral veins. The metals are then dissolved in the groundwater which discharges back into surface water bodies, or by rain in the case of spoil heaps. Such minewater related pollution may have significant ecological impacts.

There are no waterbodies at risk from mines and minewaters in the Anglian River Basin District.

Please note that there is some overlap between the pressure category “Mines and minewaters” and some metals that are covered in section G.3.vi. Also note that metals in minewater discharges have been designated as priority substances, priority hazardous substances and specific pollutants. The objectives for these types are described in Annex E.

v) Organic pollution (ammonia and biochemical oxygen demand)

For the purposes of our assessments, organic pollution is comprised of ammonia and biochemical oxygen demand. The toxicity of ammonia to fish and other aquatic life is dependent on the pH and temperature of the water. Increasing pH increases the proportion of toxic 'free' ammonia. Biochemical oxygen demand is not an individual pollutant, but a measure of the amount of biodegradable organic matter present. A high concentration of biochemical oxygen demand exerts a high oxygen demand on water, leading to oxygen depletion with potentially severe impacts on the whole ecosystem.

Much of the pressure from organic pollution is the result of discharges of treated sewage effluent. Tightening of discharge standards and cessation of discharges of raw sewage to coastal waters over the past 15 years has resulted in marked improvements in water quality. National classification schemes based on organic pollutants have reflected this as shown in figures for General Quality Assessment compliance from 1990 to 2007.

Our latest risk assessments show that:

- 1,048 km (14% of total length) of river water bodies within the Anglian River Basin District are at risk or probably at risk of failing the ammonia standards;
- 812 km (11% of total length) of river water bodies within the Anglian River Basin District are at risk of failing the biochemical oxygen demand standards (BOD)[5];
- Three (17%) estuaries within the river basin district are at risk or probably at risk from point source organic enrichment.
- None of the coastal water bodies are risk from point source organic pollution.

[5] BOD is not used for classification

vi) Other Pollutants

Faecal indicator organisms

Micro-organisms occur in vast numbers in the natural aquatic environment. The greatest waterborne risk of infection to humans is through drinking water or shellfish contaminated by pathogenic (that is, infection causing) organisms, such as bacteria or viruses, from sewage or animal excrement. However, infection (such as gastroenteritis – inflammation of stomach and gut) can also occur through ingesting contaminated seawater or freshwater during bathing.

It is impractical to test water for every known pathogen in every sample, and it has therefore become standard practice to test water for 'faecal indicator organisms'. Whilst generally harmless in themselves, their presence in water are an indicator of sewage or animal contamination and the potential for pathogenic organisms to be present.

The European Bathing Waters Directive (1976) includes faecal indicator organisms such as faecal coliforms, total coliforms and faecal streptococci. The recently revised Bathing Waters Directive (2006), with objectives set in line with the Water Framework Directive for 2015, takes account of more recent public health research and uses the faecal coliform *Esherichia coli* and the faecal streptococci intestinal enterococci as its faecal indicator organisms.

The Environment Agency monitors faecal indicator organisms in those waters identified under the EU Bathing Waters and Shellfish Waters Directives and the Government uses the results to report the level of compliance with the Directives' faecal indicator organism standards each year. See Annex D for details of the relevant Protected Areas (areas designated as recreational waters and areas designated for the protection of economically significant aquatic species) and their compliance.

Metals

Metals are naturally occurring in the environment and many are needed in small amounts by organisms to function properly. However, they can be toxic to aquatic organisms such as freshwater fish, invertebrates and marine organisms in larger quantities. Metal pollutants are covered under a number of other pressure categories including urban and transport (section G.3.xi), mines and minewaters (section G.3.iv) and chemicals, including priority hazardous, priority and specific polluting substances (section G.3.ix).

The Environment Agency's latest risk assessment shows that 1,131 km (15% of the total length of river) within the Anglian River Basin District are at risk or probably at risk from point source pollution metals.

Pesticides

'Pesticide' is a general term that includes all chemical and biological products used to kill or control pests. Pests are living organisms such as rodents, insects, fungi and plants that harm our food, our health or our environment. Pesticides are used in domestic, amenity, forestry, horticultural and agricultural scenarios. Because of their toxic nature they can cause harm to 'non-target' organisms and if they are not stored, used and disposed of properly they pose a risk to terrestrial and aquatic wildlife. As well as ecological impacts, pesticides can also contaminate surface water and groundwater bodies used as drinking water sources, thus increasing the need for treatment.

Sheep dip is a veterinary medicine used to treat parasites on sheep (e.g. scab, blowfly, ticks and lice). The two active ingredients used in sheep dip products are diazinon and cypermethrin (although the use of products containing cypermethrin is currently suspended). Both these substances are highly toxic to invertebrates and very small levels in rivers can

cause severe ecological damage. Studies have shown that they can interfere with salmon reproduction by disrupting the ability of the male fish to respond to female hormones.[6,7]

Tributyltin is a biocide. European regulatory controls now prevent its use in products for the EU market. Historically its main use was to prevent fouling on shipping; however it was also used in wood preservation, paper and pulp and textiles. Whilst its use has now been restricted it is highly persistent in the environment. It is also known to be a contaminant in PVC.

Figure G.28: **Significant issues groups that include pesticides**

Significant Issue Group	Principle source of pesticides
Diffuse pollution from rural areas	Sheep dip application, application of pesticides to crops.
Diffuse pollution from urban areas and transport	Anti-foulants on boats, application of pesticides to hard surfaces for weed control.
Point source pollution	Discharges of treated effluents from pesticide manufacturing plants (via STWs), spillage incidents.

The latest assessments for pesticides for the Anglian River Basin District show that:

- 6,098 km (82%) of rivers are at risk or probably at risk from diffuse agricultural pesticides;
- 56 km (0.75%) of river is at risk or probably at risk from sheep dip

We have estimated that 10km (0.13%) of the total length of rivers in the Anglian River Basin District are at risk from point sources of pesticides

Risk characterisation work undertaken subsequent to the initial Significant Water Management Issues (SWMI) exercise (2007) has identified a number of drinking water protected areas within the Anglian river basin where diffuse inputs of pesticides from agriculture may put Article 7 compliance at risk. River monitoring conducted by Water Companies and via the England Catchment Sensitive Farming Delivery Initiative has also recently identified some specific pesticides issues in several Anglian drinking water catchments.

The Environment Agency report 'The Unseen Threat to Water Quality'[8] reports the widespread failure of the EQS for tributyl tin and its effects on dog whelk populations. The report also states that pesticides were detected in nearly one-fifth of groundwater monitored. It reported that in certain areas these concentrations were declining.

Chemicals including priority hazardous substances, priority substances & specific pollutants (excluding pesticides)

The Environmental Quality Standards Directive designates the most polluting substances as priority substances and priority hazardous substances. The list includes pesticides (see also Pesticides section) and other synthetic organic chemicals including chlorinated hydrocarbons, but also some naturally occurring substances such as metals. The severity of their effects depends on the availability to organisms, the nature of the particular substance and the susceptibility of the biological receptor.

[6] Moore, A. & Waring, C.P., 1995. Sub-lethal effects of the pesticide Diazinon on olfactory function in mature male Atlantic salmon (*Salmo salar* L.) parr. *Journal of Fish Biol*ogy **48,** 758-775.

[7] Moore, A. & Waring, C.P., 2001, The effects of a synthetic pyrethroid pesticide on some aspects of reproduction in Atlantic salmon. *Aquatic Toxicology* **52**, -12.

[8] Environment Agency 2007, The Unseen threat to water quality, Diffuse Pollution in England and Wales, May 2007.

Severe contamination can result in lethal effects to the extent that the habitat becomes characterised by tolerant or opportunistic species. In less severe circumstances, sub-lethal impacts may affect the physiology, growth and development and reproduction of organisms in the water column and sediment. Furthermore, a number of these substances bio-accumulate and many persist in sediments. The most polluting have been termed priority hazardous substances and the aim is to eliminate discharges of these substances to the aquatic environment wherever possible.

Information gathered to monitor environmental quality and compliance with other Directives shows that chemicals cause problems for the water environment in the Anglian River Basin District. The pressure from tributyltin is a concern at specific sites and is covered in discussions in relation to pesticides in. Note that the standards in the Dangerous Substances Directive will be replaced by the Environmental Quality Standards Directive (2008/105/EC).

No groundwater bodies are at risk from hazardous substances and chlorinated solvents.

Recreation (e.g. boating and fishing)

Recreational activities on or associated with water may have a direct impact on its quality or on the ecological assemblages within it. Boating activity, if intensive in shallow river or lake waters, may be associated with raised levels of suspended solids, bank erosion and fuel related pollution. Recreational angling may also lead to impacts on fish communities unless sensitively and sustainably managed.

Urban and Transport Pressures

Various pollution issues relate to the urban environment and transport networks. These include:

- Urban drainage containing a variety of pollutants, such as:
    - phosphorus from misconnections (e.g. washing machines incorrectly plumbed into the surface water sewer instead of the foul)
    - organic waste (dog fouling) from parks and pavements
    - fertilisers used in gardens
    - sediment from construction sites
    - a range of pollutants which are present in run-off from roads including contaminated sediment, metals, organic substances
- Air emissions from vehicles which are then deposited to water or land (and in some cases can cause acidification).
- Run-off from air strips that may contain de-icers and pesticides to control weeds.
- Dredging and maintenance of navigable waterways that can result in water quality issues from suspended solids and leaching of contaminants from the sediment.
- Leaching of pollutants from contaminated land.

Our latest information shows that 62 river water bodies are at risk, or probably at risk from urban diffuse pollution. See also the section on phosphorus (G.2.iv), sediment (G.2.vi), and organic pollution (Section G.3.v). for the latest detailed information.

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Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex H: Adapting to climate change

Contents

H.1 Introduction

The water environment is particularly vulnerable to the effects of climate change. We are already experiencing trends in climatic factors that are having impacts on the water environment.

The Intergovernmental Panel on Climate Change (IPCC) Climate Change and Water Technical Paper[1] concluded that 'observational records and climate projections provide abundant evidence that freshwater resources are vulnerable and have the potential to be strongly impacted by climate change, with wide-ranging consequences on human societies and ecosystems'.

Projections of future climate from the UK Climate Impacts Programme ('UK Climate Projections': UKCP09[2,3]) identify that we can all expect climate changes to intensify with the following key changes:

- All areas of the UK get warmer, and the warming is greater in summer than in winter;
- There is little change in the amount of precipitation (rain, hail, snow etc) that falls annually, but it is likely that more of it will fall in the winter, with drier summers, for much of the UK. There is likely to be an increased incidence of very intense heavy rainfall (see section H3);
- Sea levels rise, with this rise being greater in the south of the UK than the north.

Climate change will inevitably affect the conditions and pressures that the Water Framework Directive seeks to manage in the water environment. Climate change impacts may not be strongly felt during the first river basin management cycle up to 2015 and may not be easily distinguishable from normal climatic variations. However, decisions and investments made during this period may have a lifetime that extends for many decades. In particular new infrastructure or modifications to existing infrastructure will last more than one cycle. Over this extended period, towards the end of cycle two (to 2021) and through cycle three (to 2027), it is predicted that the UK's climate is likely to change significantly. Therefore, if we all fail to take account of climate change now, this could result in poor investment decisions in terms of actions and limit the extent to which we can meet Water Framework Directive objectives and/or the efficiency with which we will achieve them. Further, climate change could affect the predicted effectiveness of current or new actions in meeting Water Framework Directive objectives (unless we all take this into account). This presents real risks for implementation and success.

The European Commission has identified water management as the priority area for action in taking into account the impact of climate change. In April 2009 an EU White Paper was produced, 'Adapting to climate change: Towards a European framework for action'. This describes the kind of action that can be best delivered at EU level to deal with the impacts of climate change. The White Paper sets out a framework to reduce the EU's vulnerability to the impact of climate change and specifically highlights the need to take climate change into account in developing the River Basin Management Plans and the role the river basin management process can play in delivering sustainable water management in a changing climate.

[1] Bates, B.C., Kundzewicz, Z.W. Wu, S. and Palutikof, J.P. (Eds.) 2008: *Climate Change and Water*. Technical Paper VI of the Intergovernmental Panel on Climate Change, IPCC Secretariat, Geneva, 210 pp. Available at: http://www.ipcc.ch/pdf/technical-papers/climate-change-water-en.pdf

[2] http://ukclimateprojections.defra.gov.uk//

[3] Note that UKCP09 was launched on the 18th June 2009. In developing the draft River Basin Management Plan we used the previous UK climate change projections (UKCIP02) that were available at that time. For this plan we have now considered the outputs of UKCP09 in carrying out an initial revision of our approach to climate change and particularly the likely performance of measures.

With respect to climate change impacts on the water environment the European Commission has made it clear that member states should take climate change into account when implementing the Water Framework Directive. A policy paper on the need for, and approach to, climate change adaptation through implementation of the Water Framework Directive has been endorsed by the EU Water Directors.[4] A Common Implementation Strategy activity on Climate Change and Water, started in 2007, is currently focusing on making the best use of existing EU water legislation and identifying adaptation measures at different scales to progress adaptation for water, and is currently producing guidance on integration of climate change into Water Framework Directive implementation. This guidance should be published by the end of 2009. The EU white paper identifies the development of guidance and supporting tools to 'climate-proof' River Basin Management Plans as a specific action. The UK (through Defra with the support of the Environment Agency) is supporting the development of this guidance including leading on the drafting of a chapter on the 'analysis' stages of Water Framework Directive implementation.

As a minimum, the European Commission expects our response to climate change to include, in the first cycle, screening of the likely effects of climate change on the pressures identified under the characterisation (Article 5) step of the river basin management process. The European Commission also recommends that member states carry out a climate impact sensitivity analysis or 'climate check' on the programme of actions to help in 'selecting actions that are effective, sustainable and cost efficient under changing conditions'. The European Commission also states that, 'In the second planning cycle, climate change impacts should be taken fully into account'. The European Commission recommendation is primarily in relation to climate change adaptation (rather than mitigation) which is the main thrust of this annex. This annex seeks to summarise how the Environment Agency have approached these assessments of the impacts of climate change in producing this first River Basin Management Plan.

H.2 Summary of approach in dealing with climate change

The Environment Agency's priorities for dealing with climate change in the first cycle of implementing the Water Framework Directive in England and Wales will be to:

- consider the change in risk, due to climate change, of not achieving the Water Framework Directive default objectives (for example no-deterioration, good status) as a consequence of the identified Water Framework Directive pressures (for example abstraction);
- consider the impacts of climate change when identifying and appraising actions and propose appropriate adaptation of actions where necessary;
- look for opportunities in the monitoring programme to improve our understanding of climate change trends;
- consider the likely contribution of actions to future climate change through their impact on emissions of greenhouse gases, and propose appropriate mitigation where necessary.

In the first cycle the Environment Agency will not attempt to incorporate climate change into typologies, reference condition descriptions or default objective (including standards) and final water body objective setting. This is because we require some stability in our planning assumptions for subsequent work and because further work is required to understand what impact climate change will have on underlying conditions before we can do this. Further, on the basis of current scientific results, it is not expected that, within the timeframe of initial Water Framework Directive implementation (i.e. up to 2027) and within the metrics used for pressure assessment, a climate change signal will be observable above natural variability or

[4] Common implementation strategy for the Water Framework Directive, policy paper on climate change and water, June 2008

adequately distinguishable from other human pressures at a level to cause major changes in typology or major changes at reference sites. We are following the recommendations of the European Commission for the first cycle and are expecting a view from the commission as to common and consistent action to address issues identified above for future cycles. We will not reopen the agreed monitoring plan for similar reasons. However these aspects of the planning cycle will be addressed by future planning cycles.

We will do further research and scoping work in the first cycle of river basin management to determine if and how climate change should be factored into these considerations. There is already relevant ongoing or proposed research which will help inform our decision on these issues in the future. Examples include:

- A proposed assessment of the impact of climate change on river flows and groundwater levels across England and Wales, to improve the Environment Agency's capacity for taking this into account in management and regulatory decisions.
- Proposed development of guidance for water companies to prepare plans for future water supply that include effective adaptation to and mitigation of climate change.
- Project on 'Potential impacts of climate change on river water quality' (Environment Agency Science report: SC070043/SR).
- Project on 'climate change impacts and water temperature' (Environment Agency science report: SC060017/SR).
- Project on 'Preparing for climate change impacts on freshwater ecosystems (PRINCE)' (Environment Agency science report: SC030300).

Further work is also required to determine if and how controlling non-climate change pressures and maintaining ecosystems in good functional condition increases the resilience of ecosystems to the impacts of climate change. Robust evidence for this could influence adaptation strategies, appraisal outcomes and therefore alternative objective setting.

This annex addresses a number of the priorities identified in the bullets above:

- The impacts of climate change in England and Wales and the river basin district.
- The potential impacts of climate change on the identified Water Framework Directive pressures.
- How resilient the programme of actions are to the impacts of climate change.

Essentially this annex looks at climate change impacts on the pressures, actions and achievement of Water Framework Directive objectives in the River Basin Management Plan. It does not report in detail the impact of the programmes of actions on greenhouse gas emissions and future climate change. These aspects are considered in the strategic environmental assessment reports which accompany the draft and this River Basin Management Plan and annex E which describes how the cost of carbon was included in the economic appraisal process. As such this annex, annex E and the strategic environmental assessment are complementary. The assessments in this annex are essentially qualitative. More quantitative information may have to be used in appraising existing measures or through other processes (e.g. PR09) and should be used in updating risk assessments prior to measures implementation.

H.3 Summary of climate change impacts

This section summarises climate change effects in England and Wales to date and scenarios for future climate change effects as reported in UKCP09[5]. You can find more detailed analyses and descriptions on historic trends and future projections, together with guidance on how to plan for climate change via either the UKCP09 or the UK Climate Impacts Programme[6] websites.

Climate change effects to date

The 'climate of the UK and recent trends report' from UKCP09 identifies the following climate change effects to date for the UK[7]:

- Warming of the global climate system is unequivocal, with global average temperatures having risen by nearly 0.8 ºC since the late 19th century, and rising at about 0.2 ºC a decade over the past 25 years.
- It is very likely[8] that man-made greenhouse gas emissions caused most of the observed temperature rise since the mid 20th century.
- Global sea-level rise has accelerated between mid-19th century and mid-20th century, and is now about 3mm per year. It is likely that human activities have contributed between a quarter and a half of the rise in the last half of the 20th century.
- Central England temperature has risen by about a 1.0 ^{o}C since the 1970s, with 2006 being the warmest on record. It is likely that there has been a significant influence from human activity on the recent warming.
- Annual mean precipitation (rain, hail, snow etc) over England and Wales has not changed significantly since records began in 1766. Seasonal rainfall is highly variable, but appears to have decreased in summer and increased in winter, although with little change in the latter over the last 50 years.
- All regions of the UK have experienced an increase over the past 45 years in the contribution to winter rainfall from heavy precipitation (rain, hail, snow etc) events; in summer all regions (except North-East England and Northern Scotland) show decreases.
- Severe windstorms around the UK have become more frequent in the past few decades, though not above that seen in the 1920s.
- Sea-surface temperatures around the UK coast have risen over the past three decades by about 0.7 ºC.
- Sea level around the UK rose by about 1mm a year in the 20th century, corrected for land movement. The rate for the 1990s and 2000s has been higher than this.

Scenarios for future climate change

Much of the change in climate over the next 30 to 40 years has already been determined by historic emissions and because of the inertia in the climate system. We are all likely, therefore, to have to adapt to some degree of climate change even if future emissions are reduced. The climate of the second half of the twenty-first century, and beyond, will be increasingly influenced, however, by the volume of greenhouse gases that human society emits over the coming decades.

[5] http//:ukclimateprojections.defra.gov.uk
[6] **http://www.UKCIP.org.uk/**
[7] Jenkins G.J., Perry M.C. and Prior M.J.O., 2009. The Climate of the United Kingdom and Recent Trends, Revised Edition, Jan 2009, Met Office Hadley Centre
[8] The IPCC definitions of likelihood are used throughout this annex, i.e.: very likely means: more than 90 per cent probability of occurrence; likely means: more than 66 per cent probability; unlikely means: less than 33 per cent probability, very unlikely means: less than 10 per cent probability.

Consideration of future climate change is based on scenarios of future global emissions of greenhouse gases. The scenarios reported by UK Climate Impact Programme 2009 describe three alternative emissions scenarios for the UK. These are 'low emissions', 'medium emissions' and 'high emissions'. Due to space constraints we have largely presented results in this document for the medium emissions scenario. In the Environment Agency assessment of climate impacts on pressures and the performance of measures we have looked across all three emission scenarios.

As well as uncertainty surrounding future greenhouse gas emissions there are also other significant uncertainties (for example in the choice of climate model to use) that mean that it is not possible to give one correct value for future climate. UKCP09 addresses this through, for the first time, presenting climate change projections in probabilistic form. This has been made possible through advancements in the understanding and modelling of the climate system, advances in computing power, and the integration of the results of climate models from centres other than the Meteorological Office Hadley Centre. Within UKCP09 and in this annex, where probabilities are described, the Intergovernmental Panel on Climate Change definitions are used – for example very unlikely means that there is less than 10 per cent probability of occurrence of an event. Further, UKCIP09 presents projections for three different emission scenarios: 'low', 'medium', and 'high'.

The following statistics, maps (Figures H1-H3) and cumulative distribution functions (Figure H4) are provided in order to give an indication of the scale, direction of change and uncertainty associated with annual average temperature, winter precipitation and summer precipitation in the 2050s. The 2050s are presented to allow consideration of the potential changes in climate over the lifespan of those measures that might be less flexible to changing conditions (i.e. fixed infrastructure such as housing, flood defences, reservoirs, wastewater treatment works and so on). UKCP09 projections are provided at seven 30-year time periods covering the period from 2010 to the end of this century – thus the '2050s' represents the average across the time period from 2040-2069. The changes are relative to a 1961-1990 baseline. Further information including other significant variables (e.g. humidity, rainfall intensity, maximum and minimum temperatures), additional timescales and alternative probability levels are available from the UKCP09 website http://ukclimateprojections.defra.gov.uk.

The UKCP09 projections suggest that for the Anglian River Basin District[9] in the 2050's:

- Under medium emissions, the central estimate of increase in **winter mean temperature** is 2.2ºC; it is very unlikely to be less than 1.1ºC and is very unlikely to be more than 3.4ºC.

- Under medium emissions, the central estimate of increase in **summer mean temperature** is 2.5ºC; it is very unlikely to be less than 1.2ºC and is very unlikely to be more than 4.3ºC.

- Under medium emissions, the central estimate of increase in **summer mean daily maximum temperature** is 3.4ºC; it is very unlikely to be less than 1.3ºC and is very unlikely to be more than 6ºC.

- Under medium emissions, the central estimate of increase in **summer mean daily minimum temperature** is 2.7ºC; it is very unlikely to be less than 1.2ºC and is very unlikely to be more than 4.7ºC.

[9] Based on the UKCP09 'East of England' administrative area

- Under medium emissions, the central estimate of change in **annual mean precipitation** is 0 per cent; it is very unlikely to be less than –4 per cent and is very unlikely to be more than 5 per cent.

- Under medium emissions, the central estimate of change in **winter mean precipitation** is 14 per cent; it is very unlikely to be less than 3 per cent and is very unlikely to be more than 31 per cent.

- Under medium emissions, the central estimate of change in **summer mean precipitation** is –16 per cent; it is very unlikely to be less than –37 per cent and is very unlikely to be more than 6 per.

Figure H1 - **Change in annual mean temperature (ºC) in the 2050s under the Medium emissions scenario for the Anglian River Basin District for the a.) 10 per cent; b.) 50 per cent and c.) 90 per cent probability levels. Results from UKCP09.**

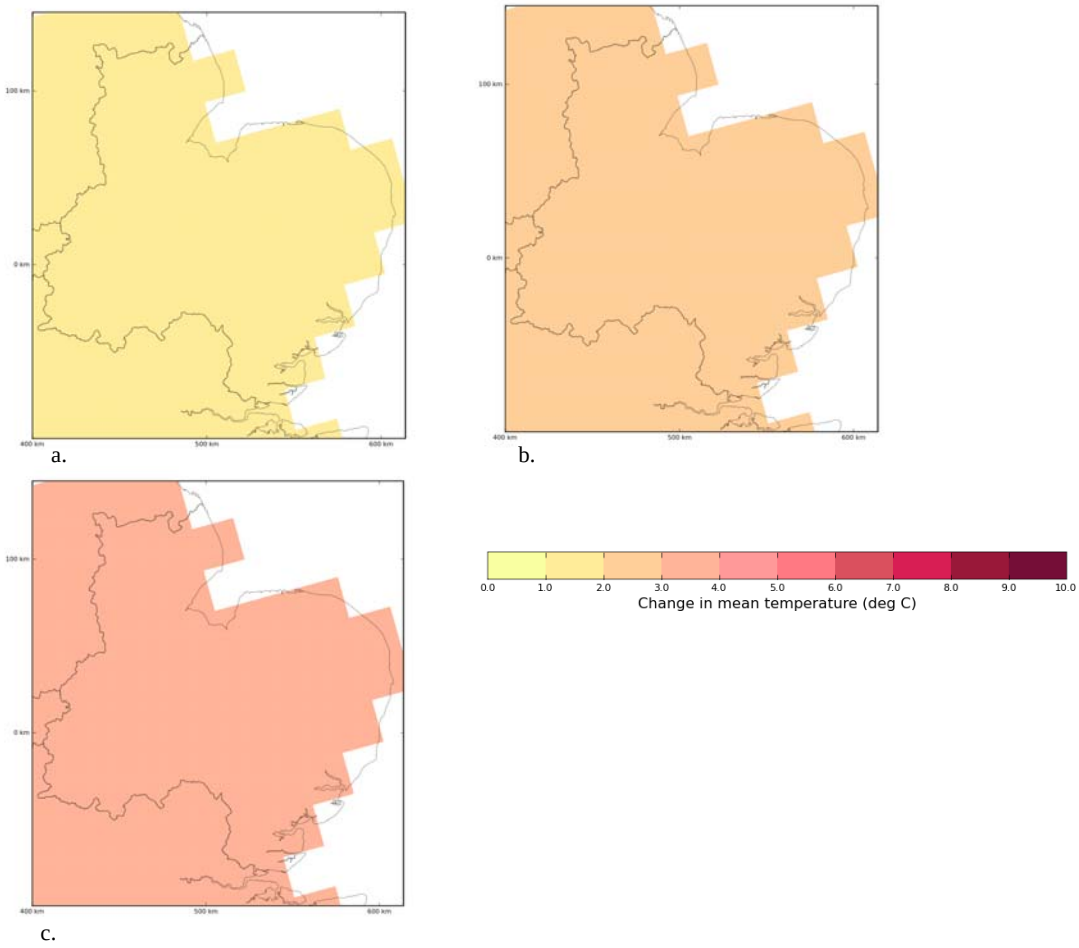


Figure H2 - **Change in summer precipitation (per cent) in the 2050s under the Medium emissions scenario for the Anglian River Basin District for the a.) 10 per cent b.) 50 per cent and c.) 90 per cent probability levels. Results from UKCP09.**

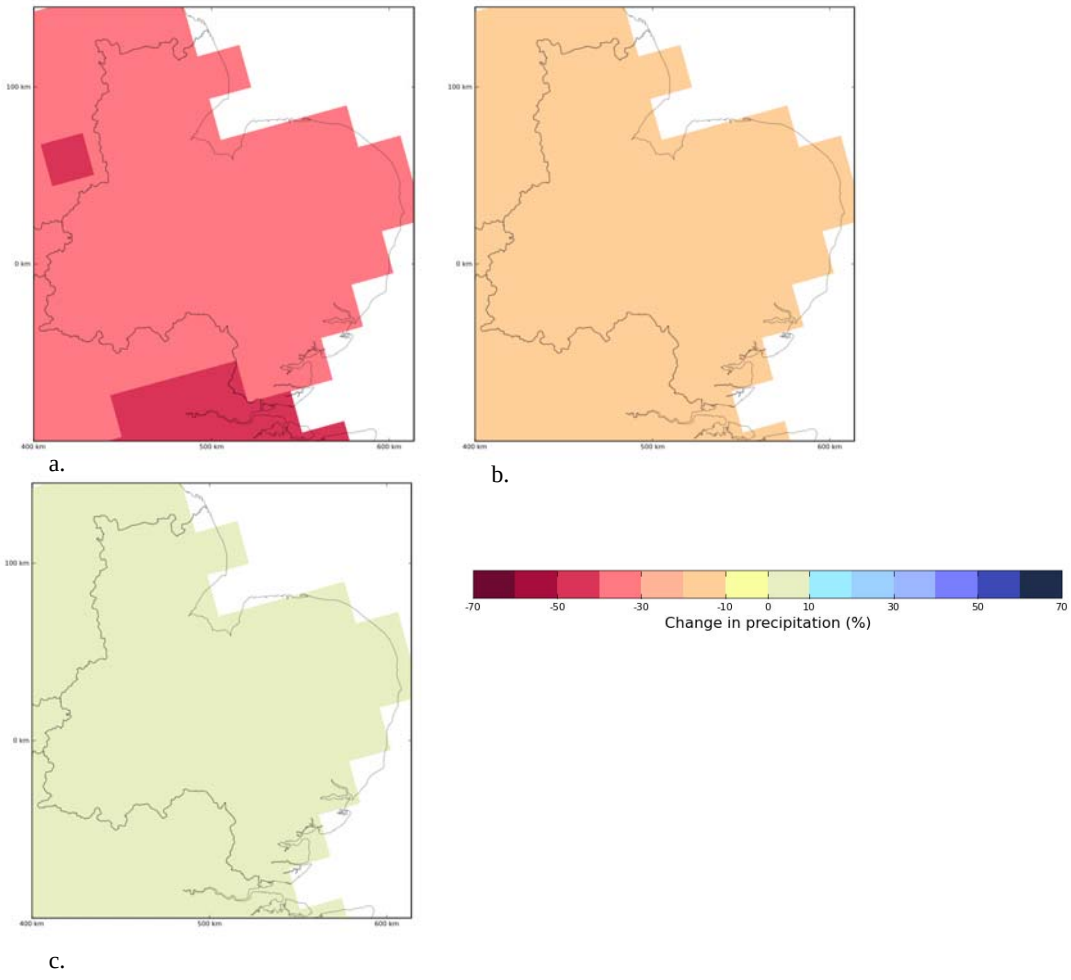
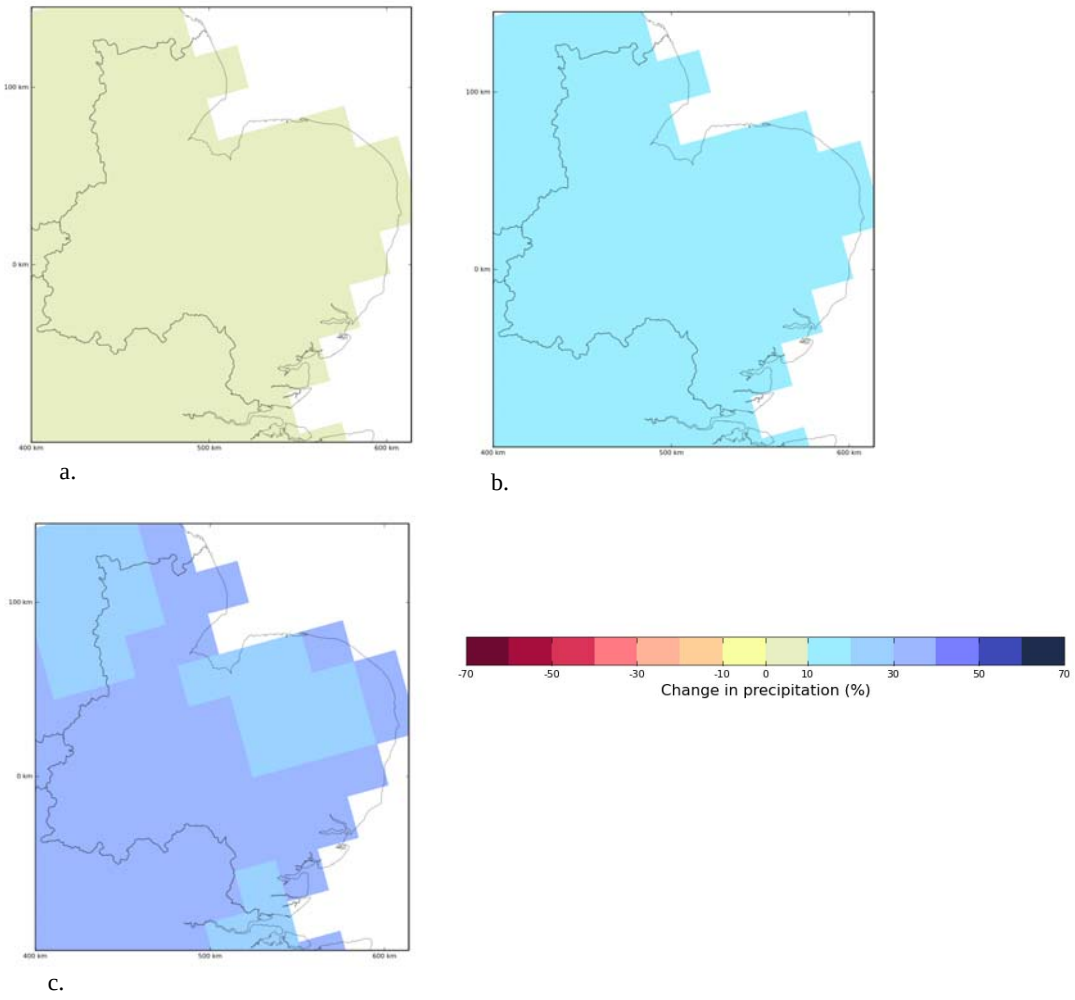


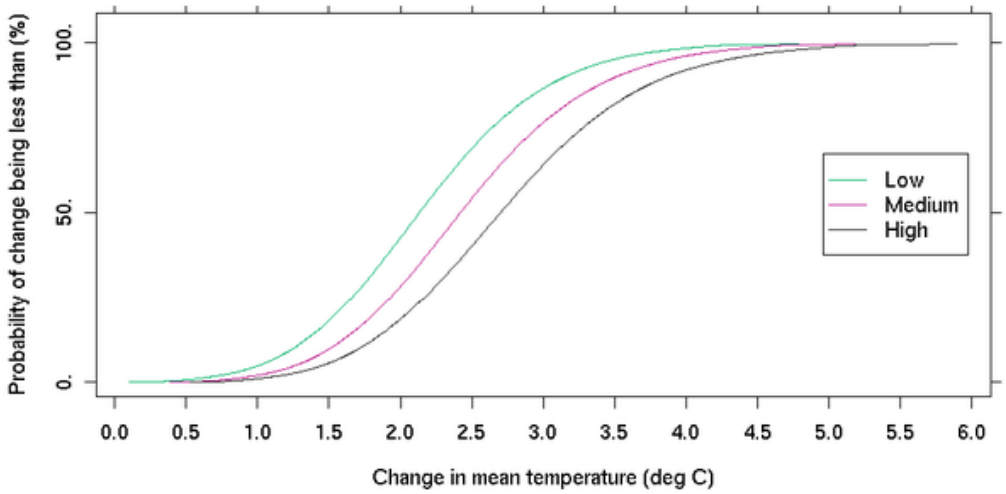
Figure H3 - **Change in winter precipitation (per cent) in the 2050s under the Medium emissions scenario for the Anglian River Basin District for the a.) 10 per cent, b.) 50 per cent and c.) 90 per cent probability levels. Results from UKCP09.**



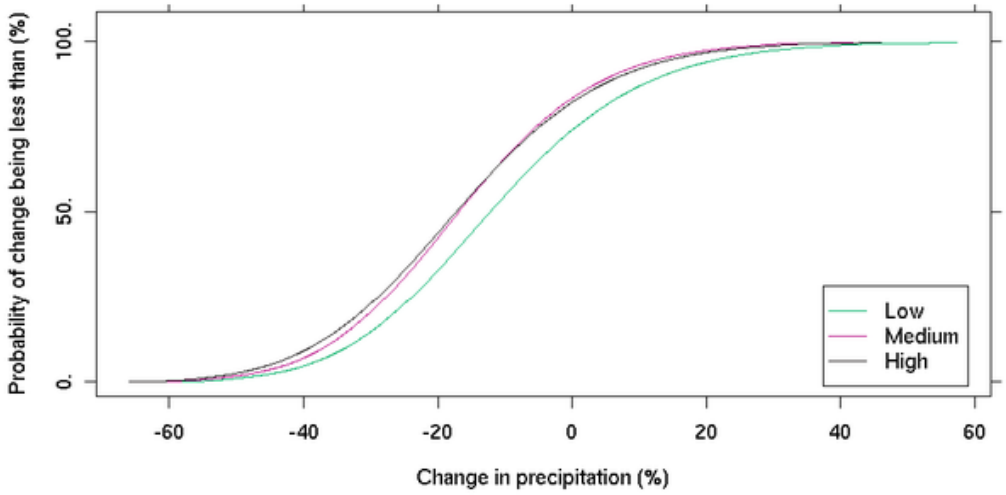
The maps above (figures H1-H3) present only a single possible future climate and do not properly represent the range of possible futures. In preparing for the impacts of climate change we need to consider the range of probabilities and take a risk based approach to our planning (in particular looking for solutions that are robust and cost effective over a wide range of conditions). Figure H4 gives an indication of the range of possibilities for future temperature, summer rainfall (June, July and August) and winter rainfall (December, January and February).

Figure H4 – **Change in a.) annual mean temperature (ºC), b.) summer precipitation (per cent) and c.) winter precipitation (per cent) in the 2050s for the Anglian River Basin District plotted as cumulative distribution functions for the low, medium and high emissions scenarios. Results from UKCP09.**

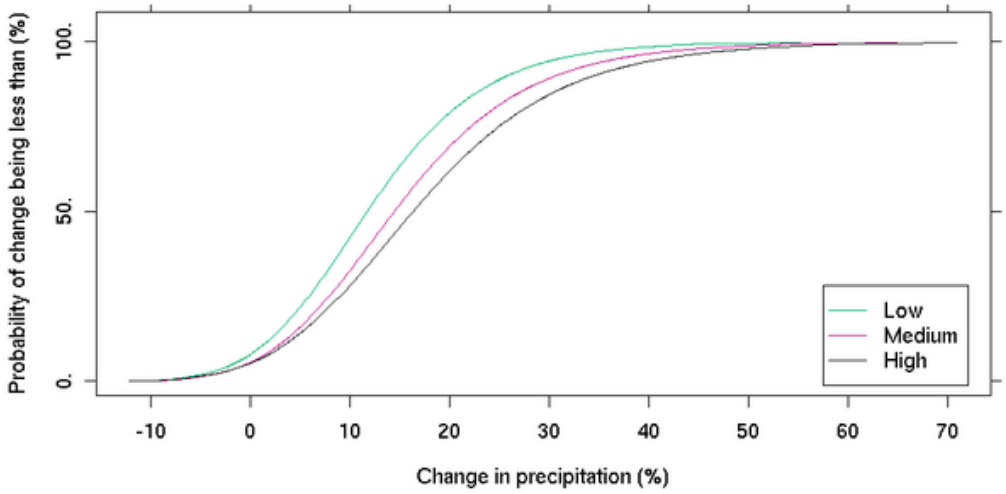
a.



b.



c.



H.4 The impact of climate change on the identified pressures and the ability of measures to perform under future climate conditions

Introduction

We all want to make sure that this River Basin Management Plan brings benefits now and into the future. We do not want the actions that are implemented, and the benefits they deliver in terms of Water Framework Directive objectives, to be undermined by changing climatic conditions.

This section looks at the likely consequences of climate change on the pressures that are being considered in the Anglian River Basin District under the Water Framework Directive and then considers if the proposed actions will continue to perform under future climatic conditions.

Firstly, we include here an assessment of the potential impacts of climate change on the individual pressures. These are:

- Abstraction and other artificial flow pressures
- Biological pressures (fisheries management and invasive non-native species)
- Microbiological pressures (including faecal indicator organisms)
- Organic pollution (sanitary determine and) pressure
- Nutrients pressure (nitrogen and phosphate)
- Priority hazardous substances, priority substances and specific pollutant pressure
- Acidification pressure
- Salinity pressure
- Temperature pressure
- Physical modification pressure
- Sediment pressure

The assessments are only qualitative at this stage and give no indication of the severity and timescale over which changes may occur. UKCP has advised the Environment Agency that the new UKCP09 climate projections will not change the generalities of previous pressure trend analyses based on UKCP02. Although only qualitative, this assessment of pressures will help us all prioritise both improving certainty in our risk assessments and our adaptation work. Whilst it is clear that human induced climate change is occurring, predicting the exact impacts on the water environment is difficult. There are a number of levels of uncertainty over, for example, what level of climate change to expect and over the combinations of processes controlling behaviour in water bodies. As we continue to understand more about these uncertainties we will all be able to improve these assessments and develop appropriate responses in future river basin management planning cycles.

Secondly, for each of the individual pressures, we include a summary of how the current or proposed actions are likely to be able to deal with the changes to the pressures due to climate change (that is, how well this River Basin Management Plan is adapted to climate change). The Environment Agency has carried out a systematic screening (or 'climate check') for most of the actions which make a contribution to achieving Water Framework Directive objectives to determine if and how they are likely to perform under future climate conditions – or where we need further adaptation, to seek alternatives or to develop additional actions. This screening has assessed both the 'mechanisms' in annex F and the 'actions' in annex C. This has been repeated since the draft River Basin Management Plan on the revised annex F and C with the new UKCP09 projections.

This screening is to help ensure any increased risk due to climate change does not compromise the benefit of the actions in terms of achieving Water Framework Directive objectives. In doing this we have tried to take a view on the lifespan and permanency of actions.

Because of the uncertainties concerning the impacts of climate change on the water environment we all need to, where possible, choose actions that can cope with a range of future climate conditions. There are a number of viable cost-effective adaptation approaches that we can apply. Applying these approaches will minimise risks associated with implementing actions whose cost-effectiveness at achieving Water Framework Directive objectives could be compromised by climate change even in the face of high uncertainties.

These adaptation options are normally referred to as win-win, no-regrets, low-regrets, and flexible/adaptive management. Actions may include more than one of these approaches. In addition the Environment Agency screening tried to make sure that we are not proposing any unfavourable or regrets options where the action is identified as unlikely to perform under future climate nor be able to be enhanced or modified to deal with future climate change. The way in which actions are likely to cope with climate change are described using the following descriptions:

- **Win-win options**– cost-effective adaptation actions that have the desired result in terms of minimising the climate risks or exploiting potential opportunities but also have other social, environmental or economic benefits. Within the climate change context, win-win options are often associated with those actions or activities that address climate impacts but which also contribute to climate change mitigation or meet other social and environmental objectives. For example, encouraging efficient use of water, and particularly hot water, in the home is a win-win option, reducing demand on water resources and also mitigating climate change by reducing carbon emissions from water heating.

- **No-regrets option** – cost-effective adaptation actions that are worthwhile (that is they bring net socio-economic benefits) whatever the extent of future climate change. These types of actions include those justified (cost-effective) under current climate conditions (including those addressing its variability and extremes) and are further justified when their introduction is consistent with addressing risks associated with projected climate changes. For example promoting good practice in soil management to limit the risks of diffuse pollution is a no regrets option. This is a low risk option.

- **Low-regrets (or limited regrets) option** – adaptive actions where the associated costs are relatively low and where the benefits, although mainly met under projected future climate change, may be relatively large. For example allowing for climate change in assessing headroom in water company plans for managing water resources could be a low regrets option.

- **Flexible adaptation option**– these are actions which are designed to include a capacity to be modified at a future date as climate changes. Influencing the design of a reservoir so its capacity can be increased at a future date if necessary would be an example of flexible adaptation.

- **Regrets** - these are unfavourable options where the action is identified as unlikely to perform under future climate conditions and where it is likely that the action cannot be enhanced or modified to deal with future climate change. It should be noted that this term has been adopted for the purpose of this document and, unlike the other terms, is not commonly used.

Figure H.5 **Adaptation options**

The majority of the actions proposed within this River Basin Management Plan are identified as no regrets approaches. These are actions that are proposed and justified in the river basin management planning process due to current pressures. They will also bring benefits under future climatic conditions, and should, therefore, rightly be a favoured option. In several cases the actions proposed are highlighted as flexible adaptation – this means that as the climate changes the action can be adapted to cope with these changes. In terms of looking at future cycles of the river basin management process it is recommended that these actions in particular are revisited to assess whether adjustment is needed to cope with new climatic conditions. Few actions were identified as regrets actions. However one area of potential regrets is in the citing and performance of infrastructure within floodplains. Under climate change the frequency and severity of flooding is likely to increase, and it is important that any infrastructure (for example waste water treatment) is located or designed to provide business continuity with this in mind.

An example of our screening of actions is displayed below in Figure H.36 for abstraction and other flow pressures. In the following section we give a summary of the results of the screening, presented for the pressures the proposed actions are acting to address. In section H.6, where applicable we also give a summary of actions we are carrying out to address climate change in relation to some of these pressures.

Figure H.6 **Summary of ability of actions to perform under future climate for abstraction and other artificial flow (an example of the screening is only displayed for this pressure)**

Name of action	Mechanism	How is action able to cope with climate change?
Preventing damage to the environment from new development, which helps to achieve good status for surface and groundwater and reduce the effects of flooding.	The Environmental Impact Assessment Directive (85/337/EEC) Town and Country Planning (Environmental Impact Assessment) Regulations 1999 (SI 1999 No. 293) Environmental Impact Assessment (Land Drainage Improvement Works) Regulations 1999	Regrets – potentially development may add to risks of flooding and drought under climate change if not adequately adapted. Currently there is low confidence that all new developments will be properly adapted to future climate. No regrets options (for example sustainable drainage systems or high levels of water efficiency should be sought.
Prevent unauthorised abstraction.	Abstraction of water prohibited without a licence with certain exemptions[1] under Water Resources Act 1991 s24.	No regrets – preventing unauthorised abstraction helps us manage water resources now and under future climate.
Managing abstraction such that it is sustainable, efficient and within environmental limits.	Conditional licences for water abstraction and conditional licences for impoundment under Water Resources Act 1991, Chapter II of Part II (as amended by Water Act 2003) Time limited abstraction licences	No regrets – managing abstraction improves our ability to manage water resources now and under future climate. Flexible adaptation – a flexible licensing system means that abstraction can be modified as necessary as the climate changes through review of licences.
Reduce unacceptable abstraction impact.	Amend or revoke abstraction licences often requiring compensation.	No regrets – reducing abstraction improves our ability to manage water resources now and under future climate. Flexible adaptation – a flexible licensing

Name of action	Mechanism	How is action able to cope with climate change?
		system means that abstraction can be modified as necessary as the climate changes through review of licences.
Reduce unacceptable abstraction impact through operational arrangements for example for river support schemes.	Agreements under Water Resources Act 1991 s20, 20A and 158.	No regrets – reducing abstraction improves our ability to manage water resources now and under future climate. Flexible adaptation – operational arrangements can be amended further as necessary as the climate changes.
Tighten controls in times of drought.	Drought orders and permits under Water Resources Act 1991, Chapter III of Part II.	No regrets – controls help us manage droughts now and under future climate Low regrets – action may also be needed to highlight increased risk of drought under climate change (and the higher natural probability of drought than that which responsible parties currently plan for) and prepare abstractors. Where drought conditions are reasonably foreseeable under climate change scenarios drought should not be used as a reason for temporary deterioration).
Mitigation work.	Direct action to maintain, improve/ increase flows. Will depend on natural flow conditions.	Flexible adaptation – approach may not be able to withstand future climatic conditions and will therefore need to be reviewed from time to time. Issues of sustainability and carbon emissions relating to water transfers will need to be taken into account. (could be 'Regrets' if not adjusted to future climate).
Demand management actions.	Voluntary agreements, permits, economic incentives (water pricing) water-saving campaigns etc.	Win-win – demand management improves our ability to manage water resources now and under future climate and reduces the carbon footprint of water use. Low regrets – climate change as a driver of the need for demand management should be brought into water-saving campaigns now.
Preservation, maintenance and re-establishment of biotopes and habitats for wild birds.	The Council Directive on the conservation of wild birds (Birds Directive (79/409/EC). Direct action by Natural England or service of management notices or implementation of management agreements under Wildlife and Countryside Act 1981. In some coastal sites, this may be directed by Coastal Habitat Management Plans	No regrets – protection of habitats now likely to give greater robustness to climate change. See for example conserving biodiversity in a changing climate guidance for practitioners[10]
Restricted operations within the Special Protected Areas.	The Council Directive on the conservation of wild birds (Birds Directive (79/409/EC). This may be directed by Coastal Habitat Management Plans in some coastal sites.	No regrets – protection of habitats now likely to give greater robustness to climate change.
Designation of Special Protected Areas.	The Council Directive on the conservation of wild birds (Birds Directive (79/409/EC). Conservation (Natural Habitats &c.) Regulations 1994.	No regrets – protection of habitats now likely to give greater robustness to climate change.

[10] Conserving biodiversity in a changing climate: guidance on building capacity to adapt, Published by Defra on behalf of the UK Biodiversity Partnership, DEFRA 2007

Name of action	Mechanism	How is action able to cope with climate change?
On land designated as a Special Area of Conservation or Special Protection Areas designated under the Wild Birds Directive you must comply with requirements to take appropriate steps to avoid deterioration or disturbance of species and habitats and to assess plans and projects likely to have a significant effect on the Special Area of Conservation.	European Community Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora 'Habitats Directive'. Conservation (Natural Habitats &c.) Regulations 1994 – Regulation 3(3) & 3(4) and Regulations 48 & 50.	Variable – dependent on pressure on Special Protected Areas or Special Areas of Conservation. Where pressures from abstraction or diffuse pollution may be high. No regrets and low regrets actions should be sought.
General duties for protecting, managing the quality and sufficiency of supplies and promotion of water efficiency.	Section 6(2) Environment Act 1995	Win-Win – demand management improves our ability to manage water resources now and under future climate and reduces the carbon footprint of water supply R- Potential carbon increases from some measures (particularly water quality related infrastructure)
Provisions to encourage water conservation, through installation of water efficient appliances.	Water Industry Act 1991	Win-Win – demand management improves our ability to manage water resources now and under future climate and reduces the carbon footprint of water supply
Standards for water efficiency.	Government code for sustainable homes. Initiated through Development Plans etc	Win-Win – demand management improves our ability to manage water resources now and under future climate and reduces the carbon footprint of water supply Flexible Adaptation – standards may need to be tightened as climate change progresses (potential for R if standards insufficient in large portion of housing stock)
Review and improve environmental flow indicators (EFI).	Catchment abstraction management strategies	No regrets – Abstraction can be reduced further as necessary with climate change through review of EFIs
Improve flow estimates for surface water bodies.	Catchment abstraction management strategies	No regrets – Action should help us manage water resource pressures now and in the future
Programme of investigation of ecological impacts of managed flows in Heavily Modified Water Bodies with water supply use.	Catchment abstraction management strategies	No regrets – Action should help us manage water resource pressures now and in the future
Extension of abstraction control to include previously exempt uses.	Water Resources Act 1991	No regrets – Control helps us manage water resource pressures now and in the future
Registration for previously exempt activity: 'water meadows'.	Water Resources Act 1991	No regrets – Control helps us manage water resource pressures now and in the future

As well as the consideration of adaptation for individual pressures we all need to consider how pressures link together. We also need to factor in other changes that will change the risk from the pressures such as population change and housing development into risk assessments. For instance Governments in England and Wales are still committed to increase house building to meet demand through new growth points and ecotowns. The

greatest demand is often in areas that are already water stressed. It is projected that some of these areas, such as the South-East of England, are likely to experience significant reductions in summer rainfall increasing the risk that water stress will increase. In England the Government's water strategy for England 'Future Water[11]' and in Wales the Environment Strategy for Wales[12] identifies water demand and water supply actions and approaches to reduce potential climate effects to reduce this risk. Water companies are expected to incorporate estimations of increased demand from new development within their water resources planning, and this feeds into this River Basin Management Plan.

Partnership working and better integration of different aspects of water management will increase our chances of successfully adapting to climate change. In particular flood risk management, urban planning, and water resource management will need to integrate better with river basin management planning (see Annex J).

Abstraction and other artificial flow pressures

Climate change impact on abstraction and other artificial flow pressures

Water is abstracted from groundwater and surface waters for a variety of purposes such as drinking water, irrigation and industrial uses. This should be managed in a sustainable way so that other uses and the environment are not compromised.

The largest use of water in the Anglian River Basin District is for public supplies with current average domestic consumption at around 150 litres/head/day. Agriculture, in particular spray irrigation, comes in second and yet nearly three quarters of the licensed water volume is in catchments under severe water stress. In total the river basin district produces 30 per cent of potatoes and 25 per cent of fruit and vegetables grown in the UK. This represents 60 per cent of the irrigated area and 57 per cent of the volume of water used for irrigation in England. Agricultural use is significant since the period of highest demand is concentrated in the summer months when river flows are at their lowest and will continue to increase with predicted reductions in summer rainfall.

The majority of industrial demand is met through the public supply system but a significant proportion is met from direct abstractions, especially for cooling or washing purposes. Despite the generally dry climate, the river basin district supports a high number of water dependant habitats (wetlands, rivers, estuaries etc.). Many of these are of special conservation value with the Norfolk and Suffolk Broads being one such example. It is Britain's largest protected wetland and third largest inland waterway, with the status of a national park.

Many catchments within eastern area are classed as 'Over licensed' or 'Over abstracted' under Catchment Abstraction Management Strategies (CAMs). The Environment Agency is tackling this by targeting our enforcement activities, promoting water efficiency and carrying out the Strategy Actions stated in CAMS.

Sea level rise/saline incursion is an issue along the east coast and in the Broads. This could result in licence holders not being able to abstract, for example, for irrigation, forcing them to re-locate. This could have consequences for other areas that already have no further water available for abstraction. There may be further impacts from the estuaries' strategies.

[11] Future Water- The Governments Water Strategy for England. DEFRA. HM Government Feb 2008
[12] Environment Strategy for Wales. Welsh Assembly Government. 2006

The demand for development growth is and will have significant impacts on abstraction and water availability. The demand for development growth in the South East and in the East of England will impact highly on the Anglian River Basin District. This will provide challenges to ensure that a high level of sustainable construction and resource use is incorporated in these developments as well as an active recognition of the future challenges posed by climate change. The Environment Agency is an influential advisor. We aim to raise the environmental awareness and resource efficiency of businesses so that they achieve high productivity while taking environmental considerations, including the changing climate, into account.

Demand for water is likely to increase for domestic, leisure industry, agricultural and industrial uses as a result of rising temperatures. Studies such as Climate Change and the Demand for Water[13] suggest that agricultural irrigation use, for example, will increase by around 20 per cent by the 2020s and around 30 per cent by the 2050s. Demand in tourist areas may increase as tourism increases due to more predictable warmer and longer summers. There is also likely to be a need for increased abstraction for cooling waters as industrial processes operate at higher ambient air temperatures and as the temperature of abstracted cooling water itself increases at certain times of the year. The proposed house-building programme will also put further pressures on current water resources, particularly in areas which are already water stressed. Water resources are likely to decrease at the same time due to higher temperatures, reduced and changing rainfall and, increased saltwater intrusion into drinking water supplies. Studies have assessed flow change across a wide range of catchments, under different climate model projections[14]. By the 2020s flows in winter could increase by between four and nine per cent and summer flows will decrease on average by 11 per cent but this could range from one to 32 per cent depending on the catchment location, land use, soils, geology and model uncertainty. A number of organisations, including the Environment Agency, plan to carry out further research to understand, and integrate in water resource planning, the likely impacts of climate change on river flows following the publication of UK Climate Projections (previously named UK Climate Impact Programme 2008).

Reduced available water resources to maintain compensation flows and overall reduction in flows at certain times of the year may reduce the opportunities for fish migration within systems and particularly around or across barriers such as weirs.

In an area where water resources are already stressed, any increase in overall demand or reduction in availability is likely to increase the risk of failure to meet the Water Framework Directive objectives. Three of the largest Growth Areas identified in the 2003 Sustainable Communities Plan are in the Anglian River Basin District including Milton Keynes-South Midlands, London-Stansted-Cambridge-Peterborough and the Thames Gateway which affects South Essex. Furthermore four potential Ecotowns (only one has been included in the Planning Policy Statement of July 2009) are in the river basin district and eight urban areas have been identified as New Growth Points. The current Regional Spatial Strategies (RSS8 and RSS14) outline a need for 600 000 new homes to be built by 2021. This growth in demand will be parallel to reducing water availability due to climatic changes and will often occur when water supplies are at their lowest i.e. watering gardens in the summer.

Good planning, based on accurate information and backed by a strong regulatory framework will be the key to managing this risk. Many of the measures we have identified aim to reduce water demand but these may be being played out against a background of climate change driven rising demands.

[13] Downing, T.E., Butterfield, R.E., Edmonds, B., Knox, J.W., Moss, S., Piper, B.S. and Weatherhead, E.K. (and the CCDeW project team) (2003). Climate Change and the Demand for Water, Research Report, Stockholm Environment Institute Oxford Office, Oxford.
[14] Romanowicz *et al*., 2007

This will be in relation to protected area objectives, status, no deterioration and groundwater level objectives.

Relative severity of impact of climate change on abstraction and other artificial flow pressures **Very high**

Ability of actions for abstraction and other flow pressures to perform under climate change

The Environment Agency and other bodies already do a lot to plan for climate change in managing water resources. For example, water companies are considering the impact of climate change on supply-demand balance, make estimates of their carbon footprint and use the shadow cost of carbon in their comparison of options. The Environment Agency has a role to ensure that all water companies make these assessments. The system for licensing water resources is now flexible and includes time limited licences, meaning that as climate changes adjustments can be made to ensure continued protection of the environment. A further example is the Environment Agency's developing water resources strategy which looks to 2050. Several modules of this strategy are considering how climate change will impact on available water resources and how our management of them might adjust to cope with future pressures.

Within the screening of actions identified in this River Basin Management Plan it is clear that existing and proposed actions are likely to need to change to make sure they deliver Water Framework Directive objectives with changing climatic conditions for this pressure. It is considered that all the actions, related to managing abstraction and flow pressures, help us tackle these pressures now and in a future climate (see Figure H.6). The Environment Agency cannot identify any current or proposed actions in the programme of actions where it would be a significant mistake in terms of managing the pressure now or under a future climate to continue to apply or introduce these actions (this assessment does not consider in detail the impact on carbon emissions. This should be considered in economic assessments of the actions. Also the effects of actions to reduce abstraction pressures on climate change (that is impact on carbon emissions) are presented in the strategic environmental assessment reports which accompany the draft and this River Basin Management Plan).

Furthermore most of these actions can be adapted in the future so that they will be capable of managing any increased risk from climate change. For example, abstraction licences can be modified in relation to volume and abstraction period to adjust to seasonal water availability. Flows in rivers can be augmented by changing management procedures. This depends on individual rivers as their natural flow patterns vary. Flexible adaptation will require a good understanding of how changing conditions increase or decrease the risk that the pressures will prevent us achieving Water Framework Directive objectives. The possibility of the option to adapt the action is purely a technical possibility. Future socio-economic considerations may change this view. For example land take costs could increase such that adaptation of a particular action that involves land take is no longer the cost-effective approach.

Some of the actions have risks in terms of successful application unless we change policies and operational relationships/ requirements. For instance, abstractors will need to be prepared for a higher probability for the application of drought orders or permits under the Water Resources Act 1991.

Certain actions represent a win-win. For instance, demand management actions will improve our ability to manage water resources now and in the future as well as reduce the carbon footprint from water supply and treatment (see strategic environmental assessment reports which accompany the draft and this River Basin Management Plan).

It is clear, however, that further actions will be required in areas of proposed housing development, particularly in areas which are already water-stressed and where climate change is projected to have greatest impact on water resources (e.g. in the South-East).

Biological pressures (Fisheries management and invasive non-native species)

Climate change impact on biological pressures

Fisheries management can represent a risk in terms of direct fish/shellfish removal, impact of competition/predation from managed fisheries on native biology, impact of supplied feeds on nutrient conditions and impacts of removing migratory fish.

The Anglian River Basin District has a thriving fishing industry with a number of pleasure, match and specimen silverfish fisheries. There are also a number of non migratory trout farms and managed trout waters, predominantly in Lincolnshire and Norfolk. These range from large reservoirs such as Grafham Water to small reservoirs on private farms.

Climate change could result in increased disease levels in managed fisheries which could spread to native plant and animal life. There could be an increased consequence of nutrient impacts from supplied food. Changing water temperatures may bring about changes to stocked species. Reduced flows may increase stocking pressures on native fish. Longer term temperature increases may mean that certain water courses may not be able to support the species for which they are required to achieve a designated water quality standard. In these cases the Environment Agency will take the view, in line with the requirements of the Water Framework Directive, that the lack of particular indicator species is no reason to let the quality of the watercourse deteriorate.

- Ecto parasites may be of particular concern. The species *Argulus* is already a significant problem for trout farmers, with three mortality incidents in the river basin district this year in tench and bream. Ergasilus and Lernaea are similar parasites.
- Warmer and brighter conditions may increase fish deaths caused by algal toxins as the relevant species of algae - already in the river basin district - will thrive.
- Koi Herpes Virus infections have been recorded in the river basin district in the last two to three years, and increasing temperatures are likely to result in further mortalities. However this may be offset by a concomitant increase in the carp immune response also due to the higher temperatures.
- On the horizon, Epizootic Ulcerative Syndrome caused by *Aphanomyces invadens* is not yet in this country, but is spreading across mainland Europe. This temperature dependent infection is high on the risk list.

Relative severity of impact of climate change on fisheries management pressure **Low/Medium**

Invasive non-native species can be introduced intentionally or non-intentionally as a result of their use as ornamentals, ‘hitch-hiking’ on ornamentals, washout from ship ballast water and from farming and fishing practices. Species can spread rapidly as a result of these activities, water transfers and transfer between catchments caused by animals and people moving.

Table H.7: **Priority non-native Species in the Anglian River Basin District**[15]

Priority Species	Impact	Location in Region		
		Northern	Central	Eastern
HIGH PRIORITY – ALREADY PRESENT				
Floating Pennywort *Hydrocotyle ranunculoides*	Flood defence & ecology	✓	✓	✓
Signal Crayfish *Pacifastacus leniusculus*	Ecology	✓	✓	✓
Topmouth Gudgeon *Pseudorasbora parva*	Ecology	✓?		✓
Mink *Mustela*	Ecology	✓	✓	✓
Japanese Knotweed *Fallopia japonica*	Flood defence & ecology	✓	✓	✓
Zebra Mussel *Dreissena polymorpha*	Flood defence & ecology	✓	✓	✓
Giant Hogweed *Heracleum mantegazzianum*	Flood defence & ecology	✓	✓	✓
Himalayan Balsam *Impatiens glandulifera*	Flood defence & ecology	✓	✓	✓

More research is needed into how these species and others will be impacted by climate change in the Anglian River Basin District and therefore impact the local fauna and flora in the future.

Climate change will alter the geographical location of the climatic conditions that define many UK habitats, with knock-on effects for the species they support. It is already having a significant impact upon the timing of the developmental cycles of species such as early emergence of certain plant and animal species in spring and early breeding of birds. This includes the survival, variety and extent of non-native species, increasing the risk of their becoming invasive. The range of invasive non-native species may have to be constantly updated as new species are introduced and become established as the climate changes.

Further, concepts about what constitutes a 'non-natural' species may have to change as our climate and underlying conditions change. Research such as the 'Modeling Natural Resource Responses to Climate Change' (MONARCH) programme, the Marine Biological Association led project 'Marine Biodiversity and Climate Change' and the Environment Agency led project 'Preparing for climate change impacts on freshwater ecosystems' (PRINCE) are helping to predict how the composition of plant and animal communities in the UK will change. Increasing air temperatures in a future climate may increase the survival and transport of invasive non-native species. Increasing water temperatures and lower flows may increase their survival, proliferation and spread. The variety and use of invasive non-native ornamental species could increase as more species survive in a future UK climate and as people use their gardens more in warmer summers particularly in terms of water features such as ponds.

The predicted increase in aquaculture across the UK coupled with increased storminess may increase the risk of release of invasive non-native species.

It has been suggested that invasive non-native aquatic macrophytes (for example *Crassula helmsii*) may spread more rapidly if winters become warmer and frost events are less frequent. Invasive non-native animals, such as bullfrogs, may also benefit from warmer weather, with possible serious implications for native amphibians. A large number of marine

[15] This list was compiled during the Anglian river basin planning invasive non-native species workshop on 28/04/2008

and estuarine species are already well established. Examples include cord grass, slipper limpet, wire weed and the Chinese mitten crab. New and established marine non native invasives are likely to increase rapidly in number and range as sea temperature increases. These invasives are already having significant impacts on coastal and estuarine native species and/or morphology.

Relative severity of impact of climate change on invasive non-native species pressure	**Medium**

Ability of actions for invasive non-native species pressure to perform under climate change

It is likely that existing and proposed actions for invasive non-native species will need to be adapted to make sure they meet Water Framework Directive objectives as climatic conditions change. It is possible that new actions may be needed due to the increasing risk resulting from climate change. It is considered that all the actions, related to managing invasive non-native species help us tackle this pressure now and in a future climate. The Environment Agency cannot identify any current or proposed actions in the programme of actions where it would be a significant mistake in terms of managing invasive non-native species, now or under a future climate, to continue to apply or introduce these actions. This assessment does not consider the impact on carbon emissions which is considered elsewhere in the strategic environmental assessment reports which accompany the draft and this River Basin Management Plan). In this respect they are 'no regrets' actions. For instance controls on importation and releases will continue to be an essential way to manage invasive non-native species.

Most of these actions can be adapted in the future so that they will be able (in a technical sense) to manage any increased risk from climate change (wider socio-economic considerations may change this view). For example, the range of species restricted for importation could be broadened. Flexible adaptation will require a good understanding of how changing conditions increase or decrease the risk of the pressures of not achieving Water Framework Directive objectives.

Some of the actions have risks in terms of successful application unless we change policies and operational relationships/ requirements. For instance in order to maintain biodiversity, which species we consider as 'invasive non-native species' will have to be updated as new species arrive and become established in the UK as the climate warms.

Microbiology (including faecal indicator organisms)

Climate change impact on microbiology pressure

Livestock farming, wastewater treatment and urban runoff (e.g. dog fouling) can all lead to microbial contamination of waterways.

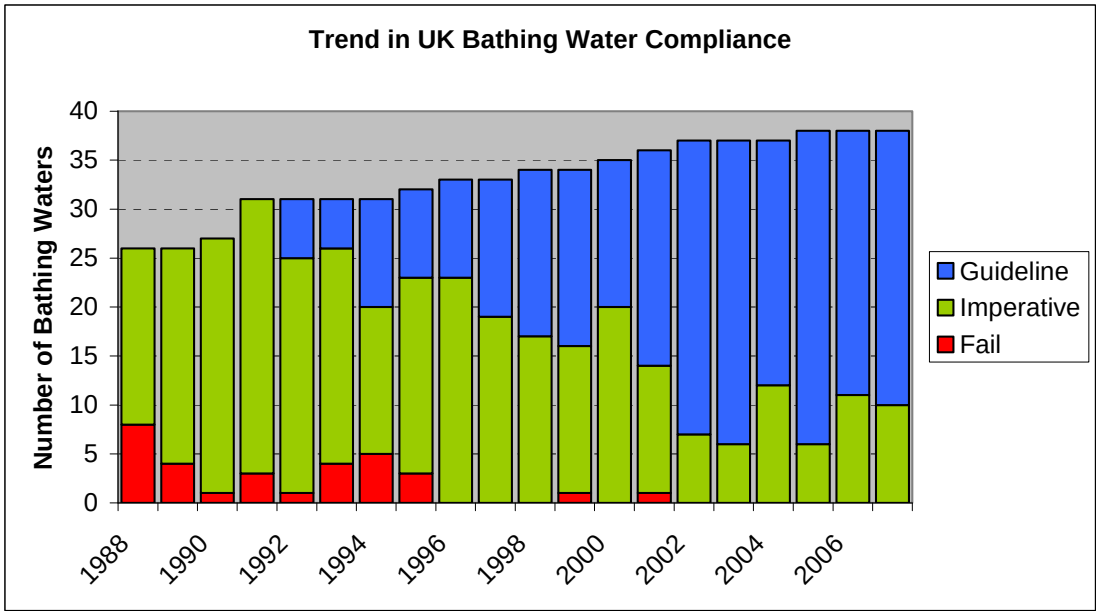
There are currently 37 designated bathing water beaches in the Anglian River Basin District. In 2007, 73.7 per cent and 76.3 per cent of these beaches met the UK and EU bathing water guideline standard, respectively. No beaches failed the mandatory standard in 2007. In fact, no beach in the Anglian River Basin District has failed the mandatory standard since 2001.

It is important to note that beach failures are not always attributable to human sewage point sources e.g. waste water treatment works. Non point sources of microbial contamination can occur. Recent scientific work, has highlighted that stores of faecal indicator organism trapped in soils can be released into coastal waters via rivers during high flow events. Furthermore, it

has been shown that in rivers draining rural areas, faecal indicator organism levels can rise by three orders of magnitude during storm events. It is worth noting that many beaches in our river basin district can be regarded as rural and have river inputs that drain via intensively farmed land. In fact, our river basin district has one of the greatest concentrations of large scale pig and poultry production units in the country. Such microbial sources can also impact on shellfish waters e.g. North East Wash.

Climate change predictions suggest that there is likely to be increased contamination from farmland and urban runoff due to compacted soils and/or less frequent but intense summer rainfall events. These events may also cause an increased frequency of combined sewer overflows overflow and sewage treatment plant flooding. These events can kill fish and other water life, and threaten human health. Although there may be an increase in the number of events that lead to high levels of microbial pathogens in water bodies increased water temperature and ultra-violet light exposure may reduce the survivorship of bacterial pathogens.

Figure H.8: **Bathing water compliance trend in the Anglian River Basin District**



In 2007, the river basin district had 14 blue flag beach awards. It is clear from figure H.8 that they have been a progressive improvement in bathing water compliance since the mid 1990's. This is due to a combination of good regulation and significant investments made by the water companies since privatisation.

Relative severity of impact of climate change on microbiology pressure **Medium**

Ability of actions for microbiological pressure to perform under climate change

It is likely that existing and proposed actions for this pressure will need to be adapted to make sure they meet Water Framework Directive objectives with changing climatic. It is possible that new actions may be needed due to the increasing risk resulting from climate change, particularly from the increased risk from diffuse sources. Most of the actions, related to managing microbiological pressures, help us tackle these pressures now and in a future climate. For instance effluent treatment at sewage works will continue to be an essential way to manage this pressure. However, the Pitt review and Environment Agency reviews of the summer 2007 floods identified that a lot of water sector critical infrastructure is in the

floodplain. Investing considerable funds in ‘climate vulnerable’ sewerage treatment and water treatment plants could represent a significant risk to not achieving Water Framework Directive objectives. Therefore although most actions are ‘no regrets’ actions there are some possible ‘regrets’ actions.

Most of these actions can be adapted in the future so that they will be capable (in a technical sense) to manage any increased risk from climate change (wider socio-economic considerations may change this view). For example there is the possibility of improving effluent treatment at sewage treatment works, changing standards and fitting improved storm tank capacity. However this will only be possible where there is capacity or space to do this. Therefore any investment in new works or managing current sites should allow for the opportunity for flexible adaptation. Unless this is done this is a case of possible ‘regret’. This will have to be bought to any operator’s attention. It is recommended that water companies use the guidance provided by Water UK ‘A Climate Change Adaptation Approach for Asset Management Planning’. Flexible adaptation will require a good understanding of how changing conditions increase or decrease the risk of the pressures of not achieving Water Framework Directive objectives.

Organic (sanitary determinand) pressure

Climate change impact on organic (sanitary determinand) pressure

Organic pollution such as ammonia and substances resulting in high biological oxygen demand come from sources such as sewage and industrial effluent discharges, urban runoff and runoff from farmland and farm premises.

The overwhelming majority of catchments within the Anglian River Basin District have been classified as ‘not at risk’ from ammonia and BOD. This is in line with our monitoring of the performance of industrial, intermittent and sewage discharges which show that compliance has been consistent throughout the region.

Climate change predictions suggest that there is likely to be increased contamination from organic pollutants from farmland and farm premises. This is due to washout during intense rainfall events from compacted soils and from urban environments at first-flush during intense rainfall events. It is possible that increased disease outbreaks amongst livestock as a consequence of climate change may lead to higher levels of organic pollution from high stock densities where movement and/or slaughter is restricted and where disease control culls are undertaken. The risk of this is not known at the moment. Intense rainfall events and increased flooding may also cause an increased frequency of combined sewer overflow. On the other hand the performance of sewage treatment works could increase under higher temperature reducing the biological oxygen demand burden. Ammonia concentrations in rivers will also potentially reduce due to greater nitrification.

It is likely, therefore, that changes in this pressure, due to the affects of climate change, could increase the risk of not achieving Water Framework Directive objectives in the Anglian River Basin District. Periods of low rainfall could reduce available dilution for effluent discharges into the receiving watercourses. This could impact upon the ecological status of the watercourse.

Relative severity of impact of climate change on organic pressure	**Medium**

Ability of actions for organic (sanitary determinand) pressures to perform under climate change

The approach to consenting of discharges to water courses, together with the Periodic Review system for the investments of water companies, allow us to adapt, to some degree, to climate change as it progresses. However it is particularly important that climate change is adequately factored into decisions for investments that will have a long lifetime to avoid regrets in the future.

For the organic pollutant pressure it is likely that existing and proposed actions will need to be adapted to make sure they meet Water Framework Directive objectives with changing climatic conditions for this pressure. It is possible that new actions may be needed due to the increasing risk resulting from climate change, in particular from the increased risk from diffuse sources. It is considered that most of the actions, related to managing organic pollution help us tackle these pressures now and in a future climate. For instance discharge licensing of point source discharges will continue to be an essential to manage this pressure. However, investing considerable funds in sewage treatment and water treatment plants built on floodplains could represent a significant risk to not achieving Water Framework Directive objectives as these will be vulnerable to flooding as a result of the consequences of climate change. Therefore although most actions are 'no regrets' actions there are some possible 'regrets' actions.

Most of the actions can be adapted in the future so that they will be capable (in a technical sense) to manage any increased risk from climate change. Wider socio-economic considerations may change this view. For example discharge consents can be modified in relation to biological oxygen demand. However, this will only be possible where there is capacity or space to do this within waste water treatment works. Carbon implications of tightening standards in this way would also need to be considered and options other than end-of-pipe (for example the phasing out of phosphate in detergents) may be preferable. The Environment Agency is currently assessing the carbon costs of wastewater management options, and will be looking to include some of the 'quick wins' from this work in the Periodic Review 2009. Therefore, any investment in new works or the management of current sites should allow for flexible adaptation. Unless this is done, this is a case of possible 'regret'. This will have to be bought to operators attention. Flexible adaptation will require a good understanding of how changing conditions increase or decrease the risk of the pressures of not achieving Water Framework Directive objectives.

Some of the actions have risks in terms of successful application unless we change policies and operational relationships/ requirements. For instance, dischargers may require improved codes of practice to account for changing climatic conditions. The same is true for farmers in terms of slurry and soil management for instance.

Nutrients pressure (nitrogen and phosphate)

Climate change impact on nutrient pressure

Diffuse nutrients such as nitrogen and phosphate compounds can come from sources such as unsatisfactory combined sewer overflow, leakage from sewerage systems, urban runoff (for example animal and bird faeces) and runoff of fertilisers and animal sludge from agricultural land and premises.

Both nitrates and phosphates have been identified as significant environmental issues within the Anglian River Basin District. Our water quality data indicates that there has been a general trend of consistently high level of nutrients occurring. This is confirmed where the

majority of river catchments have been classified as being at risk, or probably at risk, from nitrates and phosphates.

The Environment Agency have recently been working with Reading University using the 'Integrated catchment' suite of water quality models (Integrated Nutrient in Catchment model) to assess the potential impacts of water quality on river systems in the UK. The models have been used to simulate flow, total and soluble phosphorus, nitrate (as N), ammonia, sediments, and ecology (macrophytes and epiphytes). Results show that a number of factors controlling nutrient concentration will be affected by climate change. Under all climate change scenarios water quality will be affected by changes in flow regime with lower minimum flows giving less volume for dilution and hence higher concentrations downstream of point discharges. Increased storm events, especially in summer, could give more frequent incidences of combined sewer overflows discharging highly polluted waters into receiving water bodies. The potential impacts on urban water quality will be largely driven by these changes in short duration rainfall intensity overwhelming drainage systems, as well as rising sea levels affecting combined sewage outfalls. For diffuse inputs there is likely to be increased contamination from organic pollutants from farmland and farm premises. This is due to washout during intense rainfall events particularly in winter.

Climate change predictions suggest that there is likely to be increased contamination from nutrients from farmland due to compacted soils and less frequent but intense rainfall events. These intense rainfall events are also likely to cause high-levels of 'first-flush' pollution from urban areas. Intense rainfall events and increased flooding may also cause an increased frequency of combined sewer overflows, overflow, sewage plant flooding, flooding of industrial and commercial premises and wash-in from silage pits. The seasonality of changes in nutrient inputs is likely to vary between rivers dependent on the balance between urban and rural inputs, but overall nutrient loads are expected to increase.

Prolonged growing seasons may result in increased use of fertilisers. However this should be compensated by increased uptake by plants. The impact of nutrients from eutrophication may be worsened due to enhanced algal growth as a result of increased sunlight and water temperatures. This may be offset to some extent by improved breakdown of nutrient compounds in sewage treatment works due to higher temperatures and increased functioning of microbes and increased denitrification within rivers.

Loss of baseflow during summer months could lead to a reduction in dilution of effluent from sewage treatment works increasing in-stream concentrations. This is a particular concern where a large proportion of streams are fed by groundwater from chalk aquifers. Lower flows, reduced velocities and, therefore, higher water residence times will increase the potential for algal blooms. Some blooms cause toxicity issues and/or water deoxygenation killing other native species.

For chalk streams further work, using a version of the Integrated Nutrient in Catchment-Nitrogen models modified to account for the transport of nitrate through the unsaturated zone of the underlying chalk rock, predicts that reducing fertiliser inputs today will have a short-term impact on in-stream nitrate concentrations but a clear long-term reduction will not occur until between 2060 and 2080. This is because of nitrate that has already accumulated in the chalk aquifer (Jackson *et al*, 2007[16]). Thus, some in-stream intervention, such as constructing water meadows, may be the best option to reduce in-stream nitrate concentrations within the timescale of the Water Framework Directive.

It is likely, therefore, that changes in this pressure, due to the affects of climate change, will increase the risk of not achieving Water Framework Directive objectives in the Anglian River

[16] Jackson B.M. et al. 2007. Ecological Modelling, vol. 209, 41-52

Basin District. This is particularly in relation to bathing water and drinking water protected areas objectives. Decreasing quality of abstracted water will increase the risk of not achieving Article 7 objectives (avoid deterioration in their quality [water bodies] in order to reduce the level of purification treatment required in producing drinking water). There is already a rise in the need for groundwater blending and treatment to achieve drinking water standards for nitrate.

Relative severity of impact of climate change on nutrient pressure **High**

Ability of actions for nutrient pressures to perform under climate change

Similar to organic pressures it is likely that existing and proposed actions for nutrient pressures will need to be adapted to make sure they meet Water Framework Directive objectives with changing climate. It is possible that new actions may be needed due to the increasing risk resulting from climate change, in particular from the increased risk from diffuse sources. It is considered that all the actions, related to managing nutrient pollution help us tackle these pressures now and in a future climate. The Environment Agency cannot identify any current or proposed actions in the Programme of Actions where it would be a significant mistake in terms of managing the pressure now or under a future climate to continue to apply or introduce these actions (this assessment does not consider in detail the impact on carbon emissions). This should be considered in economic assessments of the actions. In this respect they are 'no regrets' actions. For instance discharge licensing of point source discharges will continue to be an essential way of continuing to manage this pressure.

Furthermore, most of these actions can be adapted in the future so that they will be capable (in a technical sense) to manage any increased risk from climate change. Wider socio-economic considerations may change this view. For example discharge consents can be modified in relation to the loads and concentrations of nutrients. However, this will only be possible where there is capacity or space to do this. Implications for greenhouse gases of tightening standards in this way would also need to be considered and options other than end-of-pipe (for example the phasing out of phosphate in detergents) may be preferable.

Some of the actions have risks in terms of successful application unless we change policies and operational relationships/ requirements. For instance, dischargers may require improved codes of practice to account for changing climatic conditions. The same is true for farmers in terms of fertiliser use, slurry management and soil management for instance.

Priority hazardous substances, priority substances and specific pollutants

Climate change impact on priority hazardous substances, priority substance and specific pollutant pressure

At the England and Wales scale the main source of priority hazardous substances**,** priority substance and specific pollutants is from the chemical, pharmaceutical and manufacturing sectors. They also come from sewage discharges, contaminated land runoff and urban runoff.

Hazardous substances are a significant issue in the Anglian River Basin District in relation to climate change.

Any change in risk as a result of climate change will be substance/ groups of substance specific and depend on issues such as sources and uses. It is unlikely that climate change

will significantly increase the risk from industrial point sources. It is also unlikely that the risk for substances such as Tributyl Tin will significantly change from either point or diffuse sources. However more frequent and intense rainfall events may cause significant first-flush spikes in some chemicals such as oils from urban and land runoff and inputs resulting from flooding of combined sewer overflows and industrial and commercial premises.

Available dilution may decrease as a result of reduced precipitation and reduced summer flows, again meaning chemical spikes occur which could exceed set limits. This could be the case for substances including pesticides and polycyclic aromatic hydrocarbons.

Cropping patterns may change as a result of climate change. This may influence the types of pesticides used and therefore the levels detected in water. For example, pesticides used on oil seed rape are now being found more frequently and at higher levels as the market for biofuel crops increases.

Relative severity of impact of climate change on priority substances pressure **Low**

Ability of actions for priority hazardous substances, priority substance and specific pollutant pressure to perform under climate change

It is possible that existing and proposed actions for this pressure may need to be adapted for controls on certain substances to make sure they meet Water Framework Directive objectives with climate change. It is possible that new actions may be needed due to the increasing risk resulting from climate change, in particular to address the increased risk from diffuse sources. It is considered that all the actions, related to managing priority substances help us tackle these pressures now and in a future climate. The Environment Agency cannot identify any current or proposed actions in the programme of actions where it would be a significant mistake to continue to apply or introduce these actions (this assessment does not consider in detail the impact on carbon emissions. This should be considered in economic assessments of the actions. Also the effects of actions to reduce hazardous substances pressures on climate change (that is impact on carbon emissions) are presented in the strategic environmental assessment reports which accompany the draft and this River Basin Management Plan). In this respect they are ‘no regrets’ actions. For instance, discharge licensing of point source discharges will continue to be an essential way to manage this pressure.

There are potential win-win actions. For instance better storage and handling of toxic substances in industrial and commercial premises reduce the risk of wash-in during high rainfall or flooding events while also potentially improving health and safety and/or resource use issues in relation to industrial raw materials and wastes.

Furthermore, most of these actions can be adapted in the future so that they will be able (in a technical sense) to manage any increased risk from climate change. For example, standards can be modified (wider socio-economic considerations may change this view so other more cost-effective actions may be needed). Flexible adaptation will require a good understanding of how changing conditions increase or decrease the risk of the pressures of not achieving Water Framework Directive objectives.

Some of the actions have risks in terms of successful application unless we change policies and operational relationships/ requirements. For instance, we may need to change codes of practice for the using and disposing of materials containing hazardous substances.

Acidification

Climate change impact on acidification pressure

Possible sources of acidification are emissions of sulphur and nitrous oxides from power stations and road transport and ammonia emissions from agriculture.

Acidification is not seen to be of particular concern in the Anglian River Basin District with relation to climate change.

Reductions in sulphur emissions since the 1980s have lead to a decrease in acid deposition across the country, but some studies warned of future problems associated with increased N deposition and climate change (Wilby R.L., 1993[17]). Climate variables that could affect acidification include higher temperatures, increased summer drought, wetter winters, reduced snow pack, simultaneous changes in hydrological pathways, and more frequent sea-salt deposition events. Intense rainfall and wetter winter conditions favour acidic episodes (Wright R.F., 2007[18]).

Droughts can make acidification even worse by lowering water tables, creating aerobic conditions and enhancing the oxidation of sulphur to sulphate (Dillon P.K. et al, 1997[19]; Wilby R.L., 1994[20]). Acid anions are exported during subsequent storm events along with heavy metals (Tipping E. et al, 2003[21]).

Seawater has been shown to be a significant sink for carbon absorbing 27-34 per cent of the CO_2 emitted into the atmosphere since the industrial revolution[22]. This has already had a significant impact on ocean chemistry, with estimates of mean surface ocean pH decrease of approximately 0.1 (equivalent to an approximately 30 per cent increase in hydrogen ion (H^+) concentration), from a value of approximately 8.18 around the time of the industrial revolution. This pH drop is significantly larger than the seasonal pH variability of 0.03 to 0.04 due to changes in temperature and photosynthesis. This is making seawater more acidic threatening marine life. By 2100, atmospheric CO_2 concentrations could reach more than 800 parts per million without any mitigation of emissions causing an additional surface water pH decrease of ~0.4 pH units.

Monitoring will be able to identify if this situation changes, and, if necessary, update the pressure in future river basin management planning implementation cycles accordingly.

Relative severity of impact of climate change on acidification pressure	**Low for freshwater. Medium/High for marine waters**

Ability of actions for acidification pressure to perform under climate change

Actions, related to acidification help us tackle these pressures now and in a future climate. Furthermore, most of these actions can be adapted in the future so that they will be capable (in a technical sense) of managing any increased risk from climate change.

[17] Wilby, R.L. 1993. The influence of variable weather patterns on river water quantity and quality regimes. International Journal of Climatology, **13**, 447-459.
[18] Wright R.F. 2007. Hydrology and Earth System Sciences Discussions, vol., 4, 2945-2973.
[19] Dillon P.K. et al. 1997. Environmental Monitoring and Assessment., vol 46, 105-111
[20] Wilby, R.L. 1994. Exceptional weather in the Midlands, UK during 1988-1990 results in the rapid acidification of an upland stream. Environmental Pollution, **86**, 15-19.
[21] Tipping E. et al. 2003. Environ. Pollution. Vol., 123, 239-253.
[22] Turley, C, Findlay, HS, Mangi, S, Ridgwell, A and Schimdt, DN. (2009) CO2 and ocean acidification in Marine Climate Change Ecosystem Linkages Report Card 2009. (Eds. Baxter JM, Buckley PJ and Frost MT), Online science reviews, 25pp. www.mccip.org.uk/elr/acidification

Salinity

Climate change impact on salinity pressure

The main sources of saline inputs to water courses included runoff of de-icing salts from roads and urban surfaces and industrial sources.

Freshwater surface water can become more saline as a result of incursion (high tide and surge impacts) and intrusion (inland migration of saline front) from marine waters. Likewise groundwater can be impacted by intrusion. Furthermore reduced rainfall in summer may reduce freshwater flows to estuaries increasing their salinity.

Freshwater surface and groundwaters can also become more saline as a result of intrusion and/or incursion of marine waters.

Saline incursions into the Norfolk and Suffolk Broads may threaten freshwater fish stocks either directly or indirectly as a result of prymnesium[23] blooms, such as those in the Hickling Broad. The risk to surface water is presently reduced due to the existing Environment Agency management structure and defence policy including both solid sea walls such as those at SeaPalling and Waxham and barriers such as at Potter Heigham. This mitigates against saline intrusion, protecting the fish in this area when the barrier operates.

Climate change predictions suggest that there are likely to be higher peaks of salinity as a result of first-flush high rainfall events from roads and urban areas after extended dry periods. However, the use of de-icing salts is likely to decrease due to milder winters and fewer snowfall events. Industrial sources will probably not change significantly.

Increasing sea levels and storm surges are likely to cause increased saline intrusion into surface freshwaters, but more importantly into groundwater systems. Although some freshwater habitat may be lost, the most significant impact will be on groundwater resources.

Relative severity of impact of climate change on salinity pressure **Medium**

Ability of actions for salinity pressure to perform under climate change

It is likely that existing and proposed actions will need to be adapted to make sure they meet Water Framework Directive objectives for this pressure as the climate changes. It is possible that new actions may be needed due to the increasing risk resulting from climate change. It is considered that all the actions, related to managing salinity pressure help us tackle this pressure now and in a future climate. The Environment Agency cannot identify any current or proposed actions in the programme of actions where it would be a significant mistake in terms of managing the pressure now or under a future climate to continue to apply or introduce these actions (this assessment does not consider in detail the impact on carbon emissions. This should be considered in economic assessments of the actions. Also the effects of actions to reduce abstraction pressures on climate change (that is impact on carbon emissions) are presented in the strategic environmental assessment reports which accompany the draft and this River Basin Management Plan). In this respect they are ‘no regrets’ actions. For instance discharge licensing will continue to be an essential way of continuing to manage this pressure.

Most of the actions can be adapted in the future so that they will be able (in a technical sense) to manage any increased risk from climate change. There may be exceptions. For

[23] Prymnesium is a bloom-forming organism found in brackish waters. Some species are toxic to fish

instance environmental controls on new developments and infrastructure (for example roads) may not have adequate requirements for applying sustainable urban drainage systems and road runoff treatment and maintaining this treatment to cope with future conditions.

In the longer term, there is little we will be able to do to avoid sea level rise having an impact on coastal aquifers. In future planning cycles of river basin management planning it may be necessary, therefore, to redefine reference conditions. The implications of salinisation of coastal aquifers on increasing demands on alternative water resources will need to be considered.

Temperature

Climate change impact on direct temperature pressures

It should be noted that in this section 'temperature pressure' refers to the release of point source effluents which are of a higher temperature than the receiving water as opposed to the direct effects of climate change on water temperature. 'Heated' point source effluents can originate from power station and industrial cooling waters and sewage discharges. However it is believed that nature of higher temperature discharges will not change to a large extent as the result of climate change

Climate change will cause a rise in water temperatures regardless of these direct sources of higher temperature waters. The potential impact in areas that receive heated discharges may be increased due to the increased temperature of the receiving water resulting directly from climate change

Relative severity of impact of climate change on direct temperature pressures **Low**

Ability of actions to perform under climate change for temperature pressure

Most, if not all, actions for this pressure can be adapted in the future so that they will be capable (in a technical sense) to manage any increased risk from climate change. This is mainly controlled through discharge licensing.

The most immediate reaction to climate change is expected to be in river and lake water temperatures. There is little we can do now to avoid at least some increase in temperatures. In future cycles of river basin management planning it may therefore be necessary to redefine reference conditions.

Physical modification

Climate change impact on physical modification pressure

The Anglian River Basin District has a long history of the construction of both fluvial and tidal flood defences to very extensive low lying areas i.e. The Fens, The Broads et al. These defences vary from relatively small earth embankments to major hard defences and barriers.

Climate change could change patterns of development and the physical pressures this imposes on water bodies. For instance coastal areas may develop because of increased tourism due to warmer drier summers.

The increased chance of extreme events leading to flooding, rising sea levels and storm surges is likely to mean flood defences and surface water drainage will need upgrading. This could threaten achieving not only good status but also good potential in water bodies

designated as heavily modified water bodies. However, all new flood defences would be required to satisfy Article 4.7 of the Water Framework Directive, which will ensure that the best environmental option is considered for the flood risks posed.

Alternative strategies to deal with high flows, described in documents such as Defra's 'Making space for water' and the Welsh Assembly Governments Environment Strategy may reduce the need for hard engineered modifications whilst having additional benefits in terms of water management in catchments.

Reduced availability of water to maintain compensation flows and overall reduction in flows may result in fewer opportunities for fish migration within systems particularly around or across barriers such as weirs. This increases the significance of this pressure.

There is a possible increased risk from dredging as more marine aggregate material is required for flood defences to protect against increased flood risk as a result of climate change. However, currently most marine aggregate regions are well offshore from the closest coastal water body such that any changes in marine aggregate production may not affect Water Framework Directive compliance.

A rising sea level and more frequent storm surges will increase the risk of wide spread saline flooding. Whilst a rising sea level alone will reduce the effectiveness of fluvial outfalls so increasing the probability and severity of fluvial flooding.

Relative severity of impact of climate change on physical modification pressure **Medium**

Ability of actions to perform under climate change for physical modification pressure

It is likely that existing and proposed actions will need to be adapted to make sure they meet Water Framework Directive objectives with changing climatic conditions for this pressure. It is possible that new actions may be needed due to the increasing risk resulting from climate change. It is considered that all the actions, related to managing physical modifications help us tackle these pressures now and in a future climate. For instance codes of practice and impact assessment will continue to be an essential way to manage this pressure. However these actions may have negative impacts for other pressures (see section 5.5.) which are increased as a consequence of climate change. Therefore careful consideration is needed to assess if there are any potential negative consequences in relation to achieving Water Framework Directive objectives of implementing these actions.

Most of these actions can be adapted in the future so that they will be able (in a technical sense) to manage any increased risk from climate change (wider socio-economic considerations may change this view).

There are a number of possible situations where climate change represents a significant risk to any investment in actions (that is a 'regrets' situation). For instance investment in fish passes or lifts could be wasted and bring no benefits in relation to meeting Water Framework Directive objectives if reduced flows in a future climate prevent them from operating properly. Climate change effects would have to be factored into their effectiveness, design and operation.

Certain actions represent a win-win situation. For instance, 'Green infrastructure' (the managed interconnected network of open spaces and natural areas, such as greenways, wetlands, parks, woodland and native plant vegetation, that naturally manages stormwater, reduces flooding risk and improves water quality), river restoration and regeneration could reduce the impact of physical modification pressures whilst bringing about other significant

benefits such as reducing the carbon footprint from 'old infrastructure' and improved quality of life in urban environments (see strategic environmental assessment reports which accompany the draft and this River Basin Management Plan). Similarly these actions could improve habitat conditions such that the biology is better able to cope and migrate with changing climatic conditions.

Sediments

Climate change impact on sediment pressure

Excessive levels of sediments in water bodies can result from runoff from agricultural and urban areas, sewage discharges and combined sewer outputs, industrial waste management procedures, construction and forestry activity.

The Anglian River Basin District has a large number of outdoor pigs, which can increase soil erosion and sediment loss, for example around Ipswich and Cambridge. Other than pigs the primary agricultural activities in the river basin district are arable crops and vegetable production, which can present a risk with issues such as:

- late cultivation can cause soil capping;
- heavy traffic can cause compaction and reduce infiltration on field;
- break down of soil structure;
- reduced organic matter content e.g. the Fens, Brecklands.

The Catchment Sensitive Farming initiative has identified sediment as the main problem in some priority catchments. One example is sediment on river bed reduces fish spawning opportunities for example in the River Wensum, and rivers in North Norfolk.

With 500,000 new homes to be built in the river basin district by 2021, construction will have a major impact on sediment in the region. The Environment Agency is promoting Sitewise, a pilot project in the river basin district encouraging the minimisation of construction waste including silt, and the need for properly resourced/monitored on-site construction waste management plans to reduce contamination.

Climate change predictions suggest that there is likely to be increased contamination from sediments from farmland and farm premises and from urban environments. This will be due to washout during intense rainfall events from compacted soils and from urban environments after first-flush releases during intense rainfall events. Changing crop types and seasonal patterns of agriculture and forestry may also change sediment runoff. Increased winter cropping is already having an effect on sediment runoff. Promotion of tree planting (for shading of rivers from UV and for carbon storage for instance) may have positive effects in reducing sediment runoff. Localised runoff from construction sites could also increase in intense rainfall events. There will also be changes in stream power during storm events and hence enhanced sediment loads due to channel erosion and enhanced resuspension. The Integrated Nutrient in Catchment model framework mentioned in the nutrients section above has been used to predict phosphorus and sediment movements and loads. In this model sediment release was described as a function of previous climate conditions and the rate of change of flow conditions. Climate change is likely to increase the rate of change of flow conditions and therefore sediment movement and loads. This will lead to higher sediment loads to lakes. Stream power between events may be reduced, causing higher rates of sediment deposition higher up the stream systems. Intense rainfall events and increased flooding may also increase the frequency of combined sewer overflow. The Defra soil strategy and soil action plan and the Welsh Assembly Governments draft soil action plan are acting to help reduce this risk.

Relative severity of impact of climate change on sediment pressure	**High**

Ability of actions for sediment pressure to perform under climate change

Existing and proposed actions will need to be adapted for controls to make sure they meet Water Framework Directive objectives with changing climatic conditions for this pressure. It is possible that new actions may be needed due to the increasing risk resulting from climate change, in particular from the increased risk from diffuse sources. It is considered that all the actions, related to managing sediments help us tackle these pressures now and in a future climate. However the effectiveness of some actions may be compromised if climate change is not considered in their design and implementation. For instance any proposed sediment traps or sustainable urban development systems may need to be designed and operated to cope with increased sediment loads to prevent blocking and to maintain their effectiveness at achieving Water Framework Directive objectives. If this is not done this would represent a 'regrets' situation.

Furthermore, most of these actions can be adapted in the future so that they will be capable (in a technical sense) of managing any increased risk from climate change.

Sediment and soils store carbon. Managing soils and sediments better will ensure soil carbon is not released to the atmosphere increasing climate change. Also soil and the minerals and nutrients it contains are retained for agriculture. This represents a win-win situation (see Defra soil strategy).

H.5 Interaction of management action for pressures

Management action to address one pressure may increase the risk of not achieving Water Framework Directive objectives for another pressure. Climate change may increase this risk further. For example, removing weirs to remove obstacles to the movement of native flora and fauna may increase the risk of allowing the spread of invasive species where the suitable habitat of these invasives is broadened because of climate change.

Further, climate change adaptation action for one issue and/or in one location may in itself cause problems elsewhere. For instance managed retreat may reduce the risk from morphological pressures but increase the risk of saline intrusion, particularly where lower groundwater and surface water levels and flows are reduced as a consequence of climate change.

Because many of these risks are higher because of climate change the interaction of climate change and management action for different pressures need to be considered. There is unlikely to be an ideal set of actions. 'Trade-offs' between different management actions for different pressures and drivers need to be considered. This highlights the need for integrated catchment thinking when managing different pressures under the Water Framework Directive. This point was made by several consultees in the various Water Framework Directive consultations.

There will also have to be significant trade-offs in relation to particular outcomes in catchments such as those for conservation, agriculture and water supply. Trade-offs will also need to be considered in relation to adaptation actions and the outcomes these deliver. This is nothing new. These trade-offs have to be considered in sustainability appraisals. Political priorities, however, may affect the methodology that is used and decisions made. Transparency, in relation to appraisal methodologies and decision-making, are therefore

important to ensure the consensus on the balance that is struck between competing outcomes and priorities.

H.6 Adaptation strategies

A number of organisations will play a part in delivering the objectives of the Water Framework Directive. This annex considers the implications of climate impacts on the effectiveness of the actions to deliver these objectives. It is important that everyone is involved in developing and implementing effective adaptation action for actions in order that we are all able to meet Water Framework Directive objectives.

Several organisations involved in the river basin management process are developing and acting on strategies for adapting their activities to address climate change. Generally these are targeted at a wide range of responsibilities including those under the 'umbrella' of the Water Framework Directive. Much of the activity will be to better understand risks and appropriate responses in the first instance. This work should rapidly develop into effective adaptation action to ensure we all meet Water Framework Directive objectives as planned. The Environment Agency would expect that organisations that have not taken on board planning for adaptation for areas of the Water Framework Directive for which they are responsible, should start to do this as part of river basin management planning and implementation of plans. The Environment Agency as competent authority for Water Framework Directive implementation will review if this is happening.

The Environment Agency, for example, has developed an organisational climate change adaptation and mitigation strategy. The different parts of the Environment Agency are now developing action plans to enact this strategy and to embed adaptation into the environmental management of sectoral activities. These will be published at a later date but include the following:

- Identifying good practice in terms of adaptation and making sure this is communicated.
- Updating our risk information using new 2009 UK Climate Projections (previously named UK Climate Impact Programme 2008).
- Ensuring water companies consider the impact of climate change on the supply-demand balance.
- Developing a map of the impact of climate change on river flows across England and Wales and examining the impact of climate change on demand for water in the 2020s, 2030s and 2050s.
- Looking at the carbon cost of different water supply actions, including the carbon footprint of operating the water supply system.
- Looking at how people value water, and alternative ways of allocating resources that will help us respond to increasing water scarcity as a result of climate change.
- Progressing research to look at, for example, the use of probabilistic climate scenarios on water supply and ecology, changes in water quality and failures of water quality standards, discharges, effluent treatment and chemical processes; the spatial coherence of European droughts in the past and in the future and the impact of future droughts on water supply management.
- Considering how to take on board climate change in our 'Time limiting of abstraction licence' policy and improving water efficiency requirements in our abstraction licences.
- Improving the resilience of water supplies to climate change through involvement in the Water Saving Group.
- Ensure climate change adaptation is embedded into fisheries practices and invasive species strategies.
- Looking for opportunities in joint working to manage and adapt for a range of pressures.

- Reflecting the long term costs of climate change in the way decisions are made to maintain or improve water quality. Make sure options are assessed by Net Present Cost, taking account of operating costs to perpetuity and, in this, the estimates that have been advised for the social costs of carbon.

As part of river basin management planning it will be important to co-ordinate activity on adaptation as part of the Water Framework Directive. Therefore the Environment Agency would like to hear of any developed or developing strategies, plans or activities which are occurring for adaptation across the Anglian River Basin District, particularly where these have relevance to planning and implementing actions under the Water Framework Directive and/or achieving Water Framework Directive objectives. As identified in section H1 the Environment Agency and other UK representatives are working within the EC common implementation strategy to help deliver guidance and tools for how climate change should be considered in the steps of the river basin management process. This will help ensure we all take a consistent approach in the way we address climate change risks and adaptation across water management activities.

H.7 Adaptation in relation to underlying conditions and biology

Work is needed to understand how changes in underlying 'natural' environmental conditions and the impacts of man-made pressures as a consequence of climate change will impact on the biology in the water environment. This is needed to ensure we all implement the most cost-effective actions to meet Water Framework Directive objectives, particularly those for biology. Those organisations involved in the river basin management process that have direct responsibilities for managing the natural environment need to consider the consequences of climate change and the need for adaptation in the context of delivering biological outcomes. The Environment Agency, for instance, is starting to set out its adaptation action plan for ecology and conservation. This includes the following actions:

- Develop the 'landscape ecology approach' to identify and protect key habitats, open up new habitats and develop and maintain wildlife corridors. Reduce habitat fragmentation and protect and restore areas of floodplains and wetlands.
- Work with Natural England and Countryside Council for Wales on their review of protected area designation criteria and on managing changing conservation objectives for designated sites.
- Work with others to develop better understanding of climate space. Map current and future climate spaces and the vulnerability and impacts for priority species and environments. Develop robust case on the future ranges of key species and how reducing current risks and adaptation actions may affect their viability.
- Target action to build environmental resilience in relation to both existing and climate change pressures.
- Work with partners to identify those species and environments at greatest risk, prioritise policies and strategies for action and identify and make changes in management practices and policies that may help freshwater ecosystems and habitats to adapt to climate change.
- Ensure we all build environmental resilience and restore damaged habitats to ensure salmon and trout species are to remain in existing localities. We will also seek to protect the habitat conditions for glacial relict fish species such as Char and White Fish which have little opportunity to adjust or move from their rare and isolated lake habitats and are therefore at significant risk of local extinction.

Further the Environment Agency intend to commission research to understand if, and over what timescales, the variables on which the characteristics of waterbodies are determined will change, how this could change such things as waterbody type or category and whether or how best to modify tools, analyses, and management as a consequence.

H.8 Summary

It is likely that the risk to not achieving Water Framework Directive objectives from a number of man-made pressures will increase as a result of climate change.

Figure H.9: **Summary of severity of climate change impacts on pressures in the Anglian River Basin District**

Relative severity of impact of climate change on:	Level of Severity
Abstraction and other artificial flow pressures	Very High
Nutrient pressure (nitrate and phosphate)	High
Sediment pressure	High
Microbiology pressure	Medium
Organic pressure	Medium
Physical modification pressure	Medium
Salinity pressure	Medium
Invasive non-native species pressure	Medium
Fisheries management pressure	Low/Medium
Acidification pressure	Freshwater: Low Marine: Medium/High
Priority hazardous substances, priority substance and specific pollutants such as pesticides	Low
Temperature pressure	Low

Therefore we all will be at more risk of failing Water Framework Directive objectives in the future unless we use adapted actions that continue to bring benefits (in terms of Water Framework Directive objectives) in a future climate. In our screening analysis of actions the Environment Agency consider that the vast majority of actions will help us tackle pressures now and in a future climate (there are few current or proposed actions in the programme of actions where it would be a significant mistake to continue to apply or introduce them). Most actions can be adapted as the climate changes. Therefore most represent a 'no regrets' and/or 'flexible adaptation' option. Any investment in new works or managing current sites should include adaptation or allow for the opportunity for flexible adaptation. Unless this is done this is a case of significant possible 'regret'. Of particular significance here is infrastructure where the effectiveness could be compromised by flooding.

We should all be looking for win-win type actions. It is clear that a number of these exist. It is also clear that actions for different pressures can be counterproductive particularly in a context of a changing climate. This highlights the need to think and plan in a more integrated and catchment based way.

The issues raised in this annex need to be progressed in terms of improving understanding and certainty through to management action. Organisations involved in the river basin management are starting to identify positive action to do this. However this work must be accelerated if we are all to ensure delivery of Water Framework Directive objectives to the Water Framework Directive timescale.

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Annex I: Designating artificial and heavily modified water bodies

Contents

I.1 Introduction

This annex explains the criteria used to designate water bodies in the Anglian River Basin District as artificial or heavily modified. The criteria used for designation of freshwater water bodies can be found in section I.2 and the criteria for estuarine and coastal water bodies can be found in section I.3. Section I.4 discusses how results of a liaison panel consultation on designation were incorporated and further quality checks made to results. Section I.5 outlines how designation of new and split water bodies was made and I.6 maps the artificial and heavily modified water bodies in the Anglian River Basin District.

The need to designate water bodies as heavily modified or artificial

Article 4(3) of the Water Framework Directive (WFD) states that water bodies may be designated as artificial or heavily modified in the river basin management plans. The WFD recognises that some water bodies have been significantly physically modified to support various uses which provide valuable social and economic benefits. In many cases these modifications cannot be removed without having a major negative effect on the social and economic benefits that these uses bring. If achieving 'good status' would require changes to a water body's hydromorphology that would have significant adverse effects on the social or economic activity, then it can be designated as a artificial or heavily modified water body. Before designation it also needs to be established that due to technical or disproportionate cost reasons there is no significantly better environmental option for delivering the social and economic benefits (European Union CIS guidance document no. 4, 2003). The WFD also recognises that many artificial bodies of water need to be managed in terms of their environmental quality and hydrology.

Artificial and Heavily Modified Water Bodies (AWB/HMWBs) have to achieve an alternative objective of "good ecological potential" (GEP). The objective of GEP is similar to good status but takes into account the constraints imposed by the social and/or economic uses.

Definitions

Article 2 (8) of the WFD defines an artificial water body as a 'body of surface water created by human activity'. Article 2 (9) defines a heavily modified water body as a 'body of surface water which as a result of physical alterations by human activity is substantially changed in character, as designated by the Member State in accordance with the provisions of Annex II (of the WFD).'

The definitions presented in the WFD are expanded on further in Common Implementation Strategy guidance documentation. In order to address the challenges of WFD in a co-operative and coordinated way, the Member States, agreed on a Common Implementation Strategy (CIS). CIS Guidance documents and technical reports have been produced to assist member states in implementing the WFD. CIS guidance document no. 4 focuses on the 'Identification and Designation of Heavily Modified and Artificial Water Bodies' and can be found at:

http://circa.europa.eu/Public/irc/env/wfd/library?l=/framework_directive/guidance_documents/guidancesnos4sheavilysmo/_EN_1.0_&a=d

Paragraph 3.1.1 of CIS guidance No. 4 ('the CIS guidance') states that:

'In order to be a heavily modified water body, a water body must be:

- Physically altered by human activity;
- Substantially changed in character;
- Designated under Article 4(3)'.

In general, the changes to the hydromorphology need to be long-term and alter the morphological and hydrological characteristics in order to represent a substantial change in the character of a water body.

Paragraph 3.1.2 of the CIS guidance interprets an Artificial Water Body as:

'A surface water body which has been created in a location where no water body existed before and which has not been created by the direct physical alteration or movement or realignment of an existing water body'.

The guidance clarifies that this does not mean that there was only dry land present before. Minor ponds, tributaries or ditches may have been present, which were not regarded as discrete and significant elements of surface water. Significant water bodies that have changed water category due to modifications are considered to be heavily modified water bodies. For instance a river dammed to form a reservoir is a heavily modified river not an artificial lake.

I.2 Freshwater water bodies

Introduction

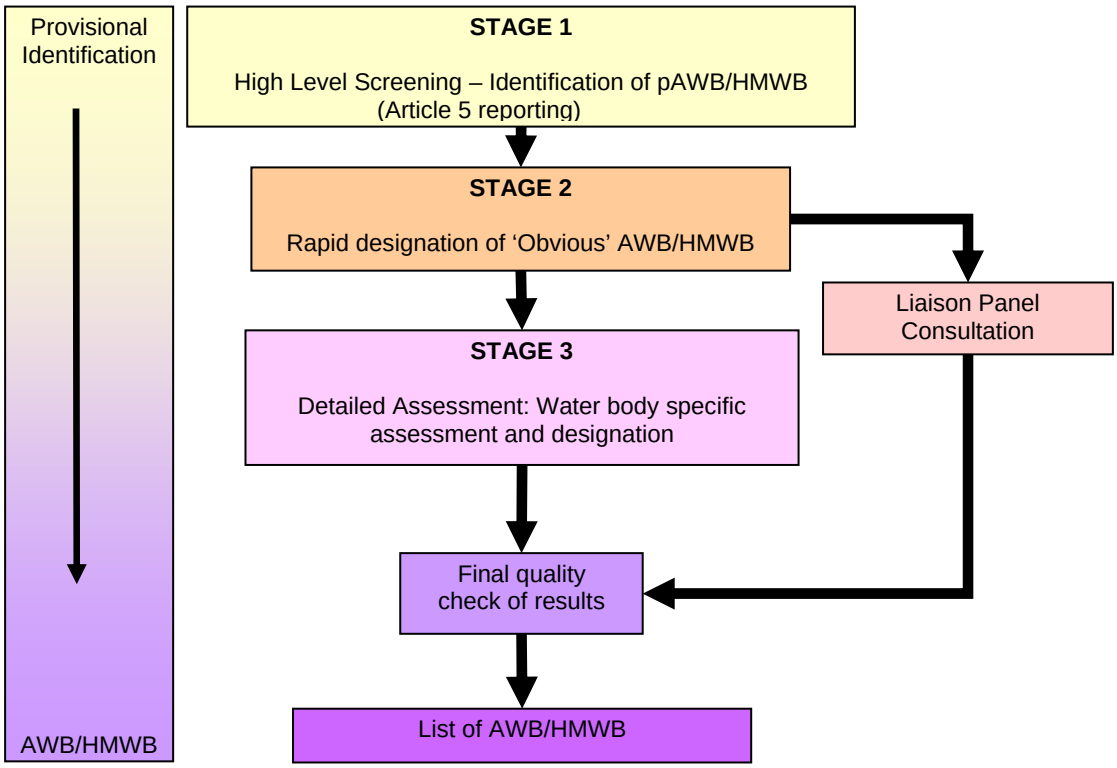
A two-stage approach was developed to apply the Article 4(3) designation tests to those water bodies provisionally identified as AWB/HMWB for Article 5 reporting (Figure I.1). This list of provisional AWB/HMWB (pAWB/pHMWB) was formed of water bodies that were at risk of failing good ecological status due to morphological pressures. The risk assessment was completed as part of the river basin characterisation process. Further detail on the risk assessment approach is discussed in Annex G. The two-stage designation process comprised of a rapid designation stage to identify 'obvious' AWB/HMWB followed by a second more detailed assessment stage.

The rapid designation stage applied the 4(3) tests to a small number of priority water body uses. The rapid designation stage was developed following the principles outlined in the UK TAG paper, 'Criteria and Guidance for the Designation of heavily modified water bodies':

www.wfduk.org/tag_guidance/article_4/heavily_modified_wb/view

For water bodies where it was not possible to designate using the rapid process a further detailed process was applied. The detailed designation process also applied the Article 4(3) tests but to a wider set of water body uses and gathered more supporting information and justifications for designation. The process is described in Figure I.1.

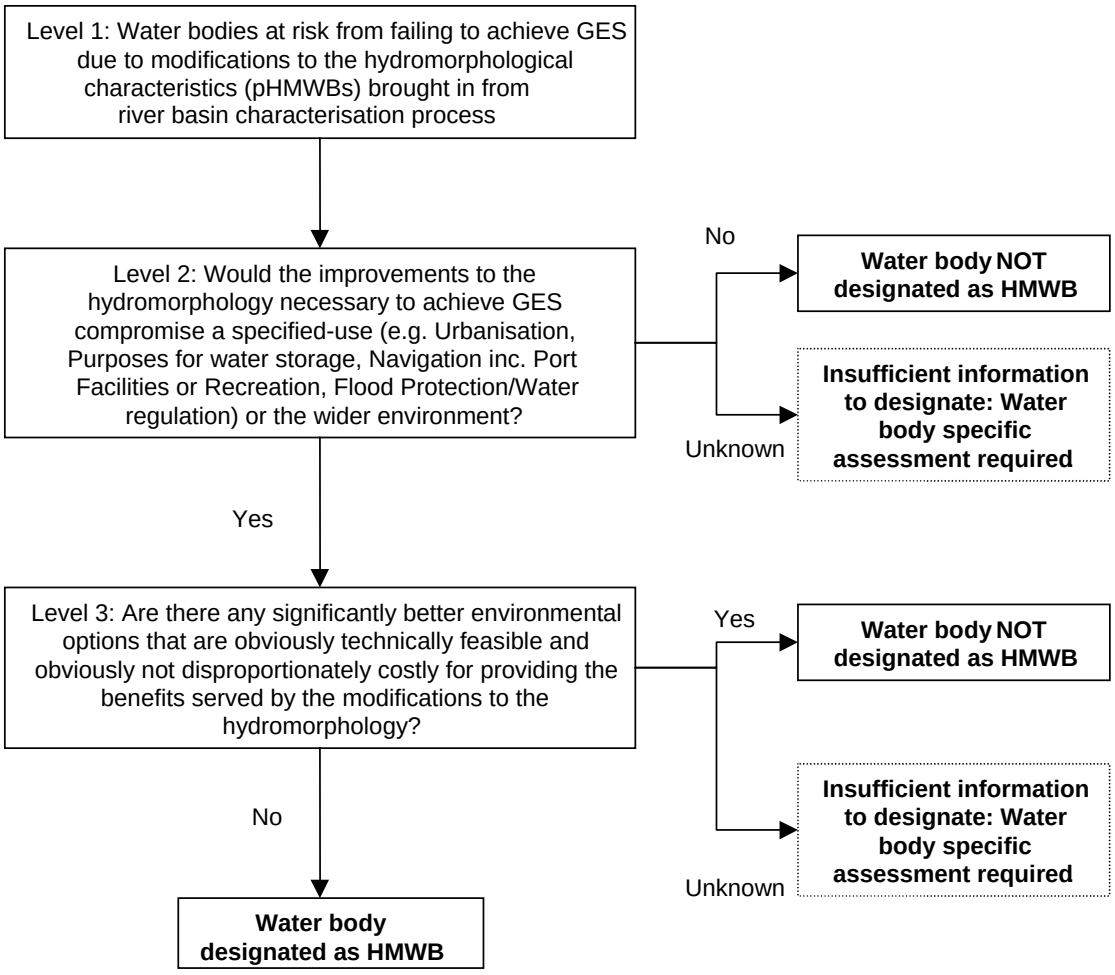
Figure I.1 **Summary of steps in the designation of artificial water bodies and heavily modified water bodies for freshwater water bodies**



Overview of the rapid designation process for heavily modified water bodies

The process is described in Figure I.2:

Figure I.2 **Outline of the rapid designation process for freshwater heavily modified water bodies**



Further specified uses were addressed in the detailed designation process.

Overview of the rapid designation process for artificial water bodies

A water body should be designated as artificial if the ability to achieve 'good ecological status' is limited through the designated use or through changes necessary for this use.

However, not all man-made water bodies have to be designated. Paragraph 6.8.1 of the CIS guidance explains:

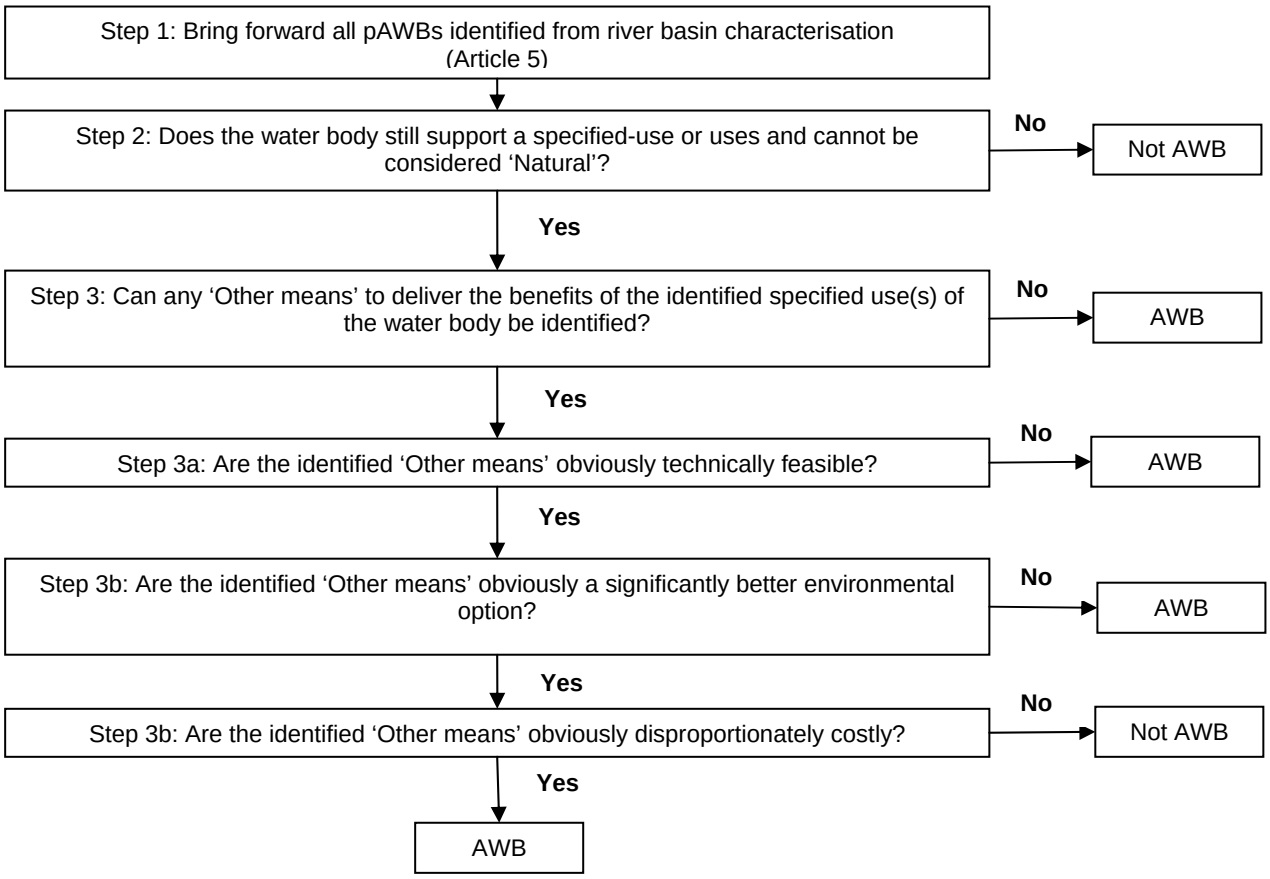
'There may be some circumstances where long established water bodies, which are subject to little or no pressures, are indistinguishable from natural waters. Under such circumstances it may be appropriate to consider their current biological condition as high ecological status (HES) or good ecological status (GES)'.

Water bodies that are considered as provisional artificial water bodies are shown in Figure I.3. The process for designating 'obvious' artificial water bodies is shown in Figure I.4

Figure I.3 **Water bodies that are considered as provisional artificial water bodies**

Category	Types	Includes
Lake	Lake	Flooded gravel pits Flooded surface mine workings Flooded clay pits Flooded peat workings Large ornamental lakes Large recreational lakes Pumped storage reservoirs Drainage ditches/channels
River	Canal Surface water transfers (open channels only)	Completely artificial dug canals Water diversions Leats Reservoir feeders
Estuarine and coastal waters	Docks and Harbours	Dug docks Flooded clay pits (which experience some saline intrusion) Storage reservoirs

Figure I.4 **Outline of rapid artificial water body designation process**



Overview of the detailed designation process

Where a decision on designation was not possible using the rapid process, water bodies were fed through to the detailed designation process.

The detailed designation process took into account all eleven specified uses outlined in Article 4(3);

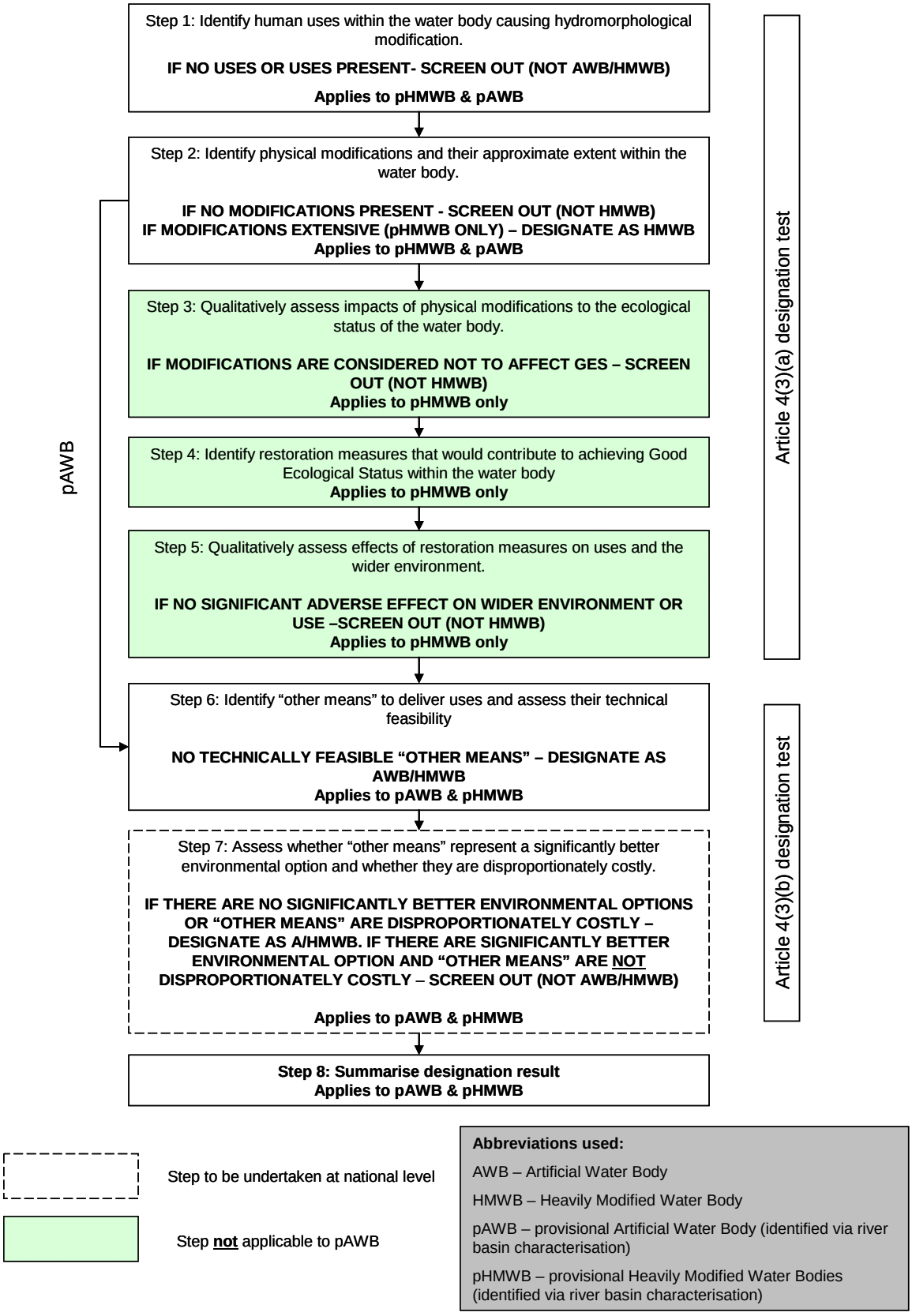
1. Wider environment
2. Navigation including port facilities
3. Recreation
4. Drinking water supply
5. Power generation
6. Irrigation
7. Water regulation, subdivided into i) strategic water transfers and ii) impoundment releases
8. Flood protection
9. Land drainage
10. Urbanisation
11. Other equally important sustainable human development activities

Several specified uses may be extensive within a water body. For example a riverine water body may be used extensively for Navigation, Flood Protection and Urbanisation.

The detailed artificial and heavily modified water body designation process comprised of eight steps (Figure I.5).

The steps highlighted in light green did not apply to artificial water bodies. Further detail on the steps can be found below:

Figure I.5 **Outline of detailed artificial and heavily modified water body designation process**



Further detail on the steps outlined in Figure I.5:

- Step one involved setting out the links between the pressures identified in the provisional identification of artificial and heavily modified water bodies, and the human uses associated with these pressures. Where water bodies did not have a specified use (and therefore could not have Article 4(3) tests applied), the water body was screened out from further assessment. The water bodies screened out were passed back into the broader river basin management process and have a target objective of good ecological status. Those which are not screened out remained as provisional artificial and heavily modified water bodies and continue to Step two.

- Step two involved the identification of those physical modifications that could result in changes to the hydromorphology of the water body. These changes needed to be long-term and substantially alter the water body morphological and hydrological characteristics. These modifications also needed to have a specified use as determined in Article 4(3). If there were no such physical modifications then the water body was screened out as not heavily modified. For provisional heavily modified water bodies, if there were extensive modifications present that had an associated specified use then it was assumed they would meet the Article 4(3) tests and the water body could be designated as heavily modified and screened out from further tests, provided the justification for the designation was recorded. For provisional artificial water bodies, as the water bodies are artificial, by default there must be extensive modifications associated with the water body, therefore it was not appropriate to apply this step.

- Step three involved bringing together information regarding morphological modifications (from Step two) and expert judgement from the Environment Agency ecology and biodiversity teams regarding the perceived ecological status of the water body. These teams were asked to assess how morphological modifications are affecting ecological status. Where water bodies are thought to be able to achieve good ecological status with existing hydromorphological modifications, the water body was screened out as not heavily modified. Those which were not screened out remained as provisional artificial or heavily modified water bodies and continued to Step four.

- Step four identified any potential hydromorphological restoration actions that could result in the water body achieving good ecological status. This step was informed by the expert knowledge of linkages between modifications and the ecology identified in Step three.

- In step five, information that had been gathered from earlier steps is pulled together in order to qualitatively assess the effects of restoration actions on the specified uses or the wider environment. Water bodies where restoration actions would not significantly affect the use or the wider environment in a negative way were screened out as not designated. These restoration actions to achieve good ecological status should go forward to the river basin management process (and be assessed as to their technical feasibility and cost effectiveness). The remaining water bodies were then assessed further in step six.

- Step six looked for ‘other means’ of delivering the benefits of the specified uses. If the ‘other means’ for providing the intended uses benefits were found to be technically infeasible then the water body can be designated as artificial or heavily modified as the water body had met the requirements of Article 4(3)(b). Otherwise the water body is assessed further in Step seven.

- Step seven considered the environmental benefit and monetary cost of any ‘other means’. Where the ‘other means’ were disproportionately costly or a worse environmental option, then water bodies could be designated as artificial or heavily

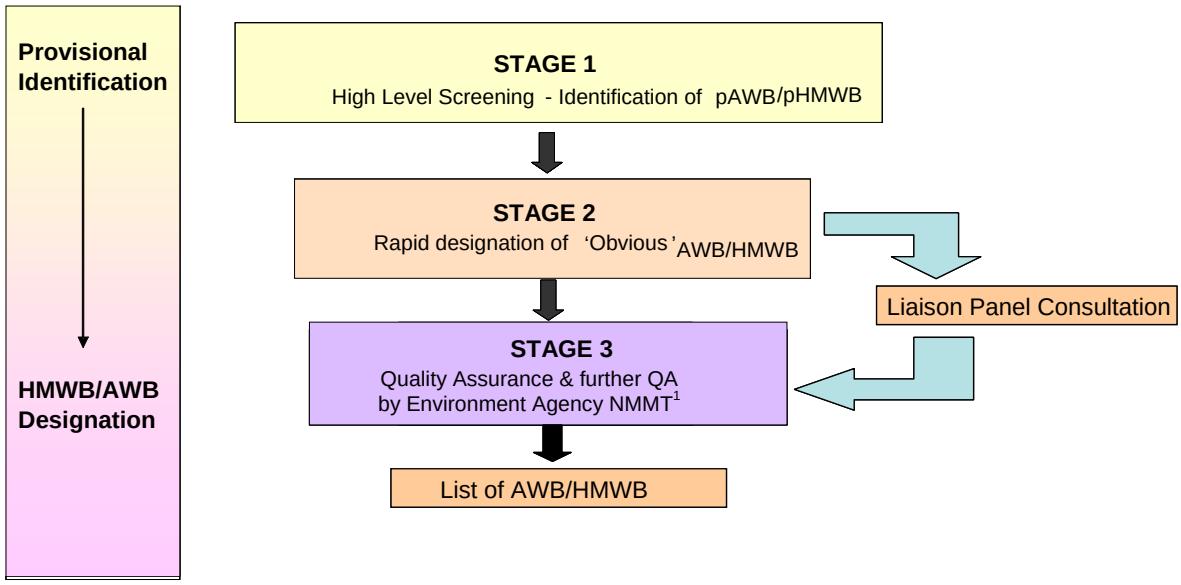
modified. If the ‘other means’ identified were a better environmental option and were not disproportionately costly then the water body could not be designated and screened out of further assessment. Only a small number of water bodies reached step seven to undergo these economic tests, most had been screened out at earlier stage.

- The final step (step eight) compiled all the steps undertaken during the detailed assessment and reports whether the water body was designated as an ‘artificial water body’, ‘heavily modified water body’ or ‘not artificial or heavily modified water body’ and any relevant comments supporting the designation.

I.3 Estuarine and coastal waters water bodies

The designation of Artificial and Heavily Modified Water Bodies for Estuarine and Coastal Waters process is described in Figure I.6 below.

Figure I.6. **Summary of steps in the designation of water bodies for estuarine and coastal water bodies**



([1] National Marine Monitoring Team)

Estuarine and Coastal Water Bodies were designated as Artificial and Heavily Modified Water Bodies for the following uses (outlined in the following sections)

- Flood protection use
- Navigation, ports and harbours use
- Coast protection use
- Marine aggregate extraction use
- Marine shell and fin fisheries use

The thresholds that were applied to the relationships between physical pressures, morphological change and ecological impacts were based on expert judgement.

Flood protection use

Water bodies were assessed that had significant flood risk management assets that modify the hydromorphological characteristics to protect land. The removal of these assets could therefore compromise the benefits provided by flood protection.

The assessment was based on three separate elements relating to:

- the extent of reclaimed land protected by shoreline flood protection assets;
- barrages and barriers across the width of the main water body or forming a boundary with another water body which provide flood protection benefits; and
- sluices across the width of the main water body or forming a boundary with another water body which provide flood protection benefits.

It is recognised that there are a large number of sluices associated with coastal and estuarine flood protection structures but these generally do not form the boundary with an adjacent water body. The view has been taken that such structures are only likely to be significant in the context of heavily modified water body designation where they span the width of the main water body or form a boundary with an adjacent water body. In addition to barrages/barriers and sluices, there are also a number of weirs in estuarine and coastal waters. However, none of these are considered to provide any flood protection benefit. Their main purpose has generally been to maintain water levels in the vicinity of upstream towns/villages, and they are therefore not considered further in the assessment.

Navigation, ports and harbours use

Water bodies were assessed that had a significant navigation, ports or harbour use that modifies the hydromorphological characteristics of the water body.

The assessment tested whether the actions to achieve good ecological status in these water bodies would compromise the benefits of navigation or ports and harbours.

The key criteria that have been used for the assessment were:

- the extent of navigation dredging in the water body - maintenance of navigable depth in previously deepened areas is critical to maintenance of the navigation use;
- the extent and intensity of dredge material disposal in the water body - disposal of dredge material is critical to the maintenance of the navigation use; and
- the extent of reclaimed areas behind quay lines - loss of quay line will directly affect specified use (unless there is significant long-term spare capacity).

Where the answer to any question was uncertain, the decision on whether to designate as a heavily modified water body for navigation or port and harbour use was deferred and the water body designated using expert judgement from Environment Agency area and national staff (taking into account any stakeholder comments available for the water body).

Coast protection use

Water bodies were assessed that contained significant coast protection structures/structures associated with the manipulation of sediment transport. The assessment examines whether the actions to achieve good ecological status in these water bodies would compromise the benefits provided by the coast protection structures.

The key criteria that have been used for the assessment were:

- the extent of influence of manipulators of sediment transport on inshore waters within the water body; and
- the extent of infrastructure development afforded protection by coast protection structures.

They typically include soft cliff protection structures (linear defences) and beach erosion structures (groynes, offshore breakwaters). In some locations, coast protection is also delivered through beach nourishment. In some instances coast protection structures may also provide a flood defence function.

Where the answer to any question was uncertain, the decision on whether to designate as a heavily modified water body for reasons of coast protection was deferred and subject to more detailed assessment during the Environment Agency quality assurance and stakeholder consultation.

Marine aggregate extraction use

Water bodies were assessed that were subject to marine aggregate extraction. Where such pressures were deemed to be significant, the assessment tested whether the actions to achieve good ecological status in these water bodies would compromise the benefits provided by the activity.

The key criteria that have been used for the assessment were:

- the extent of water body area licensed for marine aggregate extraction (marine aggregate extraction generally occurs offshore and most licensed sites are out of the 1nm from baseline WFD boundary). However, a small number of extractions do take place within WFD water body boundaries including:
  - sub tidal extraction of sand and gravel;
  - intertidal extraction of sand; and
  - subtidal extraction of marl.
- the extent of water body area subject to active extraction or sediment disturbance in the past decade.

Where the answer to any question is uncertain, the decision on whether to designate as a heavily modified water body for reasons of marine aggregate extraction was subject to a more detailed examination using expert judgement from Environment Agency area and national staff (taking into account any stakeholder comments available for the water body).

Marine shellfisheries use

Water bodies were assessed that were subject to marine shellfisheries use. Where such pressures are deemed to be significant, the assessment tested whether the actions to achieve good ecological status in these water bodies would compromise the benefits provided by the activity.

The criteria that has been used for the assessment was the extent of the shell fishing beds within designated shellfish waters within the water body.

The main hydromorphological impacts of shellfisheries include presence of structures (for cultivated shellfisheries) and bed disturbance during harvesting of shellfish (dredging, suction dredging). The alleviation of the pressures associated with shellfisheries can be achieved through reductions in the amount and intensity of harvesting and/or through controls on harvesting methods.

The assessment was based on the following information:

- extent of shellfish beds within designated shellfish waters in the water body; and
- threshold of 15% of total water body area to identify whether the water body is at risk of failing good ecological status.
- whether the shell fishing activities within the water body are likely to cause significant seabed disturbance and cover an area of greater than 15% of the water body area, (information supplied by the local Sea Fisheries Committee).

Where a water body is at risk from shellfisheries bed disturbance pressures (either alone or in combination with other forms of physical modification), two further specific tests need to be applied for a water body to be designated as heavily modified:

- would a reduction in extent of harvesting activity or change in harvesting method have a significant adverse effect on shellfisheries activity;
- would all environmentally better and technically feasible alternatives be disproportionately costly?

Consultation with Sea Fisheries Committees has indicated that the answer to both of these questions would generally be “Yes”. For the purposes of this assessment, if a water body has been identified as “at risk” because of shellfisheries pressure, it has been designated as a heavily modified water body.

Where responses have not yet been provided by the relevant Sea Fisheries Committees, the water body was flagged as “Unsure” and the final designation decision was made taking into account any received stakeholder and Environment Agency area comments before quality assurance.

Marine fin fisheries use

Water bodies were assessed that were thought to be supporting significant fin fisheries activities. The criterion used for the fin fisheries assessment was:

- the extent of fin fishing activities including Otter and Beam trawling known to cause significant seabed disturbance

Where responses were not provided by the relevant Sea Fisheries Committee, the water body was flagged as “Unsure”. These were then further assessed as part of the Environment Agency quality assurance using any additional information from the stakeholder consultation.

I.4 Liaison Panel Review and Further Quality Check of Results

Liaison panel review

After the rapid designation stage was complete, these interim results formed the basis of a liaison panel consultation. Liaison panels were invited to comment on the results from the rapid designation and provide any additional evidence they held on water bodies. Any information provided by the liaison panels was used to augment the existing information held within the Environment Agency. Where designation results from the liaison panels and the rapid designation process were contradictory the water body information was reviewed and designation results were modified where appropriate.

Quality check of designation results

A further quality check of the designation results was undertaken as part of the good ecological potential classification process. This was the first time the water body designations were used operationally in order to classify artificial and heavily modified water bodies. Through this process various corrections were made where designations were found to be inaccurate.

Cross check with ecological status of the water body

After the designation process was completed the Environment Agency made a cross check of the designation results and the ecological status of the water body. In some cases it was found that a water body has been designated as heavily modified yet the biological elements surveyed are showing good ecological status. Where this was the case the HMWB designation was removed. Further biological monitoring will be carried out between 2010 and 2012 to confirm that it was right to remove the designation.

I.5 Designation of Additional Water Bodies

In March 2008, the Secretary of State agreed to the inclusion of additional water bodies and the re-delineation or splitting of a small number of existing water bodies. These water bodies were not identified in time to be included in the designation process described above. Due to resource constraints and limited data availability, these water bodies have been assessed as part of a much simpler designation process, largely based on the results of the hydromorphology risk assessments. Annex G discusses risk assessment in more detail.

Any water body with an ‘at risk’ or ‘probably at risk’ classification from the hydromorphology risk assessment process is designated as a provisional HMWB. Further map and aerial photography based analysis is used to identify provisional AWBs (based on physical indicators) which may include changing a previously identified pHMWB to a pAWB. An additional map-based assessment was used to provide a ‘reality check’ on the provisional designation status before the water bodies are finally identified as HMWBs or AWBs.

Water body use (or reason for designation) is based on the pressures identified in the hydromorphology risk assessment process and any further available information relating to use (e.g. conservation designation, drinking water protected area or freshwater fisheries protected area). The list of uses assigned to freshwater and coastal/estuarine water bodies is the same as that used in the full designation process described above.

I.6 Results

Figure I.7 **The designation status for riverine water bodies**

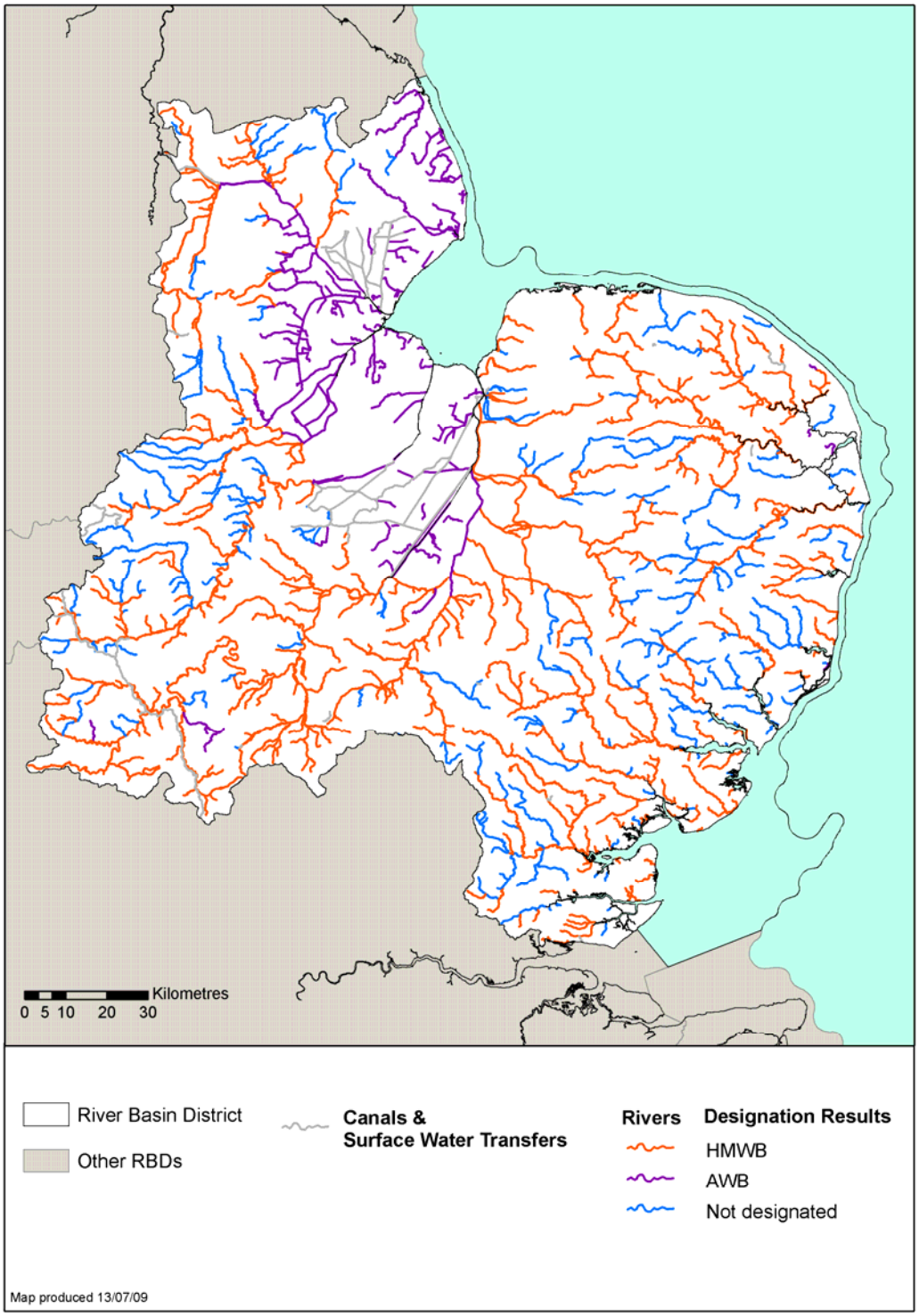


Figure I.8 **The designation status for lake, estuarine and coastal water bodies and SSSI ditches**

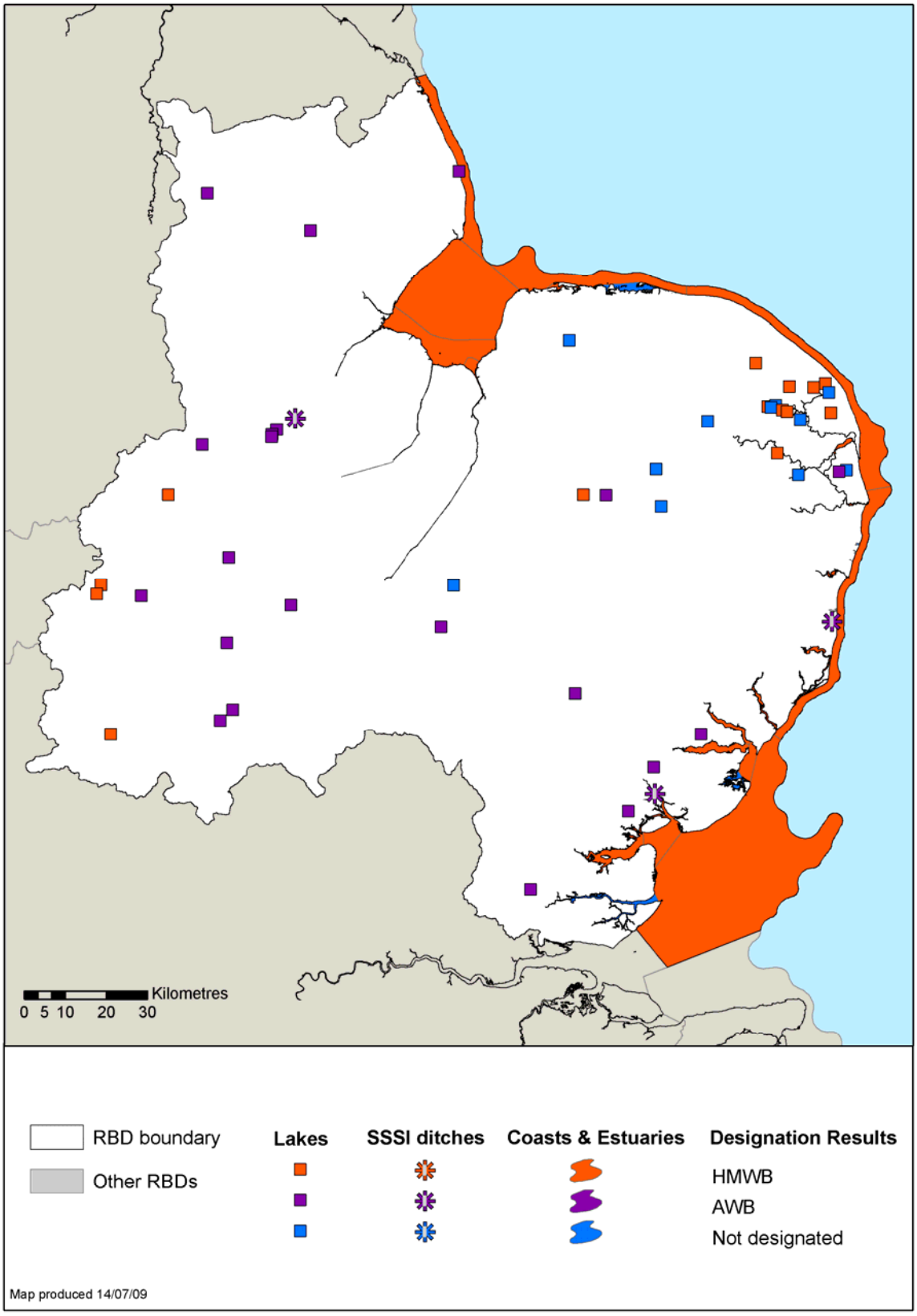
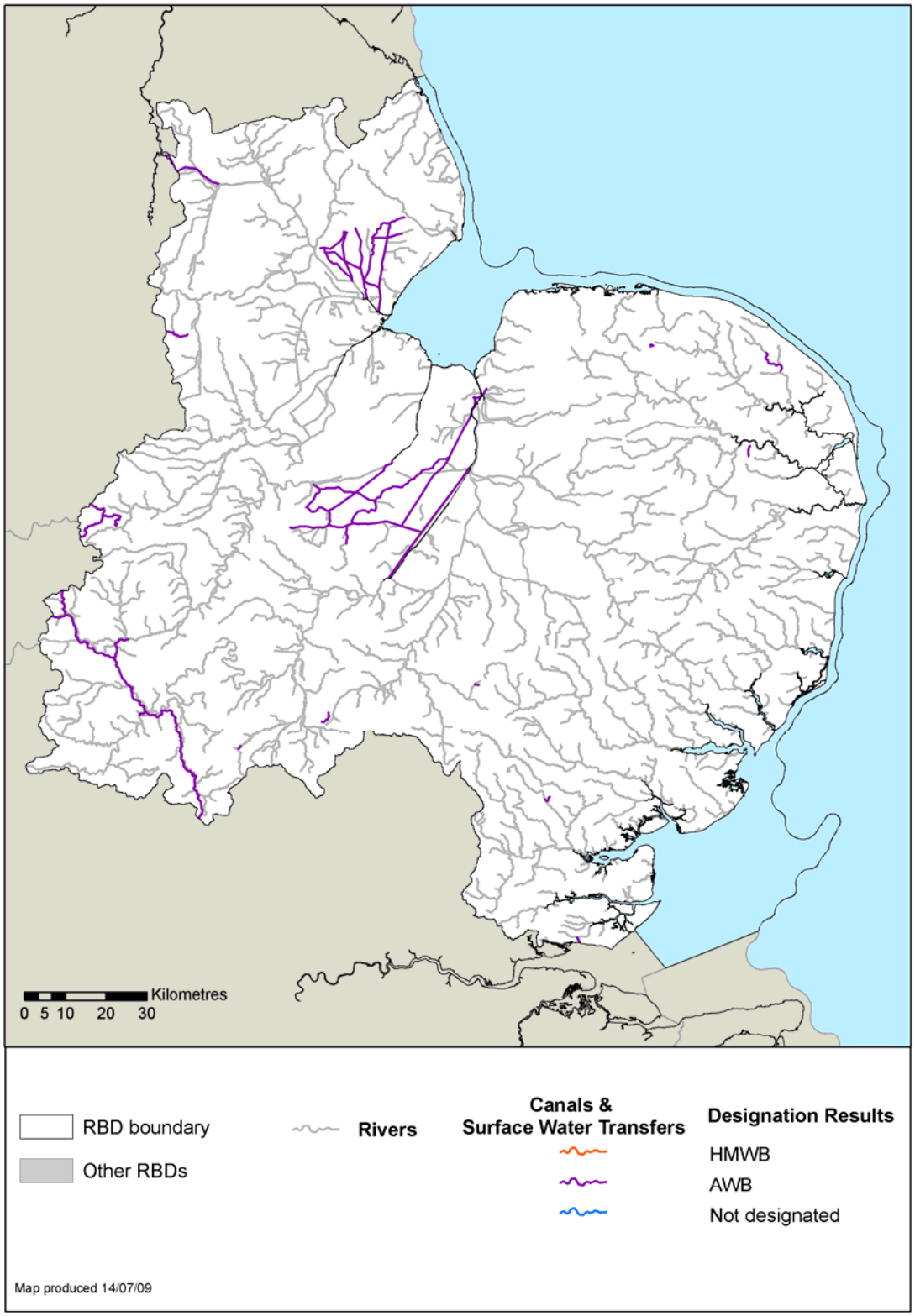


Figure I.9 **The designation status for canals & surface water transfer water bodies**



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Annex J: Aligning other key processes to river basin management

Contents

J.1 Introduction

Purpose of annex

Ministerial guidance on River Basin Planning[1] identifies that a large part of river basin management will involve reviewing the wide range of existing policies, plans and measures and amending them where necessary, to meet Water Framework Directive objectives. This includes those for which the Environment Agency is responsible, and some which are the responsibility of other organisations.

This annex starts to identify where and how relevant policies, planning processes, management processes, programmes, initiatives and methods are being better aligned to deliver more sustainable outcomes for the water environment. The annex intentionally focuses on key planning processes that are spatially structured which are somewhat "external" to the river basin management process, namely,

- Urban and rural land use planning; and
- Flood and coastal erosion risk management.

Marine planning is also covered because of ongoing developments with the Marine Bill and alignment to river basin management.

The Annex identifies both national alignment of generic processes as well as more targeted local work.

Alignment, in some respects, represents a measure or an action in itself. It should help deliver more widespread and sustainable outcomes, more quickly, for on-going river basin management. This annex is not intended to be comprehensive, rather more illustrative, with the intention that this alignment should and will continue as part of on-going river basin management. Annex F identifies many of the key legislation, policies, plans and programmes that can help to deliver Water Framework Directive objectives.

Drivers for alignment

Government and a number of public bodies have a duty to help deliver sustainable development and most other organisations, whether public or private, have made commitments to carry out their activities with sustainable development in mind. In doing this the environmental dimension of sustainability must be balanced against economic and social dimensions. The general aim of the Water Framework Directive is to deliver sustainable water management. Any significant policy, planning process, management process, initiative or programme which has the potential to impact on water or the water environment should therefore consider the philosophy (Water Framework Directive, pre-amble), aims (Water Framework Directive, Article 1) and objectives (Water Framework Directive, Articles 4 & 7) of the Water Framework Directive.

Likewise, in delivering sustainable water management, implementation of the Water Framework Directive will need to consider economic and social dimensions while planning to deliver environmental outcomes. The main processes and mechanisms to do this are through the economic appraisal processes required to justify alternative objectives (Water Framework Directive, Article 4(3-7)) and the supporting impact assessments and recommendations from Strategic Environmental Assessment reports which accompany the draft and this first River Basin Management Plan.

[1] River Basin Planning Guidance. Department for Environment, Food and Rural Affairs & Welsh Assembly Government. 2006

In the Regulations[2] implementing the Water Framework Directive in England and Wales there is a general legal duty on all public bodies, in exercising their functions, so far as affecting a river basin district, to have regard to the River Basin Management Plan and any supplementary plans.

Article 4(7) of the Water Framework Directive sets out the circumstances under which a deterioration in water body status or failure to meet Water Framework Directive objectives is permitted, where certain conditions are met. River basin management will involve reviewing the wide range of existing policies, plans and processes, discussed in this annex, in order to manage new physical modification. Managing new modifications will require an assessment of the potential impact of the modification on water body status and an application of Article 4(7) where appropriate. The Environment Agency will review its own polices, plans and processes to incorporate a new process to manage new modifications through environmental assessment. The Environment Agency will provide guidance and advice to external organisations to ensure that no deterioration and water body objectives are met where new modifications are proposed, and an Article 4(7) defence is applied where necessary. The baseline water body status against which deterioration will be assessed is that reported in this River Basin Management Plan (see Annex B).

All new physical modifications occurring in water bodies between December 2006 and March 2009 have been assessed according to Art 4(7) requirements. Where a physical modification was identified as likely to have caused a deterioration in status or prevented a water body from meeting its water body objectives, then the Article 4(7) tests were applied. The results of this assessment are reported in Annex B of this plan. The list of physical modifications considered as part of the assessment was compiled from Environment Agency functions and external bodies (for example British Waterways and the Association of Inland Navigation Authorities).

Ministerial guidance on river basin management planning[3] identifies that the Environment Agency should:

- promote and encourage awareness of impacts that activities and policies of other public bodies have on the water environment;
- work with other public bodies to develop good links between river basin [management] planning and other relevant plans and strategies, especially those plans that have a statutory basis (for example Regional Spatial Strategies and Local Development Frameworks/ Local Development Plans);
- promote and encourage the inclusion of Water Framework Directive considerations in public bodies' plans, policies, guidance, appraisal systems and casework decisions;
- take action to integrate and streamline its own plans and processes.

The guidance identifies that this should be a two way process.

Ministerial guidance on classification and standards for water[4] identifies the environmental standards that must be embedded into Environment Agency policies, planning processes and classification schemes.

European and UK policies on climate change adaptation are also developing on the basis not only that climate change considerations need to be aligned into existing processes but also that aligning existing processes should, in itself, help deliver significant benefits for climate change adaptation (see Annex H).

[2] The Water Environment (Water Framework Directive)(England and Wales) Regulations 2003, Statutory Instrument 2003 No. 3242
[3] River Basin Planning Guidance. Department for Environment, Food and Rural Affairs & Welsh Assembly Government. 2006.
[4] Water Framework Directive: Directions to the Environment Agency on Classification of Water Bodies Department for Environment, Food and Rural Affairs & Welsh Assembly Government 2009

This annex addresses almost unanimous stakeholder support[5] for the principle of better alignment and where possible integration of relevant processes to:

- help deliver more sustainable water outcomes more quickly;
- identify synergies and the possibility of more radical multiple-benefit solutions;
- deliver more efficient stakeholder engagement.

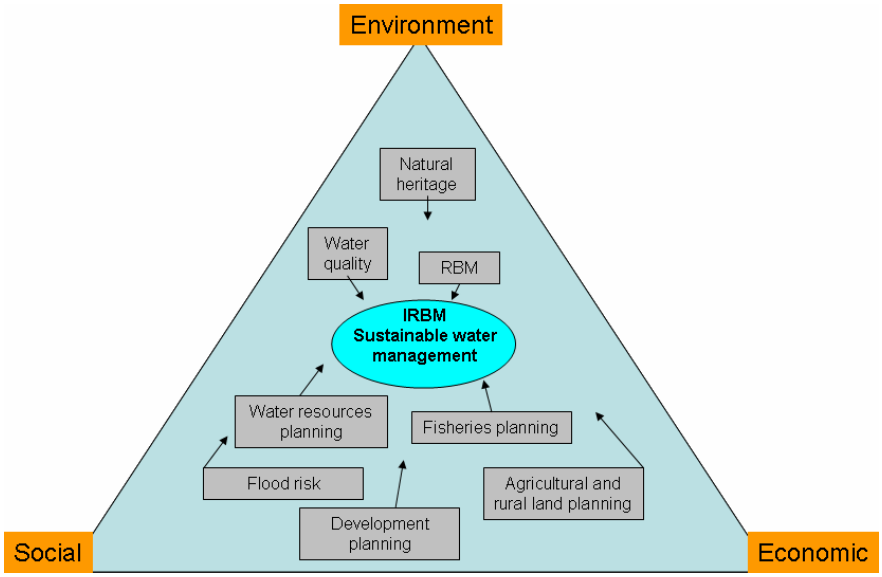
Opportunities for alignment

There are considerable overlaps between the aims, objectives and processes of many existing activities to those of the Water Framework Directive[6,7]. This means there are significant opportunities for alignment. However there are issues which make this alignment complex such as differences in: responsible parties; spatial and temporal scale of planning and implementation; processes and tools; source funding restrictions and priorities. However significant progress can be made if parties are willing and clearly guided.

Alignment can be performed through better integration of policy (EU and UK), the consideration of the objectives and outcomes of different processes through planning and implementation activities and the embedding of process steps (e.g. option appraisal and justification of alternative objectives and standard methods in existing processes. It is important that this alignment is ongoing through close working between key stakeholders at different organisational levels from national to local.

Figure J1 illustrates some of the key processes, which have an impact on sustainable water management and where they might sit, in terms of emphasis, in the three key dimensions of sustainability: environmental, societal and economic.

Figure J1: **Some of the key processes which have an impact on sustainable water management.**



[5] Water for life and livelihoods. A framework for river basin planning in England & Wales. Environment Agency. Feb 2006
[6] A research study into the production of Registers of Strategic Management Plans and Stakeholders. Feb 2002. For the Environment Agency by Land Use Consultants (in association with Conlan Consulting)
[7] Consistent Economic Appraisal Approaches with Respect to the Water Framework Directive River Basin Management Plans. Collaborative Research Programme on Water Framework Directive economics Final report. Jan 2006. For the Welsh Assembly Government and Water Framework Directive Collaborative Research Programme by Jacobs in association with ADAS

The Strategic Environmental Assessment reports which accompany the draft and this first River Basin Management Plan identifies some of the potential positive and negative impacts of other processes on the river basin management process and vice-versa.

J.2 Building, town & country planning and regeneration

Introduction

In England despite the current economic conditions, the National Housing and Planning Advice Unit feels that, housing affordability and unsatisfied housing need has not lessened the demand for new homes and associated infrastructure (roads, schools, waste management and utilities etc). Government still expects the number of new homes to rise significantly with three million additional homes proposed by 2020. This represents an increase of up to 40 percent over existing housing development rates and these are reflected in the latest rounds of Regional Spatial Strategies. Recent National Housing and Planning Advice Unit advice has suggested a possible need to consider even higher rates of housing delivery in England. This would be tested through revisions to Regional Spatial Strategies or the new Single Regional Strategies required under the Local Democracy**,** Economic Development and Construction Bill.

The impacts of all these new homes on the water environment and achieving Water Framework Directive objectives would be tested through the spatial planning system and its examination and appraisal processes as outlined below. For example, some of this development is in already water-stressed areas. The Governments Strategy for Water in England "Future Water"[8] identifies that water efficiency will be taken into account in planning and delivery of housing growth.

Main aims of the spatial planning system

Under Section 39 of the Planning & Compulsory Purchase Act 2004, planning in England and Wales has the statutory purpose of contributing to the achievement of sustainable development as set out in the UK Sustainable Development Strategy[9] and the Welsh Assembly Government's Sustainable Development Scheme for Wales[10]. The planning and management of development must therefore protect and improve the environment, respect environmental limits and contribute to a healthy and just society.

The spatial planning system has a direct and legitimate role in addressing the potentially significant sustainability implications of growth and development, particularly those arising through increased house building rates. This includes the very real impact new development can have on the water environment.

Local Authorities in England and Wales, Regional Assemblies in England, the Greater London Authority, National Parks Authorities and the Broads Authority constitute Planning Authorities. They are required to develop spatial land use plans to guide development and land use activity within their areas.

At the level of the English Regions and Greater London this is through Regional Spatial Strategies and the London plan, respectively. These set policies in relation to development and land use, including the setting of specific house building targets for local authorities within their areas. Below these are local authority produced Local Development Frameworks. These identify locations for certain types of developments, including a 5 year

[8] Future Water- The Government's Water Strategy for England. Defra. HM Government, Feb 2008.
[9] Securing the future- delivering the UK sustainable development strategy. Defra Mar 2005.
[10] http://wales.gov.uk/topics/sustainabledevelopment/publications/onewalesoneplanet/?lang=en

supply of housing sites to meet their housing targets and policies to control certain aspects of their form, location and, potentially, timing of development.

Together these represent the 'development plan' which provides the policy framework against which development must be assessed

These plans are subject to Sustainability Appraisal (incorporating Strategic Environmental Assessment) and will be tested through an Examination in Public.

Guiding the overall operation of this system is a range of planning policy guidance provided by Planning Policy Statements.

The new Infrastructure Planning Commission and National Policy Statements

Major infrastructure projects such as ports, power stations and transport schemes will have significant potential impacts on the water environment. Currently these are dealt with through other planning regimes[11].

The Planning Act 2008 creates a new system of development consent for certain types and scales of nationally significant infrastructure. Part 3 of the Act outlines the types and scales of development which will be covered by this new consent regime. This has established the formation of an Infrastructure Planning Commission who will examine and determine these proposals. To guide them a set of National Policy Statements covering these infrastructure types is currently being developed and, when in force, will set the framework for the Infrastructure Planning Commission's decisions.

Spatial Planning and the delivery of the Water Framework Directive

The role of spatial planning is hugely important in improving the water environment, and as a minimum, the activities of all public bodies must not lead to a deterioration of the water environment. Regional and sub-regional and local plans and activities have a far-reaching influence on local business and communities.

The sustainable development duty which underpins spatial planning provides a real opportunity for the control of development to ensure we get the right type and quality of development, in the right place and at the right time. The spatial planning system can therefore be better aligned with Water Framework Directive to take Water Framework Directive objectives into account through national guidance and local processes. For example, it is essential that sustainable water management is incorporated into spatial plans and local guidance (such as Supplementary Planning Documents) and the control of applications for planning permission (such as Planning Conditions and section 106 Agreements). One way to ensure this happens is through their Strategic Environmental Assessment, for which the Environment Agency is one of the statutory consultees.

Public bodies should also identify opportunities for improvements and restoration work to maximise any contribution to meeting the Water Framework Directive objectives. Key areas of work are flood risk, land management and transport. Tools such as Water Cycle Studies (in England) at a project level can help identify and realise significant benefits for the water environment.

These spatial plans are also subject to Habitats Regulations Assessment which will assess their impact on and need to avoid and reduce impact to water-based Natura 2000 sites.

[11] These regimes include the Transport & Works Act 1992, the Electricity Act 1989, the Highways Act 1980, the Gas Act 1965, the Harbours Act 1964, and the Pipelines Act 1962.

The table below identifies the main Water Framework Directive pressures affected by growth and development and how spatial planning can contribute to addressing these.

Table J1- **Main Water Framework Directive pressures affected by growth and development and how spatial planning responses can contribute to addressing these.**

Water Framework Directive pressure	Contribution of growth and development to pressure	What spatial planning may be able to do address this
Point Source pollution	• increased loads for waste water (Biological Oxygen Demand, nutrients, chemicals) treatment of additional flows from new development.	• timing and phasing development to coincide with delivery of additional capacity to meet demands from urban growth and industry. • include policy in spatial planning documents (e.g. for sustainable drainage systems and place conditions on the grant of planning permission to control the rate of runoff from new development into combined sewer systems – reducing frequency of storm overflow discharges. • ensure that development is designed to integrate these principles from the outset. • use of water cycle strategies early in development planning
Diffuse non-agricultural pollution	• during construction (mobilisation of contaminants, sedimentation, pollution incidents etc). • afterwards through biological, chemical and other pollutants/sediments washing off from hard standing areas into watercourses. • risk of misconnections	• where land may be affected by contaminants, include policies in development plan documents which encourage sustainable remediation techniques which reduces/removes/render them harmless. • encourage good construction practices. • require sustainable drainage systems which improve the quality of runoff rather than just controlling its quantity/rate.
Pressure on the quantity of water	• abstraction and other artificial flow pressures arising from need to supply water to new developments. • developments leading to physical modification of water courses, affecting the quantity and dynamics of flow (the hydrological regime).	• slow the increasing demand for water, e.g. through water efficiency policies (the code for sustainable homes and BREEAM incl. water efficiency measures). • production and promotion of design guidance including retro-fitting. • timing and phasing development to coincide with delivery of enhancements to water storage, transfer systems and local supply networks. • use of water cycle strategies early in development planning.
Other impacts on the status of water	• pressure for physical modification of watercourses (morphology). • development in areas of flood risk (or development which increases flood risk elsewhere). • biological pressures - including fish stocking, biota removal, invasive non-native species. • increased pressure from	• spatial planning documents to include policies which protect natural water bodies from modification, and the improvement and naturalisation of heavily modified water bodies. • applying Policy Planning Statement (flood risk) by locating development sites outside of flood risk areas, controlling the rate and impact runoff downstream and mitigating the potential impacts of flood defences, drainage works and surface water management on water bodies. • seek the inclusion of green infrastructure policies within spatial planning documents. Green

Water Framework Directive pressure	Contribution of growth and development to pressure	What spatial planning may be able to do address this
	Recreation (e.g. boating, fishing). • loss and fragmentation of habitats and green space • soil sealing (extensions, drives patios)	infrastructure can help deliver sustainable water management to help address existing issues and mitigate the effects of new development.

Each of the responses outlined above can be addressed sequentially at different stages of the planning process. For example, to address water resources it is necessary to analyse capacity and major infrastructure in a region (within Regional Spatial Strategies), consider local infrastructure and housing and other growth delivery trajectories in particular locations (Local Development Frameworks and Plans), and influence water efficiency in buildings through master-planning and the planning application process.

However, it should be noted that spatial planning does not generally influence the performance of existing development and the significant and ongoing impacts this will have on the water environment. There may be some exceptions where, to be sustainable, new development is subject to 'neutrality' policies which require efficiencies (i.e. water use) to be made within existing development. However initially the Environment Agency expect only a limited number of these situations. Other mechanisms will be required to manage this impact[12]. It is clear however that more needs to be done, with Local Authorities, in housing renovation programmes. Work is ongoing to develop and ensure the implementation of appropriate actions to address this.

Aligning spatial planning and river basin management planning

As a statutory consultee, the Environment Agency already has much involvement in the spatial planning system through its existing work. Whilst the Spatial Planning system provides structures and mechanisms for delivering some of the outcomes of the Water Framework Directive, further work is already underway to better align these so they support the delivery of Water Framework Directive objectives.

To properly align river basin management and spatial planning to achieve the objectives of each regime we will all have to apply new standards, and over a period of time, review external guidance and policy and Environment Agency advice to spatial planners so that development plans and planning applications become Water Framework Directive compliant.

There are three main areas in which Spatial and river basin management can be better aligned. These are set out below:

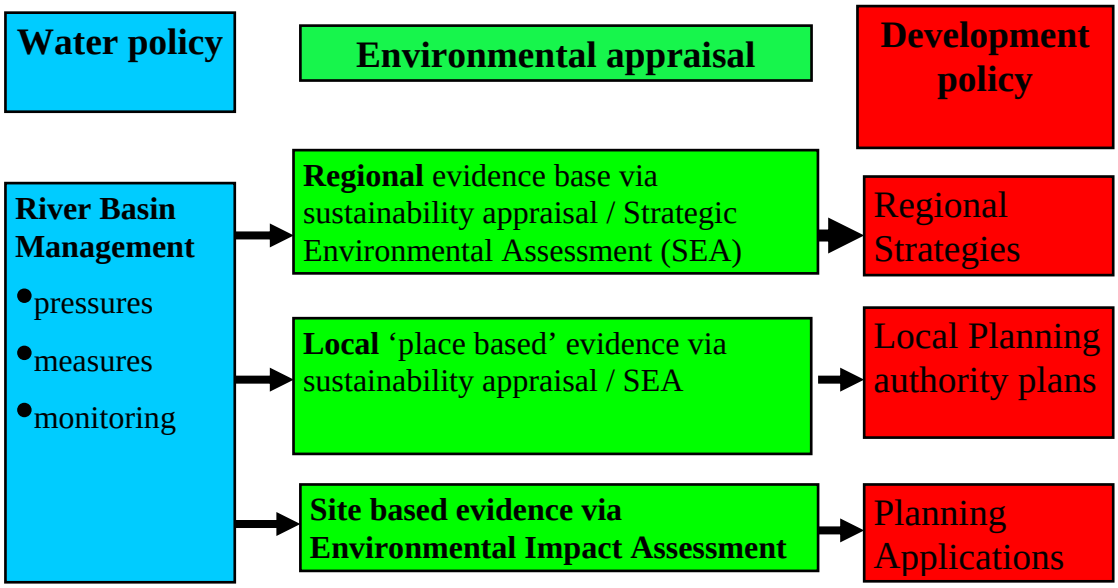
- **Providing the evidence support to the spatial planning system through river basin management**

River basin management under the Water Framework Directive and the River Basin Management Plans provide key information on the pressures on the water environment. As such the river basin management process can provide a robust evidence base to help the key planning stages of spatial plan options development and site allocations. It will also provide confidence in the deliverability and soundness of plans and be an invaluable input into any public examinations, including technical seminars and evidence sessions. A key

[12] See "Future Water: The Governments water strategy for England. HM Government. Feb 2008

way align the spatial and water planning systems is to ensure the analysis done for river basin management (and the River Basin Management Plans) feeds into the evidence and appraisal process required for all plans and the consideration of individual planning applications (see below).

Figure J2 – **Proposed interaction of river basin management with the planning system**



- **Providing Planning Guidance**

Further work by Government (supported by the Environment Agency) is already underway to clarify the implications for spatial planning and delivery of planned development. In England, primarily, this will occur through the production of a Water and Planning guide by Communities and Local Government – aimed for publication in late 2009 or early 2010. This guidance will set out government policy on water relevant to spatial planning and specifically what considerations local authorities and others involved in planning should take. It will also detail steps local authorities should or could take to reflect these considerations in local spatial plans.

Additionally, through the public consultation on National Policy Statements (and their accompanying Appraisals of sustainability) the impacts of these significant infrastructure projects on Water Framework Directive objectives will have to be embedded into this policy framework which will guide the Infrastructure Planning Commission's decisions.

- **Providing spatial planning advice as statutory consultee**

There is also a need to ensure Water Framework Directive objectives are better aligned with existing Environment Agency processes for engaging with spatial planning and the advice we provide to planning authorities. To these ends the Environment Agency intends to:

- Better co-ordinate its internal spatial planning policy work with other internal policy teams such as sustainable communities and river basin management teams;
- Influence Government Departments and national bodies to issue Water Framework Directive guidance and training for the planning profession;

- Review internal Environment Agency processes for dealing with Regional Spatial Strategies, Local Development Frameworks/Plans and planning applications and ensure that they meet Water Framework Directive requirements;
- Review and improve our internal guidance to our teams to influence the spatial planning system to take account of Water Framework Directive objectives in spatial planning documents and policies;
- Review and issue work instructions for our staff on how to take Water Framework Directive objectives into account when responding to planning consultations;
- Make Water Framework Directive information available to planning authorities in a useful format (e.g. Environment Agency "Environmental Information for Decision Makers project").

Timescales

Overall timescales align, however the timescales for the production and review of regional spatial strategies and local development frameworks and the production and publication of the first River Basin Management Plans do not.

There is much variation on the production and adoption of spatial planning documents across England and Wales. Many spatial planning documents will have reached the submission stage before the first River Basin Management Plan has been published. This means that the emerging first River Basin Management Plans will have less weight in planning terms and may not have fully influenced the spatial planning documents. However, as adopted spatial plans are reviewed and the first River Basin Management Plan is published in December 2009, the spatial planning system will have to consider how to "have regard to River Basin Management Plans" and how much weight is given to this in the decision making process.

J.3 Rural planning and agriculture

Introduction

Because of the long-term risk of agricultural activities to the water environment, water supplies and to the quality of groundwater, it has recently been the focus of new policy development and programmes.

The current planning process for rural areas in England and Wales

The Town and Country Planning system (See Spatial Planning above) provides the most significant controls over land use planning in rural areas. However agricultural land managers still retain many permitted development rights for built development and are able to use land for different types of agriculture, or manage it in different ways which change environmental impacts. The current planning system for development does not address agricultural impacts on water.

Public incentive and subsidy led programmes

There are a variety of programmes, which provide substantial incentives and subsidies for land managers for a range of purposes, which can create a very strong motivation for changing land management or land use.

Programmes with a clear relevance to the river basin management process include:

- The Single Farm Payment of the Common Agricultural Policy and the design and implementation of the associated cross-compliance conditions;

- The Rural Development Programme for England;
- The EU Structural Fund programmes.

Regional Government offices, Regional Development Agencies, Natural England and the Forestry Commission are in charge of a large proportion of the planning and implementation of areas of work regarding rural development.

Single Farm Payments and the Rural Development Programme for England operate on different funding cycles to the Water Framework Directive, making coordinated planning more difficult. Water Framework Directive objectives are included in agri-environment schemes, but it is a relatively recent driver for investment. The England Catchment Sensitive Farming Delivery Initiative, currently funded by Defra separately from the Rural Development Programme for England, aims to address biodiversity and water quality issues related to diffuse water pollution from agriculture and will also help to meet Water Framework Directive objectives. The Government's Land Use Foresight Project will look at how to address the impacts of water and land on each other in the longer term.

Coordination of the rural planning system

Planning for rural areas is co-ordinated largely through Regional Spatial and Economic strategies which include both urban and rural issues. Delivery bodies in the Regions tend to plan individually. In order to deliver successfully in rural areas, river basin management will need good co-operation between delivery bodies.

Rural planning processes that can potentially be aligned to the river basin management process, at a *policy and planning* level, are:

- Future diffuse pollution reviews, scientific evidence and related strategies and policy development that will derive from them;
- Future development of agriculture-specific and forestry-specific regulations addressing issues of significant risk;
- EU Common Agricultural Policy health check challenge agenda and periodic reviews of cross-compliance regulatory requirements;
- Future development of cross-compliance standards under the reformed Common Agricultural Policy;
- Future review of Rural Development Programmes particularly further development of Land Management Schemes and Catchment Sensitive Farming initiatives;
- Future reviews of National and regional strategies for trees, woodland and forestry focusing on the use of broadleaf woodland to reduce pollution risk.

There are also numerous, more specific, strategies which will offer an opportunity for future alignment with the river basin management process to reflect water planning objectives.

Strategy developers should be encouraged to accept the link between activities on land and their effect on water quality and the water environment. They should increase their emphasis on protection and improvement of soil and water quality and resources, make specific reference to the need of promoting better water quality outcomes and to the roles of agriculture and forestry in meeting Water Framework Directive objectives. Where possible, they should seek development of integrated strategies covering both agricultural and forestry management for each country, and provide a consistent message to land managers.

Anglian River Basin District activity on alignment of rural planning and agriculture for Water Framework Directive

Here we identify some specific examples of alignment of rural planning and agriculture that have occurred in the Anglian River Basin District.

The Common Ground initiative has been developed to improve communication routes with the agricultural advisers and businesses working with and advising farmers in the Anglian River Basin District. The aim of the initiative is to promote best practice so that the advisers recognise the importance of resource protection and climate change adaptation to farm business sustainability. Common Ground workshops will run on an annual basis within the river basin district.

J.4 Forestry management

Both commercial and recreational forestry activities deliver significant economic and social benefits, but they can also impact on the environment.

Forest management and planning falls outside the boundaries of development planning regulation and the Environment Agency is not a statutory consultee on forestry issues. A key element for successful implementation of the Water Framework Directive will therefore be the establishment of appropriate links between the river basin management and the forest planning and regulation systems in England and Wales. The Environment Agency is currently able to comment on a non-statutory basis on license applications submitted to the Forestry Commission. The Environment Agency also serves on steering groups involved with the Regional Forestry Frameworks and can exert influence via this route too.

Operational issues

The Forestry Commission produced (in conjunction with a working group) the 'Forests and Water Guidelines'. These guidelines provide the basis for sustainable management of the water environment by forest planners and managers. The fourth edition of these guidelines is currently being revised, and will take into account the Water Framework Directive. In order to ensure the sustainable management of the water environment by forest planners and managers it is important to bring about the widespread adoption of the "Forests and Water Guidelines", both in terms of management practices and in the planning of new forests.

Going forward we will all have to build on our assessments of the extent and types of pressures affecting the aquatic environment in forested catchments. Parties will need to work in partnership to implement river basin management in relation to both planning and management and influence forestry management practices with appropriate agreed management actions.

J.5 Flood and coastal erosion risk management

EU Floods Directive

Implementation of the EU Floods Directive (Directive 2007/60/EC on the assessment and management of flood risks) will be closely co-ordinated with the Water Framework Directive. The assessment and management units (e.g. river basin districts) and the planning cycles for the two directives will be closely aligned. The EU Common Implementation Strategy for the Water Framework Directive also supports the implementation of the Floods Directive, through Working group F on Floods. This group

is co-ordinating implementation as a core activity in its work-programme. As well as administrative co-ordination, the Floods Directive requires that the environmental objectives of the Water Framework Directive are taken into account in flood and coastal erosion risk planning.

Flood and Coastal Erosion Risk Management Strategies

The Government, through the draft strategy for Flood and Coastal Erosion Risk Management (FCRM), 'Making Space for Water[13]' has expressed the intention to move towards a more holistic approach to FCRM that takes into account all sources of flooding.

Their stated aim is to manage risks by employing an integrated portfolio of approaches which reflect both national and local priorities, so as to:

- reduce the threat to people and their property; and
- deliver the greatest environmental, social and economic benefit, consistent with the Governments' sustainable development principles.

This shift in emphasis fits in with the concept of integrated river basin management that the Water Framework Directive seeks to establish. However there are other FCRM initiatives that are already moving the sector towards this way of working and that will help to deliver Water Framework Directive objectives and measures.

Flood and Coastal Erosion Risk Management Outcome Measures

From 1st April 2008 "Outcome Measures" became the new performance framework to measure the overall benefits of FCRM investment in England. The outcome measures have been developed as part of the "Making Space for Water" programme, to provide greater clarity on what policies and funding for flood and coastal erosion risk management are intended to achieve. As well as providing criteria for the prioritisation of projects, the outcome measures have also been used to set targets for FCRM over the current spending review period.

Through the delivery of outcome measures 4 and 5 (table J2), FCRM activities already contribute to delivering more sustainable water outcomes for river basin management.

Table J2 **"Making Space for Water" outcome measures 4 & 5**

Outcome Measure	Description
Outcome measure 4. Nationally important wildlife sites	This measure will record, through liaison with Natural England and Countryside Council for Wales, the delivery of flood, water level and coastal management remedies which contribute to the government target to have 95 per cent of Sites of Special Scientific Interest in favourable condition by 2010.
Outcome measure 5. UK Biodiversity Action Plan habitats	This measure will record the overall increase in Biodiversity Action Plan habitat achieved through flood and coastal erosion risk management activities by March 2011. This is to contribute towards delivery of the Environment Agency Wetland Policy to 'conserve, enhance and re-create the wetland capacity of catchments as part of our contribution to rebuilding biodiversity on a landscape scale'.

[13] First Government response to the autumn 2004 Making space for water consultation exercise, March 2005

Pitt Review

The Pitt Review provided recommendations following flooding which struck much of the country in England and Wales in June and July 2007. The floods were extreme, affecting hundreds of thousands of people and was the most serious inland flood since 1947.

The Review contains 92 recommendations that are addressed to the Government, Environment Agency, local authorities, Local Resilience Forums, providers of essential services, insurers and others, including the general public[14].

The Government supports all of the recommendations in the Review. Recommendations that could affect the delivery of River Basin Management Plans are mostly concerned with improvements to the spatial planning system, or high level flood risk management planning processes that could lead to diffuse pollution from urban sources and working better with natural processes whilst delivering flood risk management. The Environment Agency has already acted on many of these recommendations.

Surface Water Management Plans

The Pitt Review (recommendation 18) concluded that surface water management plans should provide the basis for managing local flood risk. A Surface Water Management Plan is a framework through which key local partners with responsibility for surface water and drainage work together to understand the causes of surface water flooding and agree the most cost effective way of managing that risk.

The Surface Water Management Plan can also provide a framework for the management of urban water quality (e.g. the control of discharges from combined sewer overflows, surface water drainage outfalls, sustainable drainage systems and the urban surface generally). Solutions which can address both flood and pollution risk have dual benefits, and can contribute to fulfilling improvements and compliance in ecology, water quality and habitats required under the Water Framework Directive.

Integration of Water Framework Directive objectives through environmental assessment

FCRM plans and projects will try to deliver river basin management objectives and measures in parallel where an opportunity exists to do this. Environmental assessment and compliance under the Environmental Impact Assessment and Strategic Environmental Assessment Directives entails that FCRM projects already take account of the Water Framework Directive, and this requirement is supported by Guidance on the Appraisal of Flood and Coastal Erosion Risk Management[15].

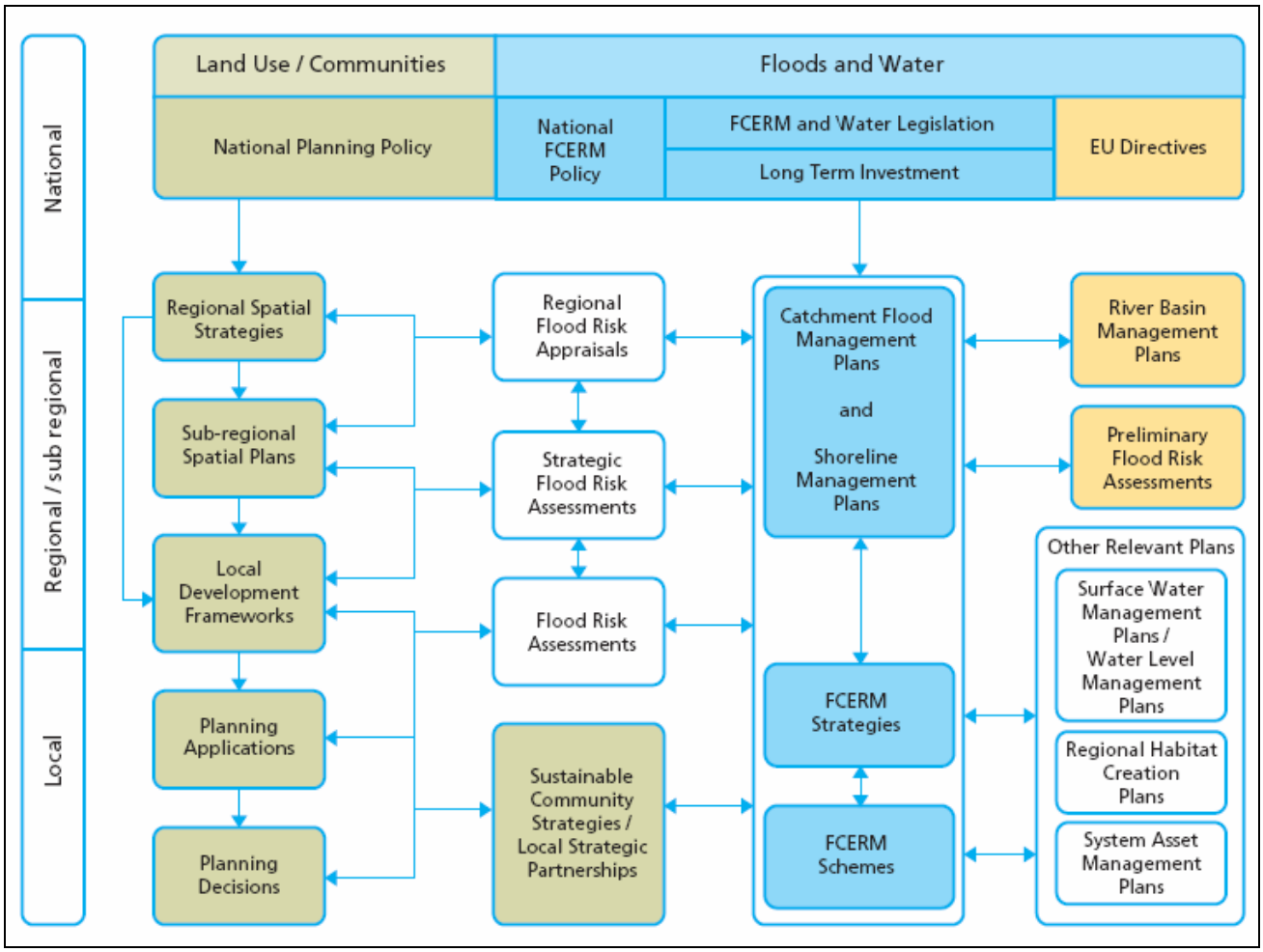
A number of research and development projects are being conducted to support this work including**:** Defra's FD2609 research project 'Water Framework Directive and Expert Assessment' will set out appropriate ways of assessing the ecological impact of a FCRM scheme; The 'Mitigation Measures Manual for Flood and Coastal Erosion Risk Management and Land Drainage' will provide an online toolkit for project managers to design appropriate hydromorphological mitigation measures into FCRM schemes; and the Environment Agency project 'Mitigation Measure Trials' will put in place a programme of trialling and monitoring of a number of mitigation measures (e.g. Removal of hard bank reinforcement / revetment, or replacement with soft engineering solution; Increase in-channel morphological diversity etc).

[14] 'Learning lessons from the 2007 floods', Sir Michael Pitt, June 2008
[15] Appraisal of flood and coastal erosion risk management - A Defra policy statement, June 2009

Taking river basin management into account in high-level Flood and Coastal Erosion Risk Management planning

River basin management will be taken into account in all levels of FCRM planning (see figure J3- for England).

Figure J3- **The flood and coastal erosion risk management planning framework for England**



Shoreline Management Plans: The second generation of Shoreline Management Plans are currently being developed. Guidance has been published that enables these plans to take Water Framework Directive objectives into account[16]. The guidance also requires a high level assessment of the ecological impact of each Shoreline Management Plan policy, to ensure that any conflict with the objectives of the Water Framework Directive are flagged up as early as possible in the coastal FCRM planning process.

Catchment Flood Management Plans (CFMPs): Policies and their supporting actions that have been set out in the recently published CFMPs will move FCRM towards a catchment-based approach that will help to deliver sustainable water objectives. However these actions are not yet funded and will be subject to further planning so cannot be included as measures within the River Basin Management Plans.

[16] Assessing shoreline management plans against the requirements of the Water Framework Directive, April 2009

The Environment Agency has carried out an exercise to determine where CFMPs policies may present opportunities and constraints in each River Basin Management Plan. The generic CFMP policies and their possible ramifications for river basin management are listed below in table J3. A river basin district specific analysis of the distribution of these policies is found in table J4.

Table J3 – **Catchment Flood Management Plan policies**

Policy	Description of policy	Interaction with River Basin Management Plans
1	Areas of little or no flood risk where the Environment Agency will continue to monitor and advise	This policy unit is unlikely to be currently managed for flood risk so no change.
2	Areas of low to moderate flood risk where the Environment Agency can generally reduce existing flood risk management actions	Opportunities to remove or allow the natural decay of existing physical modifications. Maintenance may be reduced, so pressures stemming from biota removal and other maintenance activities could be addressed. Diffuse and point source pollution may increase with the effects of climate change (such as increased storminess), as will sedimentation.
3	Areas of low to moderate flood risk where the Environment Agency are generally managing existing flood risk effectively	May require the same level of physical modification to be sustained. The frequency of instances of point source pollution are likely to remain similar, but there may be more diffuse pollution and sedimentation in line with increased storminess from climate change leading to more run-off from agricultural and urban infrastructure.
4	Areas of low, moderate or high flood risk where the Environment Agency are already managing the flood risk effectively but where we may need to take further actions to keep pace with climate change	Level of physical modification may have to increase to cope with increased risk from climate change. However, more holistic solutions may be found to compliment existing structures and minimise increases in run-off, possibly providing opportunities for diffuse pollution and sedimentation reduction. Biota removal and other maintenance activities might also be increased or decreased.
5	Areas of moderate to high flood risk where the Environment Agency can generally take further action to reduce flood risk	Probable increase rather then reduction in the level of physical modification, but the area is likely to already be designated as 'heavily modified'. Biota removal and other maintenance activities may increase. Complimentary Flood and Coastal Erosion Risk Management solutions may be promoted that improve the way land is managed, or utilise natural flood storage on tributaries that contain less risk. This could offer opportunities for the reduction of pressure on water bodies from diffuse pollution and sedimentation.
6	Areas of low to moderate flood risk where the Environment Agency will take action with others to store water or manage run-off in locations that provide overall flood risk reduction or environmental benefits	Opportunities to reduce pressure from diffuse pollution and sedimentation. Levels of physical modification may increase or decrease in these policy units as flood storage may be natural floodplain storage or artificially created flood storage. Maintenance activities such as biota removal could also increase or decrease depending on the type of flood storage required.

Anglian River Basin District activity on alignment of flood risk and coastal erosion risk management for Water Framework Directive

Here we identify some specific examples of flood risk and coastal erosion risk management that have occurred in the Anglian River Basin District.

Catchment Flood Management Plans

The Environment Agency recently developed Catchment Flood Management Plans (CFMPs) set out the long term direction of flood risk management for individual catchments. They set holistic policies for managing flood risk for the next 50-100 years, taking into account changes such as climate change, urbanisation and land management.

Each of the six generic policies found in CFMPs offer different opportunities and constraints for delivery of the Water Framework Directive. The generic CFMP policies and their possible ramifications for river basin management are listed above in table J3.

The Environment Agency have analysed the distribution of CFMP policies in each catchment of the Anglian River Basin District to see where these opportunities and constraints are, the results are found below in table J4. The figure represents the proportion of water bodies in each catchment of the river basin district that could be affected* by each generic CFMP policy. Please note that these are Water Framework Directive management catchments rather then CFMP catchments.

*those where 20 per cent or more of the water body is located within a CFMP policy type.

Table J4 – **Distribution of Catchment Flood Management Plan policies in Anglian River Basin District**

Anglian River Basin District - Catchment Name	Number of water bodies	Policy 1	Policy 2	Policy 3	Policy 4	Policy 5	Policy 6
Broadland Rivers	93	0%	72%	26%	3%	1%	8%
Cam and Ely Ouse (including South Level)	83	CFMP policies are not finalised					
Combined Essex	125	0%	63%	38%	8%	7%	2%
East Suffolk	65	0%	97%	6%	0%	5%	0%
Nene	69	0%	77%	6%	23%	3%	25%
North Norfolk	6	0%	100%	0%	0%	0%	0%
North West Norfolk	19	CFMP policies are not finalised					
Old Bedford including the Middle Level	12	CFMP policies are not finalised					
Upper and Bedford Ouse	94	CFMP policies are not finalised					
Welland	46	0%	59%	7%	43%	0%	0%
Witham	125	1%	32%	8%	62%	3%	10%
Anglian River Basin District	**737**	CFMP policies are not finalised					

National Indicators

In meeting one of the overall aims of Water Framework Directive; reducing the effects of floods, we are working with flood and coastal erosion risk management staff to tie into the delivery of Local Government National Indicator 189 Flood and Coastal Erosion Risk Management.

This performance measure identifies the need for local authorities to deliver actions within CFMPs relevant to them. Local Authorities also have a duty to have regard to the River Basin Management Plans. Local Authorities are identified as one of the key external partners that can help us deliver actions within the River Basin Management Plans. By identifying relevant actions within the CFMPs and prioritising Local Authorities according to our artificial and heavily modified water bodies the Environment Agency will be able to be more proactive in our engagement and delivery of environmental improvements.

J.6 Marine

The Marine and Coastal Access Bill introduces a new strategic planning framework for the marine environment across England and Wales. Marine plans will be underpinned by a UK-wide Marine Policy Statement that will provide a consistent policy steer for decision makers and a mechanism to achieve the Governments' High Level Marine Objectives for achieving sustainable development in the marine area. They will help deliver the Government's vision of 'clean, safe, healthy, productive and biologically diverse oceans and seas by guiding licensing decisions for activities in the marine area. Achievement of good status required by the Water Framework Directive, along with Good Environmental Status for Marine Strategy Framework Directive are two stated measures of success for achieving this vision.

Work to develop the Marine Policy Statement and marine planning guidance is underway. The Marine Policy Statement will be published within two years of Royal Assent and marine plans will follow on a phased basis (to be determined). Marine plans will set out in detail how the Marine Policy Statement will apply in specific parts of UK waters, and guide licensing decisions for activities in the marine area (marine plans will apply up to Mean High water spring). The new Marine Management Organisation will be responsible for producing marine plans and issuing licences in English inshore and English offshore areas.

Links to other plans and policies

The Marine Policy Statement will be consistent with the new National Policy Statements for nationally significant infrastructure projects that the Infrastructure Planning Commission will licence.

There will be overlaps at the coast between marine plans and other planning regimes, including terrestrial plans, Shoreline Management Plans and River Basin Management Plans. In 2008 Defra published "A strategy for promoting an integrated approach to the management of coastal areas in England" that recognises progress made to date with joining up management at the coast and sets the direction for future work.

Development of marine plans will involve producing a Statement of Public Participation and a large amount of consultation. Marine plans covering transitional and coastal waters will play an important role in supporting achievement of River Basin Management Plans through setting out what activities may or may not be permitted in particular areas. It will be important to ensure that the aims of River Basin Management Plans and Shoreline Management Plans

are complemented by marine plans, particularly as the cycles for each planning regime are not aligned.

The Environment Agency are working closely with Defra, Welsh Assembly Government and others to ensure that development of the Marine Policy Statement and marine planning guidance is consistent with, and supports delivery of River Basin Management Plan measures to achieve good water status. The Environment Agency have also undertaken partnership projects with Natural England, the Countryside Council for Wales and the National Trust to investigate what marine planning at the coast and across administrative borders will mean for all of our organisations. As marine plans are developed and implemented we will work closely with the Marine Management Organisation, Welsh Assembly Government and other coastal interests to ensure there is compatibility with River Basin Management Plans and Shoreline Management Plans.

J.7 Other processes

Other key national planning and management processes that are currently and/or need to be further aligned, which are not discussed further here, include:

- Water quality;
- Water resources;
- Natural heritage (conservation and biodiversity);
- Fisheries;
- Navigation and recreation;
- Transport planning and management;
- Energy;
- Industry (e.g. Integrated Pollution Prevention and Control (IPPC).

Addendum 1 (to this annex) identifies some of the specific policies, processes and plans for the processes identified in J.2-J.7.

J.8 Local processes

There are numerous specific initiatives which have a significant effect on the water environment which are not guided or constrained by national policies, frameworks or a strategic governing body. Some of these were identified in the “River Basin Planning: Working together” consultation documents published in 2007. These cannot be directly aligned through national policies in the first instance. Rather, they need to be influenced locally to ensure they align (if they are not aligned already) to help deliver sustainable water outcomes. This could include the initiatives of regional development authorities, local environment groups, local waterways groups, farming groups, broad and fenland management groups and land owners.

J.9 Summary

Alignment of policies, planning processes and initiatives related to water management was a key driver for the development of the Water Framework Directive. This was seen as essential to the effective and efficient delivery of sustainable water management.

Some processes are already reasonably well aligned in terms of intent (e.g. water quality). Others have made significant progress in terms of taking on board the need to protect the water environment as a valuable asset (flood risk and coastal erosion risk management). Others have made steps in the right direction (development planning and rural land

management in Wales) while others need to change quite significantly (e.g. rural land management in England). A significant effort is required by all involved and interested parties in ongoing river basin management to review and if possible amend existing policies, plans and measures. In many cases this will require influencing European developments and amending them where necessary, to meet Water Framework Directive objectives. This includes those for which the Environment Agency is responsible, and some which are the responsibility of other organisations.

Ministerial guidance to the Environment Agency[17] has made it clear that a large part of river basin management should involve reviewing and aligning the wide range of existing policies, plans and measures to meet Water Framework Directive objectives. The Environment Agency will drive this agenda forward both internally and externally. We have already reviewed a large number of internal and external processes to look at commonality in objectives and processes. We will be working with key stakeholders to propose and guide this alignment where we can at European, England and Wales and local levels through policy development to implementation “on the ground”.

[17] River Basin Planning Guidance. Department for Environment, Food and Rural Affairs & Welsh Assembly Government. 2006

Addendum J1: Specific policies, processes, plans which may require alignment to river basin management.

Adapted from "Consistent Economic Appraisal Approaches with Respect to the Water Framework Directive River Basin Management Plans. Collaborative Research Programme on Water Framework Directive economics final report. Jan 2006. For the Welsh Assembly Government and Water Framework Directive Collaborative Research Programme by Jacobs in association with ADAS"

Sector	Policy, programme, process or plan	Main aim (of relevance to river basin management)	Lead England and Wales organisation	Key partner organisations
Agriculture	Common Agricultural Policy	Framework for financial support of agriculture: food and fuel production; agricultural economy; rural development	Defra / Welsh Assembly Government	Rural Payments Agency (RPA), Natural England, Rural Inspectorate Wales, Environment Agency, Farming Unions
	Cross Compliance – Good Agricultural and environmental Conditions, Perm Pasture, Soil Protection Review and Statutory Management Requirements	Avoidance of pollution, soil erosion, environmental damage	Defra / Welsh Assembly Government	Rural Payments Agency, Rural Inspectorate Wales Natural England, Countryside Council for Wales, Environment Agency
	England Catchment Sensitive Farming Delivery Initiative	Reduce diffuse water pollution	Defra	Environment Agency, Natural England
	Environment Agency Wales catchment coordinators initiative	Provide and co-ordinate advice to land managers that will allow them to improve environmental performance. Integrating diffuse pollution mitigation with habitat creation, flood risk management and fisheries issues	Environment Agency	Farming Unions, land managers
	The EU Structural Fund programmes Objectives 1 and 2	Major EU funding mechanism for supporting social and economic restructuring across the EU.	Defra / Welsh Assembly Government	Government Offices, Regional Development Agencies
	Nitrate Vulnerable Zones and Nitrate Action Programme	To reduce nitrate pollution from agriculture	Defra / Welsh Assembly Government	Environment Agency
	Rural Development Programme / Plan	Framework for operation of integrated schemes to protect and improve rural environmental, social and economic development	Defra / Welsh Assembly Government	Natural England, Countryside Council for Wales, Farming Unions and Regional Development Agencies

Agriculture	Wales Environment Strategy	To reduce pollution, including diffuse pollution from soil erosion	Welsh Assembly Government	Environment Agency, Countryside Council for Wales, Forestry Commission Wales
	Soil Strategy for England	To reduce pollution, including diffuse pollution through soil erosion	Defra	Environment Agency, Natural England
	Agri-environment schemes England	Protect and enhance biodiversity, protect and enhance natural resources, protect historic environment	Defra	Natural England, Farming Unions, Royal Society for Protection of Birds, Environmental NGOs
	Agri- environment schemes Wales. Tir Gofal Tir Cynnal Organic Farming / organic entry level Tir Mynydd The above schemes will all cease in 2012 to be replaced by the new Glastir land management scheme (for all new entrants).	Protect and enhance biodiversity, protect and enhance natural resources, protect historic environment The new Glastir land management scheme will also deliver on the EU CAP Health Check Challenge Agenda for soil carbon and improved water quality and quantity management	Welsh Assembly Government	Environment Agency, Countryside Council for Wales, Farming Unions, Royal Society for Protection of Birds, Environmental NGOs Organic Centre Wales
	Energy Crops Scheme (Short Rotation Coppice)	Reduce greenhouse gas emissions	Defra / Welsh Assembly Government	
	Organic Farming Scheme	Increase area of organic farming	Defra	Organic certification bodies,
	Environmentally Sensitive Areas Scheme (ESAS)	Landscape preservation	Defra / Welsh Assembly Government	
	Woodland Grant Scheme (WGS) / English Woodland Grant Scheme (EWGS)	Encourage establishment of areas of woodland on farms which can be positioned to reduce diffuse pollution	Forestry Commission	Natural England, Countryside Council for Wales, Environment Agency
	Farm Woodland Premium Scheme (FWPS)	N/A	Defra	Forestry Commission
	Integrated Regulation of Agriculture (IRAP).	Targeted effort and inspections to areas and activities that pose the greatest environmental risk.	Environment Agency	
	Sustainable Farming and Food Strategy	Published in December 2002, sets out how industry, Government and consumers can work together to secure a sustainable future for our farming and food industries, as viable industries contributing to a better environment and healthy and prosperous communities	Defra	

Agriculture	Farming Food and Countryside- Building a Secure Future Strategy/ Farming for the Future	Welsh Assembly Government's strategy aimed at helping secure a viable future for farming in Wales - sustainable economically, environmentally and socially	Welsh Assembly Government	Farming Unions, Environment Agency, Countryside Council for Wales, Royal Society for Protection of Birds
	The Defra Whole Farm Approach project	One of several initiatives that see a long term integration in delivering Defra's Sustainable Farming and Food Strategy. Developed as an electronic only system, it uses a questionnaire system intended to make form filling easier and provides convenient links to best practice advice and guidance.	Defra	Farming industry, the wider Defra network (including Environment Agency, Rural Payments Agency) and other regulators including Food Standards Agency and the Health and Safety Executive.
Water resources and quality	Future water	Defra water strategy for England	Defra	
	Periodic Review Process (PRP)	Process to agree set of management and investment plans plus associated water tariffs over a 5 year period.	Ofwat (the Water Services Regulatory Authority)	Environment Agency, Water Companies
	Asset Management Plans (AMP) (incl. Drainage Area Plans) and Water Cycle Strategies (WCS)	Forms part of the Periodic Review Process and this looks at quality improvements required and the most cost effective way of achieving these. They also identify additional price rises required to deliver the plans recommendations. Water Cycle Strategies provide plan, programme and costs of Water Services Infrastructure implementation for major developments.	Water Companies	Ofwat (the Water Services Regulatory Authority), Environment Agency, English Nature, Countryside Council for Wales, Defra, Drinking Water Inspectorate, Welsh Assembly Government
	Water Company water resource management plans	Plan which specifically outlines the balance between water supply and demand in a socially/ environmentally acceptable way (including efficiency of use). Used to inform the periodic review of prices	Water companies	Defra and Welsh Assembly Government (receive plans). Environment Agency -review of social and environmental aspects; Ofwat (the Water Services Regulatory Authority)-economic issues
	Water Resources Strategies	A broad strategy for a region for 15-20 years covering water resources In Wales, the current strategy is to 2050 and beyond.	Environment Agency	Stakeholders
	Restoring Sustainable Abstraction (RSA) Programme (Environment Agency) incl. Low flow alleviation plans/ programmes and Abstraction licence review/consenting process	Catalogues wetlands and rivers that may be at risk from abstraction (as identified by Catchment Abstraction Management Strategies). Programme of investigations, appraisal of options and implementation of solutions where abstraction identified as an impact.	Environment Agency	Abstraction licence holders

Water resources and quality	Water Company and Environment Agency Drought Contingency Plans	Operational management tool to look at water shortage scenarios	Water companies, Environment Agency	Defra/Welsh Assembly Government (receive plans) Environment Agency -review drought plans
	Catchment Abstraction Management Strategies (CAMS)	Identifies discrete licences that may be impacting upon the environment to guide management of abstraction licences.	Environment Agency	Abstraction Licence Holders e.g. Water Companies, CBI, National Farmers Union etc Local Authorities, Environmental Groups
	Groundwater protection policy (Groundwater regulations)	Risk based policy. Water Framework Directive has three elements related to Groundwater: classification of status; identification of pollution trends in Groundwater; prevention of input of pollutants to GW. The details of these elements are expected to be in the Groundwater Directive.	Environment Agency	Environmental Groups, and Industries
	Eutrophication Control Action Plan	Local plans - pilot exercise assessing eutrophication and identifying measures to tackle problems	Environment Agency	Local Key Stakeholder
	Chemical strategy pollution reduction plans	Tackle issue at a substance level and are not location based. Water, air, land - all mediums considered.	Environment Agency	Defra own Existing Substances Regulations
	Endocrine disrupting substances in the Environment strategy	A consultation exercise urging companies to take precautionary measures to protect the environment from endocrine disrupting chemicals.	Environment Agency	
Flood Risk Management	Shoreline Management Plans	Shoreline Management Plans set out strategic guidance designed to assist coastal defence decision making for a defined length of coast over the next 50 years	Environment Agency	Defra and Welsh Assembly Government
	Catchment Flood Management Plans	Plan to identify future measures needed to ensure management of flood risk within river catchments	Environment Agency	Defra and Welsh Assembly Government
	Flood and Coastal Erosion Risk Management Appraisal Guidance – Practitioner's Guide	This will provides the framework for decision making in Flood and Coastal Erosion Risk Management strategies and schemes.	Environment Agency	Defra, other Flood and Coastal Erosion Risk Management operating authorities
	System Asset Management Plans (SAMPs)	A management plan to address assets and maintenance of assets.	Environment Agency	
	Coastal Habitat Management Plans (CHaMP)	CHaMPs relate to shoreline management of flood defences in relation to the Habitats and Birds Directives in a limited number of locations (pilot sites) on the east and south coast (7 locations). Coastal Squeeze element of Shoreline Management Plans.	Defra/ Welsh Assembly Government	Defra and Welsh Assembly Government

Flood Risk Management	Drainage Area Planning (surface water)	Carried out by Internal Drainage Boards (IDBs)	Internal Drainage Boards	Overseen by Defra
	Water level management plans	Plan for wetland SSSIs to balance water needs of conservation, flood defence and other needs (e.g. recreation/agric/industry). Requirements of other organisations or other parts of Environment Agency. Conservation is the main objective and give operational requirements to other parties	Environment Agency/Internal Drainage Boards	
	Surface water management plans	Framework through which key local partners with responsibility for surface water and drainage in their area work together.	Local authorities	Environment Agency
	Regional habitat creation programmes	A strategic approach to habitat re-creation for projects and as compensation for coastal squeeze caused by sea-level rise. Co-ordinates achievement of Defra Outcome Measures 4 and 5 and corporate Biodiversity targets.	Environment Agency	Land owners
	Managed realignment plans	Habitat creation programmes		
Development and Land use	National Policy Statements	National Policy Statements will set out the justification for major infrastructure projects and provide guidance on how to implement them. National Policy Statements will be subject to an 'appraisal of sustainability' where they give location information for projects. National Policy Statements will be prepared by the government department responsible for that type of project.	Welsh Assembly Government, Communities and local Government /Infrastructure Planning Commission	
	England Rural Development Programme	Funded by the European Commission and the Department for Environment, Food and Rural Affairs (Defra). The majority of programme funds are allocated to improving the environment through Environmental Stewardship - administered by Natural England and the English Woodland Grant Scheme - administered by the Forestry Commission.	Communities and local Government	Forestry Commission, Natural England
	Wales Rural Development Plan	Joint Welsh Assembly Government/European Union (EU) strategy to improve Welsh environment and encourage sustainable economic development.	Welsh Assembly Government	
	Planning Policy Statements (England)	Planning Policy Statements explain statutory provisions and provide guidance to local authorities and others on planning policy and the operation of the planning system.	Communities and local Government	
	Regional spatial strategies (RSS)	With the objective to contribute to the achievement	Regional planning	Government Office

Development and Land use	England , the Wales Spatial Plan and the London Plan	of sustainable development, the RSS, incorporating a Regional Transport Strategy (RTS), provides a broad development strategy for the region for a fifteen to twenty year period. It covers housing, environment, transport, waste, minerals issues and informs other more local spatial plans	bodies	
	Local Development Frameworks (LDFs) including Local Development Documents (LDD) England	A Local Development Framework is a suite of documents that sets out how the local area may change over the next 10-15 years. Will also cover issues of waste and minerals for relevant authorities. Local Development Framerworks must be in general conformity with RSS	District and Borough Authorities and Unitary Authorities	Government Office
	Waste and mineral development frameworks	Cover issues of waste and minerals for relevant authorities.	Counties (in two-tier areas) and unitary authorities	
	Planning Policy Wales	Current land use planning policy is contained in 'Planning Policy Wales' (March 2002) which provides the strategic policy framework for the effective preparation of local planning authorities' development plans. 'Planning Policy Wales', the Technical Advice Notes (TANs) and the circulars, may be material to decisions on individual planning applications and will be taken into account by the National Assembly for Wales and Planning Inspectors in the determination of called-in planning applications and appeals.	Welsh Assembly Government	
	Technical Advice Notes (TANS) (Wales)	Planning policy Wales is supplemented by 20 topic based Technical Advice Notes (Wales) (TANs) which provide procedural guidance on interpreting the policy and operation of the planning system in Wales.	Welsh Assembly Government	
	Local Development Plans (Wales)	Local Development Plans should provide for an adequate and continuous supply of land to meet society's needs in a way that is consistent with overall sustainability principles and objectives. In doing this these plans must set out an authority's objectives for the development and use of land in its administrative area and general policies to implement them.	Local Authorities	Welsh Assembly Government

Development and Land use	England Sustainable Communities Strategy	Prepared by local strategic partnerships as a set of goals and actions which they, in representing the residential, business, statutory and voluntary interests of a local area, wish to promote. The community strategy should inform the local development framework and act as an umbrella for all other strategies devised for the local area and promote or improve the economic, social and environmental well-being of their areas, and contributing to the achievement of sustainable development in the UK	Local Authorities	Dept. for Communities and Local Government
	Port Development Plans	Business plans for port development which usually consider environmental issues	Port Authorities	
Natural Heritage	Habitats Directive Assessment of plans and projects	All proposals affecting Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) must be assessed to show no adverse effect on site integrity. There is also a requirement to review some types of plans and projects that existed before the implementation of the Habitats Directive to assess their implication on the sites conservation objectives.	Natural England Countryside Council for Wales	All competent authorities are responsible for assessing plans and projects
	Special Sites of Scientific interest (SSSIs) improvement programme	In England there is a Public Service Agreement (PSA) target to have 95 per cent of the SSSI area in favorable or recovering condition by 2010. The SSSI remedies programme identifies the organisation that has prime responsibility for resolving or 'remedying' the reason for unfavourable condition on each SSSI unit. Financial incentives are available to support some of the work, these are usual tied into a contractual management agreement between Natural England and the landowner/occupier. Wales Environment Strategy (WES) Outcome 21 aims to restore 95 per cent of international sites by 2010, 95 per cent of SSSIs by 2015, and all sites by 2026	PSA target is led by Defra and its delivery is co-ordinated by Natural England. WES is led by Welsh Assembly Government	Organisations responsible for resolving the reason for unfavourable condition on each SSSI unit. e.g. individual site owners, central and local government, private companies, non government organisations. Delivery is co-ordinated by the Countryside Council for Wales.

Natural Heritage	England River Basin Biodiversity Framework	Summary and Geographic Information System (GIS) presentation of water-related biodiversity targets and assets in each river basin, for inclusion in WFD River Basin Management Plans where appropriate.	Environment Agency and Natural England	Royal Society for the Protection of Birds, Wildlife Trusts, Defra
	UK Biodiversity Action Plan	UK Biodiversity Action Plan is a plan for dealing with biodiversity conservation in response to the Convention on Biological Diversity 1992 which called for the creation and enforcement of national strategies and action plans to conserve, protect and enhance biological diversity.	UK Biodiversity Partnership	UK Biodiversity Partnership comprises a wide range of people from those who provide funds, amateur and professional experts to those who are interested in the wildlife and natural They are private individuals, business, government and non government representative Environment Agency lead on action plans for many freshwater habitats and species.
	Local Biodiversity Action Plans (LBAPs)	Action plans to safeguard biodiversity features. Each Local Biodiversity Action Plan works on the basis of partnership to identify local priorities and to determine the contribution they can make to the delivery of the national Species and Habitat Action Plan targets	Local Biodiversity Action Plan Partnerships	Natural England, Local Authorities, Environment Agency, Countryside Council for Wales
	Site management plans for Natura 2000 sites	The designation of a site under the 'Birds' or 'Habitat' Directives will often lead to the production of a management plan for the site in question.	Natural England, Countryside Council for Wales	Site owners and managers
	Wetland Vision for England	Wetland Vision is a partnership project which describes how the partners would like England's wetland landscapes to be in 50-years time.	Wetland Vision Partnership	English Heritage, Environment Agency, Royal Society for the Protection of Birds, Natural England, Wildlife Trusts
	The Invasive Non Native Species Framework Strategy for Great Britain.	This is a co-ordinated plan to reduce the threat to Britain's native biodiversity from invasive non-native species To help prevent introductions in the first place by raising awareness of the risks and increasing understanding of the impacts; to better enable early detection and rapid response	Defra Welsh Assembly Government The Scottish Government	

Natural Heritage		to introductions before they become major problems; and, to develop longer-term control programmes based on sound science. The GB Strategy also contains measures to improve the effectiveness of legislation, to improve integration of activities and programmes and to better focus research effort.		
Transitional and coastal	Marine Protected Area strategy (draft)	Delivering an ecologically coherent network of Marine Conservation and Zones and European Marine Sites by 2012.	Defra / Welsh Assembly Government	Joint Nature Conservancy Council (JNCC), Natural England, Countryside Council for Wales
	Marine Policy Statement (MPS) and marine planning	Will be introduced through Marine and Coastal Access Bill and set strategic framework for management and protection of the marine environment in England and Wales. Marine licensing decisions for development activities will have to conform with marine plans which will overlap with RBMPs in estuaries and coastal waters.	Defra/ Welsh Assembly Government	Environment Agency, Local Authorities
	Integrated Coastal Zone Management (ICZM)	ICZM is a management approach not a plan. The purpose of ICZM is to bring stakeholders together with a common interest often to resolve conflict. In 2007, the Welsh Assembly Government produced Making the Most of Wales' Coast - the Integrated Coastal Zone Management Strategy for Wales. The document provides an overview for the development of actions that will bring together the coastal policies and activities in Wales. In 2008 Defra published "A strategy for promoting an integrated approach to the management of coastal areas in England" that recognises progress made to date with joining up management at the coast and sets the direction for future work.	Defra / Welsh Assembly Government	All groups with regulatory, management, commercial, recreational or other interests at the coast

Fisheries	Common Fisheries Policy	Sustainable fisheries management driven through the ecosystem approach.	EU UK delivery through Defra and devolved administrations	Marine and Fisheries Agency/Sea Fisheries Committees/ Environment Agency, Welsh Assembly Government
	Freshwater Fish Directive Designations	Statutory water quality protection for designated cyprinid and salmonid fisheries.	EU England and Wales delivery through Environment Agency	Water Utilities.
	Fisheries Action Plans	Consultative processes to develop wide stakeholder engagement in freshwater fisheries management	Environment Agency	Angling organisations
	Salmon Action Plan	Catchment based strategic plans to deliver sustainable salmon management	Environment Agency	NASCO, Salmon and Trout Association and many others
	National Trout and Grayling Strategy	National Strategy to deliver sustainable species management	Environment Agency	Salmon and Trout Association, Grayling Society.
	Eel Management Plan	National strategy to deliver sustainable species management within the European Environment Agency context.	Environment Agency	
	Fisheries Strategy	National Strategy to provide an overview for the functional plan and related plans and policies.	Environment Agency	National Angling Bodies
Forestry	Forest Strategy	The Strategy was prepared in 1997-98 and provides a vision for forestry for the medium to long term (i.e. 20-50 years). It was prepared before the WFD was implemented in the UK.	Defra	Forestry Commission
	Regional Forestry Frameworks	Charts a route to help develop a vibrant sector to maintain and enhance the tree, woodland and forestry assets that can bring social, environmental and economic benefits to a region	Forestry Commission	
	The Strategy for England's Trees, Woods and Forests	Shows how we can meet the opportunities and challenges of making trees and woodlands productive, healthy and attractive	Defra	
	The Woodlands for Wales Strategy.	Establishes the role that woodlands sustaining the wider environment and in providing opportunities for people and communities in Wales and establishes importance of woodland management	Welsh Assembly Government	Forestry Commission Wales

Forestry	'Forests and Water Guidelines'	Provide the basis for sustainable management of the water environment by forest planners and managers	Forestry Commission	Forestry Commission, Forest Research, Environment Agency, Scottish Environment Protection Agency, Joint Nature Conservation Committee, Forest Service (Northern Ireland)
Industry/ chemicals	Integrated Pollution Prevention and Control (IPPC) permits	To ensure industrial installations have minimal environmental impacts and emissions are regulated	Environment Agency	
Transport	Transport Strategy	A vision for transport development in the medium to long term.	Dept. for Transport	
	The Wales Transport Strategy	Sets out the steps to achieve delivery of sustainable transport networks	Welsh Assembly Government	Local Authorities
	Regional Transport Strategies	These are part of Regional Spatial Strategies	Dept. for Transport	Environment Agency
	Local Transport Plans	Local Authority driven plans that take account of Regional and National transport plans	Dept. for Transport	Local Authorities
	Individual Transport Schemes	Scheme over £5M that require funding from Dept. for Transport.	Dept. for Transport	Developer
Recreation and Navigation	British Waterways Strategy	Management of 2,000 miles of canals and rivers in England, Wales and Scotland.	British Waterways	Defra and Welsh Assembly Government
	'A better place to Play' Environment Agency strategy for water-related sport and recreation.	Strategy to plan and promote water-related sport and recreation to achieve the maximum economic, social and environmental benefits.	Environment Agency	
	Action plan for navigation		Environment Agency	
	Waterways for tomorrow	For inland waterways to see an improving quality of infrastructure; a better experience for users through more co-operation between navigation authorities; and increased opportunities for all through sustainable development.	Defra	

Recreation and Navigation	National Parks Management Plans	Overarching strategic document and central to the future of the National Park to: show co-ordination and integration with other plans,, strategies and actions in the National Park where they affect the National Park purposes and duty; indicates how the National Park purposes and associated duty will be delivered through sustainable development; sets the framework for all activity pursued in the National Park by stakeholders.	National Parks	
	Waterways development plans, strategies, frameworks	Various documents associated with waterways regeneration and management	Various	
	Bank protection policies	Policies to give sufficient structural strength to the bank, to protect the bank from erosion (both on the waterline and from the user on the path) and to prevent leaks.		
	Green-blue initiative	The 'Green Blue' initiative gives examples of good environmental practice for boaters.	British Marine Federation and the Royal Yachting Association.	Environment Agency, Scottish Environment Protection Agency, Scottish Natural Heritage, Welsh Assembly Government, Crown Estate, Countryside Council for Wales

defra
Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex K: Economic analysis of water use

Content

K1 Economic Analysis of Water Use

Department for Environment, Food and Rural Affairs (Defra), Welsh Assembly Government (WAG), the Environment Agency (EA) and partners[1] have been engaged in a comprehensive economic analysis of water use to support the implementation of the Water Framework Directive. At the highest level this involved participation in the Common Implementation Strategy for the Water Framework Directive (WATECO) group and subsequent drafting groups (ECO1 and ECO2). These groups were given a remit by the Water Directors under the Common Implementation Strategy to develop information and guidance materials to assist in interpreting the requirements of Article 5 and Annex III of the Directive as well as provide methodologies and share experiences in relation to cost-effectiveness assessment and disproportionate cost assessment.

One of the earliest contributions was a series of economic analysis reports to support the reporting under Article 5 of the economic analysis of water use. Four reports were developed with the help of the Economic Steering Group and the Economic Advisory Stakeholder Groups for England and Wales; these were[2]:

- Report on the Economic Importance and Dynamics of Use for River Basin Characterisation
- Report on Cost Recovery and Incentive Pricing
- Report on Cost-Effectiveness Analysis and Developing a Methodology for Assessing Disproportionate Cost
- Report on Private Water Services

These reports provided the basic information with which to develop the Article 5 reports, details of which can be found at the following link: http://webarchive.nationalarchives.gov.uk/20080305115859/http:/www.defra.gov.uk/environment/water/wfd/economics/index.htm#eco

[1] Of special note has been the work of the Collaborative Research Programme on River Basin Management Planning Economics which undertook a programme of research between 2003 and 2007. Work by the Cross Government Economics Steering Group and the Economic Advisory Stakeholder Group should also be noted.

[2] Available at http://webarchive.nationalarchives.gov.uk/20080305115859/http:/www.defra.gov.uk/environment/water/wfd/economics/index.htm#eco

Each Article 5 report provides information relevant to the reporting guidance of the Water Framework Directive. It takes account of various guides and other documentation produced through the Common Implementation Strategy (CIS).

In line with this guidance, the following areas are covered by each report:

- Driving forces: This section sets out the socio-economic characteristics of each river basin district and provides forecasts for population, number of households, output (in gross value added terms) and employment to 2015;
- Pressures: This section reports on the attempts to link economic information with the most important activities for the characterisation of water bodies and associated risk assessment;
- Water services and cost recovery: This section presents information received from the Water Services Regulation Authority (Ofwat) on the financial cost of public water supply and sewerage services within each river basin district. Details are also provided on the level of environmental expenditure by the water and sewerage companies in the river basin district;
- Cost-effectiveness: This section details the progress made towards ensuring cost-effectiveness in implementing the programme of measures (PoMs). The gaps that exist are also identified; and
- Improving knowledge and the information base: The final section sets out the research programme needed to support further work under the Water Framework Directive.

The Article 5 reports represented a landmark in terms of undertaking a comprehensive, river basin district-based, economic analysis of water use. However, they represented only a beginning of a much longer and more in depth analysis. Each of the Article 5 reports and their supporting economic analysis was accompanied by a draft programme of research to take forward the main analytical gaps. This was based on the development of a research programme to be taken forward by the Collaborative Research Programme on River Basin Management Planning Economics (CRP)[3]. The main outputs of the CRP were:

> Project 1a – Economic Analysis and Decision Making for programme of measures under the Water Framework Directive – Initial Identification of Processes and Issues. This project was instrumental in developing an approach which built as far as possible on existing analysis and decision making processes.
>
> Project 1b – Consistent Economic Appraisal Approaches with respect to the Water Framework Directive river basin management plans. This report examined in detail the appraisal frameworks to determine the extent to which they developed the analysis required for decision making for river basin planning.
>
> Project 1c – Screening of water pricing policies, cost recovery mechanisms and economic instruments for inclusion in programme of measures and in relation to Article 9 of the Water Framework Directive. This report looked in detail at possible measures that might be needed to fulfil the requirements of Article 9 and the aims of the Directive in terms of Incentive Pricing.
>
> Project 2a/2b – Development of a methodology to determine the cost effectiveness of measures and combinations of measures for the Water Framework Directive. This project developed an initial methodology for undertaking cost-effectiveness analysis.

[3] Outputs of the CRP can be accessed here: www.wfdcrp.co.uk

Project 2c – Benchmark costs database and guidance on the application of the cost-effectiveness methodology. This provided a database of unit costs for use in cost-effectiveness analysis. Two detailed associated reports were prepared for the Water Industry entitled:

- Water Framework Directive: Economic analysis of water industry costs, and
- Review of econometric cost modelling of chemical phosphorus removal works

Project 2e – Deriving the Costs and Effectiveness of Delivery Mechanisms. This extended the 2c cost database to cover delivery mechanisms as well as measures.

Project 3 – Report on guidance on the evidence required to justify disproportionate cost decisions under the Water Framework Directive. This Project provided guidance on what information should be provided and how it should be presented in order to use the exemptions in the Directive related to disproportionate costs.

Project 4a – Workshop report on CRP Strategic Approach to Benefits. This report set out the approach to the assessment of Environmental and Resource Costs which was to be taken for the first planning round given the absence of information on benefits generally and limitations of the science of assessing status against standards and predicting improvements from measures. It dealt in particular with the problem of quantifying benefits of a national programme versus site specific improvements.

Project 4bc – Report on The Benefits of Water Framework Directive Programmes of Measures in England and Wales. This report presented the finding of a stated preference study into the benefits (measured as willingness to pay) for Water Framework Directive objectives. As a measure of achieving good status it represents a measure of the environmental and resource costs of water bodies which are at less than good status. It presents a national picture of benefits and hence an envelope within which action to meet the objectives of the Directive can be regarded as being proportionate.

Project 4d – Prioritisation. Project 4bc provides an envelope for the total benefits estimate; however, further information is required in order to undertake prioritisation of actions within that envelope. This project attempted to examine possible rules for this type of prioritisation to aid the Environment Agency and partners in developing the most value for money programmes of measures.

Project 4e – Direct Market Benefits. While Project 4bc looked at total non-market benefits, this study addressed direct market benefits. A range of potential benefits were examined although most were found to be significant at the national level.

Project 4f – Valuation of recreational benefits of improvements in water quality – potential benefits and data requirements. This project provides a blueprint for future benefits valuation for the Water Framework Directive. Demonstrating the data requirements of possible approaches to developing a revealed as opposed to stated preference approach to benefit estimation, with a view to improving the robustness of future benefits estimation for river basin management planning.

A series of related reports were prepared during the period of operation of the CRP. These included: reports looking at whether and how differences in the cost of capital should be taken into account for the purpose of cross-sectoral cost-effectiveness analysis (where availability of financing might be a relevant consideration in judging the cost-effectiveness of measures. These reports were entitled Economic analysis for the Water Framework Directive

Discounting and the calculation of the present value (Phase 1 – Theory and Phase 2 – Practical methods).

Following on from the work to prepare a cost-effectiveness analysis under the CRP a related study was undertaken for transitional and coastal waters. This study was entitled Scoping of Economic Impacts and Issues in Transitional and Coastal Waters.

Related work on agriculture was undertaken as part of the development of policies related to Catchment Sensitive Farming. This includes a cost-effectiveness manual and work related to the benefits of agricultural measures[4] Similarly an analysis of potential measures to control non-agricultural diffuse pollution was also undertaken[5].

A detailed study was undertaken during the period of operation of the CRP into baselines and trends. This study was entitled: Water Framework Directive Economic Analysis: Information On Trends To Improve The Baseline Scenarios. It provided a substantial synthesis of information regarding possible baseline issues and trends which could be incorporated into river basin management planning.

Further economic analysis was performed in relation to the Daughter Directives on Groundwater and on Priority Substances including Impact Assessments. Information from these analyses was integrated into the overall economic analysis of water use through the National Impact Assessment[6].

The above represents a fairly comprehensive analysis of the economics of water use in England and Wales, although it is the use of this analysis which is perhaps most relevant. The following paragraphs attempt to explain the main ways in which this information was used in preparing the river basin management plan (RBMP) documents.

The main use of the above information was to inform two sets of guidance to the Environment Agency as the competent authority for river basin management planning[7]. This guidance provided the framework within which river basin manageent planning could take place. The second volume of guidance was accompanied by an Impact Assessment. This National Impact Assessment used the outputs of the economic analysis of water use discussed above to consider a series of strategic options for the first set of RBMPs. The Guidance required the Environment Agency to perform similar analysis (Impact Assessment) for each of the RBMPs.

The National Impact Assessment was the first time that the cost, benefits and other impacts of the Directive had been considered in full since the transposition of the Directive and the publication of the Water Framework Directive regulations in 2003[8].Transposition of the Directive was accompanied by a Regulatory Impact Assessment (RIA) which was the first comprehensive attempt to assess the potential costs and benefits of the Directive. The key finding of this RIA was that the Directive could be cost-beneficial for the UK but this depended to a large degree on finding a way of targeting requirements to areas where actions were most cost-effective and benefits highest.

Prior to the National Impact Assessment a Preliminary Cost-Effectiveness Analysis (pCEA) was undertaken. The pCEA was carried out by Defra with technical inputs from the Environment Agency and significant stakeholder involvement, starting in autumn 2006 and

[4] http://www.defra.gov.uk/foodfarm/landmanage/water/csf/programme.htm
[5] http://www.wfdcrp.co.uk/pdf%5CNADWP%20pCEA.pdf
[6] http://www.defra.gov.uk/environment/quality/water/wfd/daughter-dirs.htm
[7] See http://www.defra.gov.uk/environment/quality/water/wfd/management.htm
[8] http://www.defra.gov.uk/environment/quality/water/wfd/transposition.htm

continuing until summer 2007. The pCEA to the extent possible used the outputs from the CRP analysis and built on this wherever necessary. The pCEA aimed to identify the most cost effective package of measures across sectors that will achieve the requirements of the Water Framework Directive, taking into account the level of uncertainty associated with the different packages, their distributional and affordability implications and the potential for phasing implementation over the three river basin planning rounds, from 2009-2027.

The National IA used information from the pCEA together with a model of benefits developed from Project 4bc of the CRP to undertake a national assessment of options for implementing the Directive. Two main options were considered:

- Option 1 'Not Phased' – all technically feasible measures are initiated with the aim of meeting Water Framework Directive good status objectives by 2015 and to meet the progressive reduction/cessation requirements for chemical status, or as soon as possible due to natural conditions. This implies that provisions in the Water Framework Directive to extend deadlines and set less stringent objectives when costs are disproportionate are not used at all.

- Option 2 'Phased' – phased implementation to ensure an adaptive, cost-effective and proportionate long term approach meeting all Water Framework Directive requirements by 2027 or as soon as possible thereafter given feasibility, proportionality and natural conditions. It assumes that alternative objectives (less stringent objectives and extended deadlines) are set to meet Water Framework Directive good status requirements by 2027, where appropriate, and to meet the progressive reduction/cessation requirements.

The National IA also provided an analysis of the consequences of introducing the environmental quality standards and associated methods developed by United Kingdom Technical Advisory Group (UKTAG) to support good status. The main conclusion of this analysis was that, given the standards, there was a clear case for phasing the costs of the Directive in order to ensure that its implementation was proportionate. Numerous measures were ruled out as either technically infeasible or likely to be disproportionate. This information was subsequently used by the Environment Agency to prepare the more detailed Impact Assessment which accompanies the river basin management plans (RBMPs).

K2 Key points about the economic analysis of water use

The following provides a commentary on key issues relating to the economic analysis of water use to assist in interpreting the work done and the way in which it has supported River Basin Planning.

2.1 Have Member States prepared a comprehensive economic analysis including all elements of and being consistent with the Directive?

The United Kingdom has provided a comprehensive economic analysis. This is demonstrated through:

- the Article 5 report economic analysis supporting documents,;
- preliminary cost effectiveness analysis;
- collaborative research programme reports; and
- various Impact Assessments that have been undertaken on the Water Framework Directive.

Further details of this information can be found on the Department for Environment, Food and Rural Affairs website at the following link:
http://www.defra.gov.uk/environment/quality/water/wfd

2.2 Where necessary, have estimates of the volume, prices and costs associated with water services been provided?

Estimates of the volume, prices and costs associated with water services have been used within the economic analysis at various stages. In particular this information was used to determine the extent of recovery of the costs of water services as set out in the report on cost recovery and incentive pricing[9] and the associated Article 5 Economic Analysis supporting documents[10]. Up to date information on these financial costs and revenues is provided by water companies annually to the economic regulator for the water industry in England and Wales (Ofwat) in a report called the June Return. This is available on the Ofwat website at the following link: http://www.ofwat.gov.uk. Information on the prices, costs and volumes for private water services is provided in the report on private water services.

2.3 Where necessary, have estimates of the relevant investment including forecasts of such investments been provided?

Estimates of investments and forecasts of investments have been used at various stages during the economic analysis of water use. In particular this information was relevant to the production of the various reports on water industry costs for the CRP cost-effectiveness work (see above) and also the water sector reports for the pCEA.

2.4 How has long term forecasts of water supply and water demand been taken into account in the principle of the recovery of the costs of water services?

In the United Kingdom water service providers recover the costs of providing water services from customers within their water service areas. Revenue in the companies arises from the provision of a range of services that make up the overall water service. These are measured and unmeasured water and sewerage charges, trade effluent charges, large user charges and other sources. The cost recovery mechanism is slightly different in each case but for each source of charge, prices are broadly cost-reflective. The process of recovery of costs guarantees that financial costs are recovered and the five yearly periodic review process internalises environmental costs through the prices paid by customers. The price setting process for the Water Industry (Periodic Review) is the mechanism through which costs are recovered and cost-recovery is on the basis of efficiently incurred costs which are allowed to finance necessary investments as determined during the periodic review process. Details of this process and how it relates to cost-recovery calculations can be found in the report on cost-recovery and incentive pricing (see above).

2.5 Have approaches been identified showing that the economic analysis was used to assist in judging cost effectiveness?

The cost-effectiveness of measures used information developed during the economic analysis of water use. This included information from the pCEA (sector and pressure reports) and the CRP's development of benchmark cost-effectiveness information on measures and

[9] See http://webarchive.nationalarchives.gov.uk/20080305115859/http://www.defra.gov.uk/environment/water/wfd/economics/pdf/cripreport.pdf

[10] See http://webarchive.nationalarchives.gov.uk/20080305115859/http://www.defra.gov.uk/environment/water/wfd/economics/index.htm

mechanisms. In addition the Environment Agency developed further cost-effectiveness information during the development of the RBMP and the IAs (see IAs and Annex E for more detail).

2.6 What progress that has been made since 2005 to address the uncertainties and data gaps in the economic analysis?

Each of the 2005 Article 5 supporting economic analysis reports contains information on improving the knowledge and information base. These sections detail how the proposed work of the CRP aimed to address uncertainties and knowledge gaps. Hence the CRP and associated outputs represent the main response to the uncertainties and data gaps revealed by the initial economic analysis.

2.7 Have Member States ensured that the measures to implement Article 9 address all three main elements of Art 9: i) incentive pricing; ii) adequate contribution to cost-recovery including environment and resource costs, iii) polluter pays principle?

The main way in which the measures to implement Article 9 have considered the three elements of Article 9 has been through the analysis to screen potential water pricing policies and cost-recovery mechanisms. The original work to undertake this screening is summarised in the report: Screening of water pricing policies, cost recovery mechanisms and economic instruments for inclusion in programme of measures and in relation to Article 9 of the Water Framework Directive.

This report screened water pricing policies, cost recovery mechanisms and economic instruments which may be included in programmes of measures to achieve compliance with the Water Framework Directive in England and Wales. This included:

- Compliance of candidate mechanisms with cost-recovery and incentive-pricing objectives set out in Article 9 of the Water Framework Directive;
- Cost-effectiveness in furthering Article 4 objectives, that is in mitigating environmental pressures arising from abstraction, point-source pollution, diffuse pollution, morphological impacts and alien species.

In terms of compliance of candidate economic mechanisms with Article 9 the report screened charging policies and cost-recovery mechanisms against the Article 9 requirements that they provide for, i.e.:

- Adequate incentives for users to exploit water resources efficiently and thereby contribute to Article 4 objectives (Article 9.1., 2nd sentence, 1st indent);
- An adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture, to the recovery of costs of water services, based on the economic analysis conducted according to Annex III and taking account of the polluter pays principle (Article 9.1., 2nd sentence, 2nd indent).

The analysis found that most, if not all, mechanisms were broadly aligned with or not immediately relevant to Article 9 obligations. It was noted however that questions may arise in relation to a number of mechanisms in particular abstraction charging arrangements; changes for industrial discharges to sewer; surface water drainage charges and metering/volumetric charging measures. In all cases further work was recommended following the screening exercises.

In terms of compliance with cost-effectiveness with regard to Article 4 environmental objectives, the study examined economic mechanisms based on polluter pays principles and incentive pricing approaches that might be used to drive necessary measures. The starting

point was a compilation of a list of economic mechanisms used or which had previously been considered and rejected in England and Wales or Scotland to address each of the five pressures identified in the Water Framework Directive, i.e. abstraction, point-source pollution, diffuse pollution, physical change and alien species. The initial assessment of mechanisms proposed or implemented in the UK suggests that further work was needed in relation to: abstraction and discharge charging regimes, surface water charging and metering and volumetric charging.

Since the publication of this report further work has been ongoing in these areas. The issues raised by this initial screening as part of the economic analysis of water use were included within Government's proposed strategy for water (Future Water)[11] in particular in relation to charging for water, competition and surface water drainage policy. Future Water announced two independent reviews to take forward these issues in the form of the Cave and Walker Reviews.

Professor Martin Cave led an independent review of competition and innovation in water markets between March 2008 and April 2009. The Review published its final report on 22 April 2009 with recommendations to the UK and Welsh Assembly Governments and sectoral regulators (Ofwat, the Environment Agency and the Drinking Water Inspectorate). The Cave Review[12] aimed to:

- deliver benefits to both business and household customers. This could be through lower bills, better service and more responsive products; and
- increase the efficiency and sustainability of water use; through assessing the scope for competition and innovation throughout the water and sewerage industries.

As part of the Review Cave examined abstraction and discharge policy and made a number of recommendations which Government is currently considering how to take forward. The outcomes of this work will have important implications for future river basin management planning and are likely to provide a range of alternative mechanisms which may be used to meet Water Framework Directive targets.

Anna Walker led an independent Review of Household Charging and Metering for Water and Sewerage Services in the UK. Terms of reference for this review were to:

- examine the current system of charging households for water and sewerage services;
- assess the effectiveness and fairness of current and alternative methods of charging; and
- consider and make recommendations on any actions that should be taken to ensure that England and Wales has a sustainable and fair system of charging in place.

The Review looks at social, economic and environmental concerns. An interim report was published on 29 June 2009[13]. Government is currently awaiting the final report from the Review which, as with the Cave review, will have important implications for future river basin plans in relation to Article 9.

Both the Cave and Walker Reviews commissioned research on cross subsidies, price structures and competition in the water industry[14].

[11] http://www.defra.gov.uk/environment/quality/water/strategy/pdf/future-water.pdf
[12] http://www.defra.gov.uk/environment/quality/water/industry/cavereview/documents/cavereview-finalreport.pdf
[13] http://www.defra.gov.uk/environment/quality/water/industry/walkerreview/documents/walker-call-for-evidence.pdf
[14] http://www.defra.gov.uk/environment/quality/water/industry/cavereview

Together these reports show that the UK is taking the issue of incentive pricing seriously and demonstrate the UK's commitment towards a continual process of improvement. This will ensure that water prices in the UK more fully reflect the true environmental and social cost of abstraction and provide greater incentives for water to be used efficiently, thus satisfying the aims of Article 9.

Agricultural diffuse pollution was explicitly outside the scope of the initial screening research as all measures related to agricultural diffuse pollution were under consideration during the development of the Catchment Sensitive Farming Initiative. This considered the balance between voluntary, regulatory and economic incentive based approaches. It began with an initial screening of potential measures[15] and concluded that the most appropriate package was a combination of advisory services, use of agri-environment schemes and the development of a new mechanism based on Water Protection Zones[16]. During the development of this policy a substantial evidence base was developed relating specifically to the economic analysis of agricultural water use[17].

2.8 How has the definition of water services and uses been implemented in practice?

In the United Kingdom the definition of water services encompasses the Water Industry: i.e., services provided by the water and sewerage industries.

2.9 How have water pricing policies provided adequate incentives for users to use water resources efficiently?

The economic analysis of water use has examined the way in which pricing policies provide adequate incentives for users to use water resources efficiently. The main analysis has been with respect to CRP Project 1c (as detailed above). The outcomes of this screening of pricing policies and cost-recovering mechanisms were incorporated into the Future Water Strategy and further work undertaken as part of the Cave and Walker Reviews (see above).

2.10 Which approach was taken to ensure that water uses are providing an adequate contribution to the recovery of the costs of water services?

The methodology for undertaking cost recovery of water uses is explained in each of the river basin district Article 5 reports and in more detail in the report on cost-recovery and incentive pricing. Further work in relation to the need for changes to cost-recovery mechanisms is summarised in the CRP Project 1c report.

2.11 Whether future plans have been put in place to address any continuing uncertainties and data gaps on the recovery of the costs of water services?

Further work on the recovery of the costs of water services will take place as a result of the Cave and Walker Reviews. In addition there are plans to undertake further longer term work on benefits assessment. This will provide better evidence on what the level of environmental and resource costs relevant to the recovery costs of water services. This research is being scheduled by Defra to deliver answers in time for the 2nd river basin management planning process.

[15] http://www.defra.gov.uk/foodfarm/landmanage/water/csf/document-archive.htm
[16] http://www.defra.gov.uk/foodfarm/landmanage/water/csf/documents/diffuse-consult-govresponse.pdf
[17] http://www.defra.gov.uk/foodfarm/landmanage/water/csf/document-archive.htm

K3 Data to be provided

3.1 Volumes abstracted/discharged per water service

This information is available for water company areas but not on a river basin district basis. Data are contained in the relevant Article 5 report or can be obtained from the Ofwat website at the above link.

3.2 Estimated investments for water services

The estimated investment costs for water services relevant for the Water Framework Directive are set out in the river basin district impact assessment documents that will be published at the same time as the plan documents on 22nd December 2009.

3.3 Costs of water services

This information is available on a water company basis not on an river basin district basis. Data is contained in the relevant Article 5 report or can be obtained from the Ofwat website at the above link.

K4 Other information

Hyperlinks to more detailed supporting documents including references to legal documents or methodology documents should be provided.

Article 5 reports for the UK River Basin Districts:
http://webarchive.nationalarchives.gov.uk/20080305115859/http:/www.defra.gov.uk/environment/water/wfd/economics/index.htm#eco

River Basin Management Planning guidance document:
http://www.defra.gov.uk/environment/quality/water/wfd/documents/riverbasinguidance.pdf

Ofwat website:
http://www.ofwat.gov.uk

Department for Environment, Food and Rural Affairs website on Water Framework Directive
http://www.defra.gov.uk/environment/quality/water/wfd

Cave report findings:
http://www.defra.gov.uk/environment/quality/water/industry/cavereview/documents/cavereview-finalreport.pdf

Walker review interim report
http://www.defra.gov.uk/environment/quality/water/industry/walkerreview/documents/walker-call-for-evidence.pdf

The UK would like to work with the Commission to produce common methods for reporting on economic analysis across Member States. This is relevant in the context of the planned workshop for next year to consider methods for improving the process.

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Department for Environment Food and Rural Affairs

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Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex L: Record of consultation and engagement

Contents

L.1 Introduction

This annex presents a summary of the steps taken nationally and within the Anglian River Basin District to ensure that the River Basin Management Plan (RBMP) has been produced through consultation and engagement with interested parties.

It is an important principle of the Water Framework Directive (WFD) to encourage a wide range of stakeholders to be involved in improving the water environment. As a first step to securing meaningful engagement stakeholders and the public need access to the information about the work in hand. Significant efforts to make information easily accessible have been made and they are described below under the heading "Public access to information".

As a step on from making information available, and in order to gain a more detailed insight into the views of stakeholders on different aspects of river basin management, there have been a number of consultations on general and specific aspects of implementation. Some of these were led by the Department for Environment, Food and Rural Affairs and the Welsh Assembly Government, some by the Environment Agency, and some by other bodies such as the United Kingdom Technical Advisory Group. Some of the consultations have had a river basin district focus and some have been for England and Wales ("national" in the context of this chapter). All of these consultations have helped develop the proposals for river basin management and provided the benefit of wide geographical, sectoral and stakeholder coverage, and linked into a number of groups focussed on specific water management issues. All these activities are listed below under the heading of **"**Consultations**"** along with a summary of their outcomes.

Finally, the process of producing this River Basin Management Plan has benefited from the active involvement in the planning process itself by many different stakeholders. These have taken place at the national (England and Wales) and at the regional level through very wide ranging activities, which include for example the work of the National stakeholders, the river basin district liaison panels and many local groups. These forms of engagement are listed and described below under the heading **"**Involvement in the planning process**".** Because this engagement has been extensive over a number of years this list is not exhaustive.

L.2 Public access to information

Means of dissemination	Activities
Environment Agency	
Environment Agency website	• Initial Article 5 information (River Basin Characterisation outputs) on 'What's in your backyard' (WIYBY) – 2005 • Technical waterbody level information on objectives, classification status and identified risks as presented in the draft River Basin Management Plans - December 2008 A river basin management web page has been set up and is updated regularly. Information on website includes: • Background documentation used in River Basin District Liaison Panel meetings and the minutes of meetings • All consultation documents and supporting information posted on the web site (different sites depending on the lead organisation for each consultation) • Posting of all statement of response to consultations • The internet address of the online consultation was promoted to local stakeholders' websites to enable web links to be created • Use of electronic consultation to facilitate responses • Technical supporting information including further characterisation (risk assessment) outputs, classification, objectives and measures as presented in the draft River Basin Management Plans. • Contact details for Environment Agency staff involved in river basin management
Use of public libraries	• Electronic and hard copy versions of the consultation documents ('draft Anglian River Basin Management Plan', 'River Basin Planning: Working Together' and 'River Basin Planning: Summary of Significant Water Management Issues') were made available at the district's central library and all local branches
Use of Environment Agency offices	• Copies of all Environment Agency led consultation documents were made available free of charge at the Head Office in Bristol and in the principal office in the Anglian River Basin District at Kingfisher House, Goldhay Way, Orton Goldhay, Peterborough, PE2 5ZR.
Direct mail outs	• Copies of 'The Water Framework Directive – Guiding Principles on the Technical Requirements' mailed to National stakeholders • 27 paper copies and 800 electronic copies of the consultation document 'River Basin Planning: Working Together' sent to stakeholders. • 27 paper copies and 800 electronic copies of 'River Basin Planning: Summary of Significant Water Management Issues' sent to stakeholders. • 12 paper copies and 30 electronic copies of the 'draft Anglian River Basin Management Plan' sent to stakeholders. • Direct notification of consultations sent to 870 River Basin District stakeholders.

Means of dissemination	Activities
Public notices	• Notice published in London Gazette for one day stating submission on 22 September 2009 of the 'River Basin Management Plans 2009-2015' to Ministers for approval, under Regulation 13(1)(b) of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2003. • Notice of consultation on the 'draft Anglian River Basin Management Plan' published in the Eastern Daily Press for 2 weeks from 22nd Dec 2008 • Notice of consultation on 'River Basin Planning: Summary of Significant Water Management Issues' published in the Eastern Daily Press for two weeks on the 24 and 31 July 2007. • Notice of consultation on 'River Basin Planning: Working Together' published in the Eastern Daily Press for two weeks on 22 and 29 December 2006.
Technical pamphlets/ information sheets	• General Water Framework Directive introductory material distributed at conferences • Issue/ sector based briefing sheets distributed at conferences • The dRBMP consultation ran from 22nd December 2008 to 22nd June 2009. • Issued nearly 2000 leaflets some of which have been distributed by the Regional Stakeholders and Liaison Panel members. • Information has also been distributed to all the statutory Committee Members. • All County Libraries have been provided with pamphlets and CD copies of the full plan. • Sector specific leaflets were also produced
Publicity material	• Publication of leaflets and postcards to publicise and promote Photography competition launched in April 2009 for Under 16s to promote the value of water participation in consultations • Significant Water Management Issues news release for trade press on 13 August 2007. • Working Together consultation newspaper adverts on 22 December and 29 December 2006, and news release published for trade press on 3 January 2007. • 2000 Leaflets on RBMP • Sector specific leaflets.
Interviews/articles in local media	• Press piece: the Water Industry's expectation of Significant Water Management Issues (SWMI), 8 January 2007. • Article in 'Buckingham Today' to promote SWMI, 11 September 2007. • Radio Cambridgeshire interview: public participation on SWMI document, July 2007. • Organisations such as Association of Drainage Authorities (ADA), National Farmers Union, Great Ouse Boating Association (GOBA) and Environmental Campaigns (ENCAMS) have published articles in their monthly newsletters and magazines with links to the consultation.

Means of dissemination	Activities
Public meetings/drop in events, other	• Presentation of the WFD in East of England at Peterborough Rotary Club, June 2006. • Presentation of the WFD in East of England at Bedford Rotary Club, May 2006. • dRBMP 11 primary workshops, which were split on a sectoral and catchment basis. 800 invitations and received around 300 attendees. • dRBMP 29 focussed workshops; small group meetings and teleconferences. These were aimed at tackling more specific questions and providing any necessary additional information.
Other	• Offer for translations of documents to be made available on request
Department for Environment, Food and Rural Affairs	
Publication of background documents on the economic aspects of implementation	• Scoping study for Water Framework Directive Annex III (economic analysis) • Regulatory Impact Assessment on potential costs and benefits associated with new environmental standards • Report on economic importance and dynamics of use of River Basin Characterisation led by Department for Environment, Food and Rural Affairs, Welsh Assembly Government also involved. • Report on cost recovery and incentive pricing led by Department for Environment, Food and Rural Affairs, Welsh Assembly Government also involved. • Report on cost-effectiveness analysis and methodology for assessing disproportionate costs led by Department for Environment, Food and Rural Affairs, Welsh Assembly Government also involved. • Report on private water services • Groundwater daughter directive partial Regulatory Impact Assessment covering England and Wales • Priority substances partial Regulatory Impact Assessment
Department for Environment, Food and Rural Affairs website	• Article 5 reports • Advert for the draft River Basin Management Plans consultation and links to details on the competent authority websites.
United Kingdom Water Framework Directive Technical Advisory Group	
United Kingdom Water Framework Directive Technical Advisory Group website	Access to information on technical interpretation of Water Framework Directive requirements including • Environmental standards • Classification

L.3 Consultations

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Led by the Environment Agency			
Draft Anglian River Basin Management Plan	This document presented the main issues for the Anglian River Basin District and briefly set out the actions proposed be taken to deal with them. The annexes to the document gave much more detail on the conditions in the River Basin District, the actions proposed and the mechanisms that can be used to take these actions forward.	There were 47 responses via the online system, 87 email responses, 8 written responses and 23 requests for information to the consultation. The main comments received were concerning • Presentation and Structure • Objectives and Ambition • Waterbody Classification • Actions and Implementation • Legislation • Climate Change • Impact Assessment • Strategic Environmental Assessments (SEA) As a result of the comments made, The Environment Agency have: • Revised local measures including moving Scenario C measures to B where possible • Revised local text where advised through the consultation responses.	December 2008 – June 2009

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
		Further detail is provided in 'draft River Basin Management Plans, a consultation response for the Anglian River Basin District' http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/anglian/Intro.aspx	
Strategic Environmental Assessment Environmental Reports for the draft River Basin Management Plans	The Water Framework Directive requires the production of River Basin Management Plans across the United Kingdom. These plans require assessment under the Strategic Environmental Assessment (SEA) Directive (2001/42/EC) to identify wider effects on the environment. The environmental report presented the methodology we used in the SEA, an explanation of how environmental factors have been considered within the decision-making, and the results and conclusions of the SEA process.	A total of 3 opinions were received relating directly to the Anglian Plan. A summary of comments across all river basin districts included: • The importance of ensuring the maintenance of water supplies to canals and the need to maintain canals open for navigation and at suitable depth. Concerns were also raised about measures that may require the screening of abstractions and transfers to supply water to reservoirs and canals. • The importance of river basin management process in delivering habitat creation, green infrastructure, re-instatement of habitat, and the enhancement of protected and UKBAP, LBAP and other locally important species.	December 2008 – June 2009

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Strategic Environmental Assessment Environmental Reports for the draft River Basin Management Plans		• Concerns were raised about how the SEA has considered the historic environment (including historic landscape character, historic built environment, archaeological remains and deposits). Sensitivities include: changes in water quality, water levels, habitat restoration schemes, managed realignment and pollution. • Respondents wished to see further evidence of how the SEA had influenced the Plan process and how it may be possible to influence other future plans and strategies. Further detail and the action the Environment Agency has taken to all comments is provided in the 'Strategic Environmental Assessment Statement of Particulars'. http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/anglian/Intro.aspx	

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Strategic Environmental Assessment Scoping Reports consultation	The Water Framework Directive requires the production of River Basin Management Plans across the United Kingdom. These plans require assessment under the Strategic Environmental Assessment Directive (2001/42/EC) to identify wider effects on the environment. The Scoping Reports set out the information to be included in this assessment	The results of the consultation were considered in finalising the approach to the Strategic Environmental Assessment (SEA). Further details for each river basin district can be obtained on the Environment Agency website.	October to November 2007 (extended to January 2008)
River Basin Planning – Summary of Significant Water Management Issues [Anglian River Basin District]	This document set out what the Environment Agency believe are the most significant issues that face the Anglian River Basin District. The Environment Agency has worked together with the members of the Anglian River Basin District liaison panel to identify the significant water management issues. To identify the significant issues for this report, a list of pressures or 'potential issues' will be assessed	The majority of responses agreed with the proposals. As a result of the comments made, the Environment Agency will: • take account of the impact of flood and erosion management, as well as the impact of new developments (e.g. Water Cycle Strategies and encouraging water efficiency). • ensure that actions they implement are as effective now as they will be in future as the climate changes. • continue to dredge in areas where it is appropriate. • consider the 'polluter pays' principle, implement and extend voluntary and statutory initiatives, and work with co-deliverers to achieve aims of the WFD. • ensure that costs are	July 2007 to January 2008

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
River Basin Planning – Summary of Significant Water Management Issues [Anglian River Basin District]		proportionately distributed. • use woodland as a measure to alleviate flood risk and diffuse pollution. • take into account economic, environmental and social implications of measures. Further detail is provided in 'River basin planning: Summary of significant water management issues, a consultation response for the Anglian River Basin District' at http://www.environment-agency.gov.uk/static/documents/Research/anglianswmidoc_1953860.pdf	
River Basin Planning – Working Together [Anglian River Basin District]	This document presented information and proposals about the way river basin planning could work in the Anglian River Basin District and how and when people interested in participating in this process could do so.	The majority of responses agreed with the proposals. As a result of the comments made, the Environment Agency: • will make the best use of the limited time and resources available. For the first cycle they will do as much as they can, whilst accepting that they will have greater knowledge over time. • will continue to assess and discuss comments received in relation to the planning process. This will help to ensure that working groups have adequate time to deal with any information and issues arising. We will concentrate on providing guidance rather than instructions, allowing	December 2006 to June 2007

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
River Basin Planning – Working Together [Anglian River Basin District]		liaison panels a greater degree of flexibility. • have compiled a communications strategy with budgeting for workshops and meetings, which sets out how they will work with stakeholders to implement the WFD. • will ensure that information on the WFD is included in various publications and websites that target different sector groups. • use the communications networks to cascade information, maintaining the ARBD contact list. This includes distributing the quarterly River Basin Planning newsletters. Further detail is provided in 'River basin planning: working together, a consultation response for the Anglian River Basin District' at http://www.environment-agency.gov.uk/static/documents/Research/wt_anglian_response_2034576.pdf	
Water for life and livelihoods – a strategy for River Basin Planning in England and Wales	This document set out proposals for how the Environment Agency was planning to work to develop River Basin Management Plans and implement the Water Framework Directive. In particular how it would engage	Responses were received from many different stakeholders. These contributed to refining the planned approach to river basin management, particularly in relation to the terms of reference for stakeholder engagement. This	January to April 2005

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Water for life and livelihoods – a strategy for River Basin Planning in England and Wales	with and encourage participation from stakeholders at national, regional and local level; and how it would integrate different aspects of managing the water environment	consultation process also helped the process of aligning the thinking about implementation of the Directive between the Department for Environment, Food and Rural Affairs, the Welsh Assembly Government and key stakeholders.	
River Basin Characterisation	District based consultation on River Basin Characterisation (Water Framework Directive Article 5)	There were many varied and constructive responses, with many suggesting improvements to the Environment Agencies proposals. As a result of these comments, The Environment Agency: • made method statements clearer; • refined and corrected the assessments for authorised point and diffuse sources, where necessary; • updated morphological pressure assessments where new information was available; • improved assessment of alien species risks to surface waters; and chemical and quantitative risks to ground water.	September to November 2004
The Water Framework Directive – Guiding Principles on the Technical Requirements	This document presented the Environment Agency's interpretation of the technical requirements from Annex II and V of the Water Framework Directive. Aspects covered by these annexes included the characterisation of	Responses were received from a number of the main stakeholders. These allowed the Environment Agency to achieve a common understanding of the technical requirements of the Directive and informed the work undertaken to complete	June to September 2002

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
The Water Framework Directive – Guiding Principles on the Technical Requirements	surface and groundwater body types; identification of pressures and impacts; review of impacts of human activity; classification of surface water and groundwater bodies; and the design of monitoring programmes.	the Characterisation Reports; the design of the monitoring programmes; and the approach to status classification for water bodies.	
Led by the Department for Environment, Food and Rural Affairs and Welsh Assembly Government			
Consultation on the Draft Flood and Water Management Bill	The draft Flood and Water Management Bill will: • deliver improved security, service and sustainability for people and their communities • it will be clear who is responsible for managing flood risk • protect essential water supplies • modernise the law for managing flood risk and reservoir safety • encourage more sustainable forms of drainage • enable water companies to control more non-essential uses of water during droughts • make it easier to resolve misconnections to sewers The overall effect will be a healthier environment, better service and greater	http://www.defra.gov.uk/corporate/consult/flood-water-bill/index.htm	April to July 2009

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
	protection for people, their communities and businesses.		
Consultation on the second phase of Environmental Permitting Programme (EPP2)	EPP2 is a Better Regulation initiative designed to reduce costs for operators and the regulator by cutting unnecessary red tape, while continuing to protect the environment and human health. This consultation proposes to extend the single EP system formed under EPP1 to create a common system of risk-based environmental permitting and compliance for an extended range of regimes. These include: • Water Discharge consents: Permits to control certain discharges to surface water; • Groundwater Authorisations: Permits to control the disposal of specific substances into groundwater, and; • Radioactive Substances Regulation: permits for keeping and use of radioactive materials; and for accumulation and disposal of radioactive waste.	http://www.defra.gov.uk/corporate/consult/env-permitting/letter.htm	February to May 2009
Consultation on new arrangements for establishing Water Protection	For England, the principle of new Water Protection Zone arrangements was included in all options	http://www.defra.gov.uk/corporate/consult/water-protection-zones/index.htm	Catchment Sensitive Farming consultation in England ended in November 2007

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Zones	for the consultation on Catchment Sensitive Farming. A Welsh consultation will consider the need for new Water Protection Zone arrangements alongside other agricultural diffuse pollution measures.	http://wales.gov.uk/consultations/environmentandcountryside/waterprotectionzones/?lang=en&status=closed	December 2008 to March 2009
Consultation on Directions to the Environment Agency on Classification of Water Bodies	This consultation is the final stage in a process of developing the environmental quality standards and other criteria recommended for use in classification in the first river basin planning cycle. It also includes recommendations on methodologies for the use of those standards and criteria to classify all WFD water bodies.		October to December 2008
Ministerial Guidance - Consultation on River Basin Planning Guidance Volume 2	Consultation seeks views upon draft guidance in relation to standards, objectives, emerging policy trends, issues around technical feasibility and disproportionate cost; and impact assessments associated with the Water Framework Directive.	http://www.defra.gov.uk/environment/quality/water/wfd/documents/consult-guidance-response-letter.pdf	February to May 2008
Consultation on Implementation of European Union Legislation in England and Wales: Aquatic Animal Health Directive	This paper asks to: • note the provisions in the Directive which are obligatory; • comment on the interpretation; • respond on the proposals relating to the areas of choice.	http://www.defra.gov.uk/corporate/consult/khv/khv-consultation-doc.pdf	December 2007 to March 2008

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
	The Directive and the implementing proposals generally cover the aquatic animals when they are caught, kept or moved by humans. There are also some obligations in relation to aquatic animals in the wild.		
Consultation on the implementation of the revised Bathing Water Directive	The purpose of this Consultation paper was to seek views on: • the number and type of bathing waters where measures should be taken to improve the water quality; • the development of a prediction and discounting system; and • the development of public information for beach signage.	http://www.defra.gov.uk/environment/quality/water/waterquality/bathing/documents/summary-responses.pdf	November 2007 to February 2008
Consultation on the review of schedule 9 to the Wildlife and Countryside Act 1981 and a ban on the sale of certain species	This consultation sought comments on proposals for a prohibition on the sale of certain species. The prohibition will be achieved by an Order made under section 14ZA of the Wildlife and Countryside Act 1981.	http://www.defra.gov.uk/wildlife-pets/wildlife/management/non-native/documents/consultation.pdf	November 2007 to January 2008
Consultation on Non-Agricultural Diffuse Pollution	General binding rules for non-agricultural diffuse pollution; Control on phosphates in laundry detergents; Sustainable Urban Drainage Systems: permeable surfaces, filter strips and swales, infiltration devices, basins and ponds.	Various steps are being considered and the Consultation on options for controls on phosphates in domestic laundry cleaning products in England has been launched.	February to May 2007

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Consultation on mechanisms to deliver Water Framework Directive Requirements on hydromorphology	This document looks at the range of legislative, economic and voluntary mechanisms that are available in England and Wales for delivering measures to avoid or reduce effects resulting from hydromorphological pressures, and whether they are sufficient to meet Water Framework Directive requirements.	The majority who responded welcomed the consultation and most provided practical and constructive comments. Various options are being considered with the Environment Agency taking on board responses to recent consultation. Any new powers that might be needed would have to be in place by the end of 2009. The idea of a catchment restoration fund is being actively considered to address the physical restoration of a number of water bodies.	February to May 2007
Article 5 economic analysis of water use supporting document	Article 5 (characterisation) requirement for River Basin District based assessments of the 'Economic analysis of water use'.	Reports summarising, for each River Basin District, the analysis required by Article 5 of the Directive have been reported by the Department for Environment, Food and Rural Affairs (on behalf of the United Kingdom) to the European Commission. http://www.defra.gov.uk/environment/quality/water/wfd/characterisation.htm	March 2005
Consultation on Guidance for River Basin Planning	This guidance set out the expectations of the Department for Environment, Food and Rural Affairs in relation to river basin planning.	Set out in two parts. See Ministerial Guidance Consultation.	December 2004 to March 2005
Second consultation on the Water Framework Directive	This second consultation invited views on the key issues arising from transposition and implementation of the	The summary of responses and the response to them is detailed in the document below, from pages 14 – 53.	October 2002 to January 2003

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
	Water Framework Directive into national legislation.	http://www.freshwaterlife.org/servlet/BinaryDownloaderServlet?filename=1060944568091_WFD_consult3_chapters_only.pdf	
First consultation on the Water Framework Directive	This consultation invited views on key issues arising from the implementation of the Water Framework Directive. It was the first step, including discussions with the principal affected parties. It also served as an introduction to the Directive's provisions and principal obligations.	In addition to the main themes, the role of wetlands and the degree to which they could be protected under the Water Framework Directive and the definition and timing of the "no deterioration" in status requirement were discussed. As a result of the comments made the Department for Environment, Food and Rural Affairs and Welsh Assembly Government: • agreed that its important to develop techniques to trace and monitor diffuse sources of pollution. • gave their intention to implement the Water Framework Directive by means of secondary legislation (regulations).	March to June 2001
Led by the Department for Environment, Food and Rural Affairs			
Consultation on proposals for time limiting of water abstraction licenses	This consultation is gather views on proposals for time limiting of water abstraction licenses. The time limiting of existing abstraction licenses is vital in ensuring water resources can be	http://www.defra.gov.uk/corporate/consult/water-abstraction/consultation.pdf	May to August 2009

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
	managed and allocated efficiently, in order to cope with the anticipated impacts of climate change and achieve water quality objectives set out in the UK Government's 2008 water strategy for England *Future Water*.		
Consultation on implementing the abstraction elements of the Water Act 2003	This consultation is to seek views on draft proposals from Defra and the Welsh Assembly Government on the removal and creation of various exemptions from license control. The proposed new Regulations to bring these proposals into force will implement the remaining abstraction provisions of the Water Act 2003.	http://www.defra.gov.uk/corporate/consult/water-act/index.htm	April to July 2009
Environmental Standards for Farming - Consultation on proposed changes to standards in cross compliance Good Agricultural and Environmental Condition (GAEC) and related measures in England	This consultation is to seek your views on a range of proposed changes to cross compliance following the conclusion of the review of the Common Agricultural Policy (CAP Health Check). These proposals relate to cross compliance standards and related measures in England, including recapturing the environmental benefits of set-aside.	http://www.defra.gov.uk/corporate/consult/gaec/index.htm	February to May 2009
Consultation on modernisation of salmon and freshwater fisheries legislation; new order to address the passage of fish	Proposals to improve the free passage of fish and to allow free access to breeding, nursery and feeding grounds for fish in England and Wales. These proposals follow recommendations	http://www.defra.gov.uk/corporate/consult/fisheries-legislation/letter.htm	January to April 2009

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
	made in the Salmon and Freshwater Fisheries Review, published in 2000, and were included in the consultation which started in February 2007 on "Mechanisms to Deliver Water Framework Directive Requirements on Hydro-morphology" and in the new water strategy for England, Future Water on 7 February 2008.		
Consultation on Draft Statutory Instrument to amend provisions of the Water Resources Act 1991 for Water Protection Zones, and related Draft Statutory Guidance for the Environment Agency	This consultation follows on from one on diffuse water pollution from agriculture that was conducted in 2007. Defra concluded in the light of that earlier consultation that the need to provide a power to regulate where necessary to implement the Water Framework Directive would be best met by simply updating the existing power to designate Water Protection Zones. This power would be available for use where appropriate under the River Basin Management Plans now being developed by the Environment Agency with the aim of achieving good chemical and ecological status in inland and coastal waters by 2015. Parts of this consultation will also apply in Wales.	http://www.defra.gov.uk/corporate/consult/water-protection-zones/	December 2008 to March 2009

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Consultation on improving surface water drainage	This consultation develops some of the key policy proposals set out in the Government's new Water Strategy, *Future Water*. The strategy sets out a vision for more effective drainage of surface water, in order to resolve existing problems and prepare for the impacts of climate change. The floods last summer brought into sharp focus the real damage that surface water flooding can cause. The interim report from the Pitt Review on lessons learned has urged early action to improve the way that surface water is managed, particularly in high risk areas.	http://www.defra.gov.uk/environment/flooding/documents/manage/surfacewater/swmp-consult.pdf http://www.defra.gov.uk/environment/flooding/documents/manage/surfacewater/swmp-consult-sum.pdf	February to April 2008
Consultation on the future of the Pesticides Safety Directorate (PSD)	This consultation paper sought views on the future of the Pesticides Safety Directorate, following recommendations made by the 2005 Hampton Review, which aimed to make Government's inspection and enforcement functions simpler and more customer focussed.		November 2007 to January 2008
Protection of Waters Against Pollution from Agriculture	• The purpose of this Consultation paper was to seek views on: • proposals for revised Action Programme measures to control pollution caused by nitrogen from	http://www.defra.gov.uk/environment/quality/water/waterquality/diffuse/nitrate/documents/consultation-supportdocs/consultation.pdf	August to December 2007

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
	agricultural sources. • whether to apply these measures within discrete Nitrate Vulnerable Zones (as revised) or throughout the whole of England.		
Consultation on the revised Code of Good Agricultural Practice to protect water, soil and air quality.	This consultation invited views on the draft revised Code of Good Agricultural Practice.	http://www.defra.gov.uk/foodfarm/landmanage/cogap/documents/summary-responses.pdf	August to November 2007
Catchment Sensitive Farming Programme: Consultation on diffuse sources of water pollution from agriculture.	Three policy packages are presented for consideration for inclusion in Programme of Measures: supportive, regulatory and economic. Also whether Water Protection Zones should be merged with Nitrate Vulnerable Zones.	Government response: http://www.defra.gov.uk/foodfarm/landmanage/water/csf/documents/diffuse-consult-govresponse.pdf	August to November 2007
Consultation on options for controls on phosphates in domestic laundry cleaning products in England	This consultation paper covers the need to take action on phosphates in the water environment and the contribution that controls on domestic laundry cleaning products might make to that process.		February 2007 to April 2008
Consultation on draft statutory social and environmental guidance to the Office of Water Services (Ofwat)	This consultation delivers on a commitment made by the Government in the Regulatory Impact Assessment which accompanied the Water Act 2003, that a full public consultation would take place on the draft Guidance.		February 2007to April 2008

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Partial Regulatory Impact Appraisal	This Regulatory Impact Assessment concerns environmental quality standards for implementation of the Water Framework Directive. The Directive requires the United Kingdom administrations to introduce environmental standards and conditions to help with the classification and objective setting process that will form the basis for the river basin management planning required to meet the Directive objectives.	http://www.defra.gov.uk/environment/quality/water/wfd/documents/pdf-ria-draft/ria-wfd-excludingannexes.pdf ***Note:*** *the United Kingdom Water Framework Directive Technical Advisory Group issued their initial proposals for standards for stakeholder review in early 2006. This Regulatory Impact Assessment takes into account the changes proposed as a result of the stakeholder review and reflects the final recommendations made.*	2007
Consultation: *Making Space for Water:* Environment Agency strategic overview – strengthening our strategic approach to sea flooding and coastal erosion risk management	This consultation paper seeks views on the proposals of the Department for Environment, Food and Rural Affairs for the way in which the Environment Agency will exercise a strategic overview in relation to sea flooding and coastal erosion risk management. A separate consultation will take place at a later stage regarding the Environment Agency's strategic overview in relation to inland sources of flooding.	*Making space for water* has identified the need to explore a greater range of delivery mechanisms for flood and coastal erosion risk management, with a view to developing more sustainable approaches which maximise the environmental, social and economic benefits achieved and which may also deliver wider benefits.	August to November 2006

Title	Brief description of document	Key outputs of consultation and actions	Period of consultation
Led by United Kingdom Water Framework Directive Technical Advisory Group			

- Environmental Standards and Conditions – Phase 1
- Environmental Standards – part 2
- United Kingdom Environmental Standards and Conditions (Specific Pollutants/Groundwater Standards/Surface Water) (SR1-2007)

For more information visit http://www.wfduk.org/

Other

- Towards Sustainability (United Kingdom Water Industry Research)

For more information visit http://www.ukwir.org/site/web/content/home

L.4 Involvement in the planning process

Sectors, Groups and networks	Activity
River Basin District Level	
Anglian River Basin District Liaison Panel	The liaison panel was created as a new forum for co-deliverers to discuss and influence the development of the River Basin Management Plan and assist with its implementation. The panel works on a representational system and core membership will be based around the key organisations that are responsible for implementation, and others who can both represent the public and other sectors. The liaison panel is made up of representatives from key stakeholder sectors:

Sector	Key Representative	Organisation (Role)
Ports	John Brien	Harwich Haven (Harbour Engineer)
Consumers	Melinda Appleby	Consumer Council for Water (Member)
Environment Agency	Harvey Bradshaw Paul Woodcock David Whiles Dave Freeman Fran Sykes Jemma Pawley Regan Harris	(former Regional Director) (Regional Director) (River Basin Programme Manager) (Principal Officer, River Basin Planning) (former WFD Communications Officer) (WFD Communications Officer)
Local Authority	Richard Belfield	Lincolnshire County Council (Director – Sustainable Communities)
Business & Industry	Jane Burch Richard Bindless	Country Landowners Association (Regional Adviser) East of England Business Group (Director)

Sectors, Groups and networks	Activity		
	Farming	Paul Hammett	National Farmers Union (Environment and Land Use Adviser)
	Natural England	Peter Grimble Jonathan Burney Gareth Dalgish	Natural England (Regional Projects Manager) (Area Manager) and (Regional Advocacy and Partnerships)
	Recreation	Peter Holloway	Anglian Regional Fisheries Consultative Forum (Chairman) and Essex Angling Consultative Association (Chairman)
	Regional Development Agency	Steve Cox Johnathan Reynolds	East of England Development Agency (Director – General Development) East of England Development Agency (Sustainable Development Manager)
	Regional Assembly	Graham Nelson Alan Wheeler	East of England Regional Assembly (Joint Head of Planning) East of England Regional Assembly (Consultant)
	Water Companies	Clive Harward	Anglian Water (Head of Water Quality and Environmental Performance)
	Consumer Council for Water	Melinda Appleby	Consumer Council for Water (Environment and Agriculture Consultant)
	Internal Drainage Boards	Iain Smith	Middle Level Commissioners (Clerk and Chief Executive)
	Inland Navigation and National Parks	Trudi Wakelin	Broads Authority (Director of Navigation)
	Extraction and Minerals	Mark North David McCabe	Lafarge Aggregates (National Planning and Estates Manager) Aggregate Industries (Midlands Estates Surveyor)

Sectors, Groups and networks	Activity		
	Environmental Non-Governmental Organisations (**NGOs)**	John Sharpe	RSPB (Vice Chairman of East of England Environment Forum)

Eleven meetings of the Liaison Panel were held in different venues within the River Basin District. Minutes are available in http://www.environment-agency.gov.uk/research/planning/33230.aspx

All Sectors	20 March 2006	Workshop/ presentations to engage stakeholders in the WFD. David Whiles (DW), Paul Woodcock & Sarah Fowler (former Regional Strategy Unit Manager) present.
	30 March 2006	Managing Waterside Environments conference. DW present.
	11 May 2006	Planning and the Environment conference. DW invited by East Midlands Regional Assembly.
	5 June 2006	DW delivered presentation at World Environment Day conference.
	21 July 2006	Anglian River Basin District (RBD) Liaison Panel meeting. All sectors represented & Melanie Munro (Cranfield University).
	2 October 2006	Anglian RBD Liaison Panel meeting. All sectors represented & Claire Merritt from GO-East.
	3 November 2006	National Liaison Panel criteria setting workshop for setting significant issues. DW attended.
	31 January 2007	Anglian RBD Liaison Panel meeting. Lesley Clarke (Strategic Environmental Assessment Officer) & Dougal McNeil (Natural England) present.
	24 April 2007	Anglian RBD Liaison Panel meeting. Julian Wright (Climate Change Policy Advisor) & Dave Corbelli (Hydromorphology Lead).
	8 June 2007	Central Area Advisory Panel. Presentation of WFD developments and impact of physical modifications.
	11 July 2007	Anglian RBD Liaison Panel meeting. Julian Wright, Jennifer Johnson (Chemical Monitoring & Data Officer) & Anthony Footit attended.
	6 September 2007	Site visit to Reedham organised by the Broads Authority (general WFD update given). DW and Fran Sykes attended.

Sectors, Groups and networks	Activity	
	23 September 2007	Anglian RBD Liaison Panel meeting. Rob Hitchen (River Basin Management Policy Advisor) attended.
	26 November 2007	Workshop to develop programme of measures for Northern Area/ Fens and coastal areas. 31 stakeholders attended from all sectors.
	28 November 2007	Workshop to develop programme of measures for Eastern Area/ Broads and coastal areas. 60 stakeholders attended from all sectors.
	30 November 2007	Workshop to develop programme of measures for Central Area/ Fens and coasts. 32 stakeholders attended from all sectors.
	17 December 2007	Anglian RBD Liaison Panel meeting. Rob Hitchen attended.
	15 January 2008	Northern Area Advisory Panel: WFD update and workshop. Dave Freeman (DF) attended.
	16 January 2008	Joint Regional Implementation Group (RIG)/ Regional Fisheries, Ecology and Recreation Committee (RFERAC) / Regional Environmental Protection Committee (REPAC) meeting to develop local PoMs. DW, DF & Jemma Pawley (JP) attended.
	21 February 2008	Groundwater Program Of Measures (PoM) workshop. 30 stakeholders present from all sectors.
	7 March 2008	Sifting and Scenario development workshop using local database. 27 stakeholders present from all sectors.
	13 March 2008	Anglian RBD Liaison Panel meeting. Rob Hitchen, Lesley Clarke & Paul Hunt (Sustainable Development Project Manager) present.
	17 March 2008	DW presented WFD update to East of England Regional Assembly (EERA) Environment Group.
	15 April 2008	Artificial Water Bodies & Heavily Modified Water Bodies (AWB/HMWB) GEP classification training sessions. 24 attendees; mainly EA staff. Internal Drainage Board (IDBs) & Ports represented.
	11 June 2008	Anglian RBD Liaison Panel meeting. Lesley Clarke & Martin Booth (WFD Environmental Quality Manager) attended.
	17 September 2008	Anglian RBD Liaison Panel meeting. Lesley Clarke, Martin Booth, and Joanne Hayward (Regional Communications Manager) attended.

Sectors, Groups and networks	Activity	
	18 September 2008	WFD display and information provided by DW at the Association of Drainage Authorities (ADA) Catchment 08 event, East of England Showground.
	4 November 2008	WFD presentation to Regional Advisory Panel, Barton upon Humber.
	18 December 2008	Anglian RBD Liaison Panel meeting. Martin Booth attended.
	6 January 2009	Paul Hammett - NFU, WFD update
	8 January 2009	Central Area Regional Flood Defence Committee (RFDC) - Statutory Committee, WFD presentation
	15 January 2009	Regional Launch Event for RBMP
	3 February 2009	WFD Consultation workshop – Huntingdon
	4 February 2009	RFERAC Statutory Committee - WFD presentation
	10 February 2009	WFD Consultation Workshop – Newmarket
	18 February 2009	WFD Consultation Workshop - Norman Cross
	24 February 2009	WFD Consultation Workshop – Lincoln
	26 February 2009	WFD Consultation Workshop - St Ives
	3 March 2009	WFD Consultation Workshop – Norwich
	4 March 2009	East Midlands Biodiversity Forum
	12 March 2009	Chartered Institute of Water Environment Management (CIWEM)/ Institute of Civil Engineers (ICE)/ Royal Institution of Chartered Surveyors (RICS)/ Royal Institute of Town Planners (RITP) - WFD presentation
	20 April 2009	WFD Consultation Workshop – Peterborough
	21 May 2009	EEEF WFD Presentation
Business Sector	4 April 2006	DW delivered a presentation on 'Water Resources and the WFD' to the Rotary Club, Peterborough.

Sectors, Groups and networks	Activity	
	14 March 2007	Attendance and assistance at 'Climate Change and the Fens' workshop. DW and Julian Wright attended.
	28 March 2007	Meeting with Paul Hammett (NFU) and Jane Birch (Country Landowners Association - CLA) to review sector communications and explain SWMI process. DW and Fran Sykes attended.
	13 June 2007	Meeting with Richard Bindless (Director of the East of England Business Group - EEBG) to introduce the WFD. DW and Fran Sykes attended.
	1 October 2007	WFD update for Richard Bindless (EEBG). DW, DF and Sarah Fowler attended.
	3 October 2007	Agricultural organisations event. 10 representatives from Agricultural organisations, Jane Burch (CLA), Peter Grimble (Natural England) & Paul Hammett (NFU).
	16 October 2007	EEBG WFD updates presentation. Sarah Fowler (former Regional Strategy Unit Manager) attended.
	29 November 2007	WFD update meeting with the Norfolk Reed Cutters Association. DW provided update.
	11 January 2008	National Industrial Symbiosis Programme (NISP) 'Ways of working with industry' meeting. DF attended.
	23 July 2008	Business and Industry sector meeting – discussion of Measures and Annex 12. DW, DF, JP, Richard Bindless (EEBG), Jane Burch (CLA), Dave McCabe (Aggregate industries), Lesley Anderson (EEDA) & Nicola Owen (Quarry Products Association - QPA) present.
	1 October 2008	DW met with Jane Burch and Paul Hammett to discuss the draft RBMP.
Water Industry	30 January 2007	Water sector briefing for next Liaison Panel meeting. DW attended.
	8 March 2007	Meeting with Melinda Appleby (CCW) to review sector communications and explain SWMI process. DW and Fran Sykes attended.
	17 April 2007	Water UK Diffuse Urban Pollution Think Tank. DW attended, water industry & planning authorities represented.
	6 June 2007	Meeting with AWS to discuss communications, SWMI and how to develop relationship. DW attended.

Sectors, Groups and networks	Activity	
	11 September 2007	Water sector update with Emily Payne (Anglian Water Services - AWS). DW attended.
	14 September 2007	Update meeting with Melinda Appleby (Consumer Council for Water - CCW). DW attended.
	11 October 2007	Update meeting with AWS. DW, DF & Lesley Clarke attended.
	5 December 2007	Meeting with AWS to discuss Drinking Water Safety Plan. DF attended.
	7 December 2007	AWS/ EA Joint Business Team meeting. WFD update plus report on AWS investigation in to River Nene. DW and DF attended.
	17 January 2008	Working Together Initiative (WTI) Sponsors Group - AWS/EA. DW attended.
	4 February 2008	Meeting with AWS - follow-up from WTI Sponsors meeting. DW and DF attended.
	28 February 2008	AWS/ EA Joint Business Team meeting. Water companies update. DF attended.
	19 March 2008	AWS Drinking Water Safety Plans. QA of process. DF attended.
	3 April 2008	Joint Business Team meeting: WFD update, especially English Catchment Sensitive Farming Delivery Initiative (ECSFDI) and Periodic Review 09 (PR09). DW and DF attended.
	8 April 2008	Water Resource AWB/HMWB workshop. Designation and classification of AWB/HMWBs for Good Ecological Potential (GEP). DW and Steve Dines (Senior Technical Specialist) attended.
	18 April 2008	PR09 meeting to discuss potential WR investigations. DW, DF, Steve Dines, Bob Hillier (Environment Planning Manager) & Richard Thompson (Principal Environmental Planning Officer) attended.
	29 May 2008	AWS/EA Joint Business Team meeting. Water companies update. DF attended.
	27 June 2008	GEP - classification of impounded rivers. DW, DF and AWS involved.
	10 July 2008	Water Industry sector meeting – discussion of Measures and Annex 12. DW, DF, JP, Melinda Appleby (CCW), Clive Harward (AWS), Iain Smith (IDBs), Essex & Suffolk Water, and Three Valleys Water attended.

Sectors, Groups and networks	Activity	
	26 September 2008	Joint Business Team meeting/ discussion with Mandy Fletton. DW attended.
	6 October 2008	DW met with Melinda Appleby (CCW) to discuss the draft RBMP.
	21 November 2008	Anglian Water Catchment Work meeting. Discussion of CSF Strategic Partnerships with AWS. DF attended.
	4 December 2008	Meeting with AWS to discuss AWS business groups' engagement in WFD consultation. DF attended.
	12 December 2008	Joint Business Team meeting with AWS. DF attended.
	28 January 2009	CCW combined East of England and Midlands region meeting
	19 March 2009	Lark Valley Abstraction Group WFD Presentation
	30 April 2009	East Suffolk Water Abstraction Group WFD Presentation
Minerals & Extraction	25 January 2007	Minerals and the Water Environment workshop. DW attended.
	16 July 2007	Meeting with Mark North (Lafarge Aggregates) and Ian Mundy. DW and Fran Sykes attended.
	25 January 2008	Meeting with Dave McCabe (Aggregate Industries). DW attended.
	23 July 2008	Business and Industry sector meeting – discussion of Measures and Annex 12. DW, DF, JP, Richard Bindless (EEBG), Jane Burch (CLA), Dave McCabe (Aggregate Industries), Lesley Anderson (EEDA) & Nicola Owen (QPA) present.
	10 October 2008	DW met with Dave McCabe to discuss the draft RBMP.
Ports	20 March 2007	Meetings with Graham Nelson (EERA), John Brien (Ports) and Peter Holloway (Recreation) to review sector communications and explain SWMI process. DW and Fran Sykes attended.
	19 October 2007	WFD update for John Brien (Harwich Haven). DW attended.
	29 September 2008	DW met with John Brien to discuss the draft RBMP.
Land Drainage	2 July 2006	Meeting with Middle Level Commissioners to discuss impact of the WFD. DW attended.

Sectors, Groups and networks	Activity	
	15 February 2007	Presentation about the WFD and its impact on IDBs to AGM of the Lincolnshire IDBs. DW attended.
	13 March 2007	Presentation to the AGM of Great Ouse Branch of the Association of Drainage Authorities (ADA). DW attended.
	19 March 2007	Meetings with Mark North (Lafarge Aggregates) and Iain Smith (IDBs) to review sector communications and explain SWMI process. DW and Fran Sykes attended.
	7 September 2007	Discussion of Hydromorphology Review with Stan Pywell (Welland and Deepings Drainage Board) and Paul Sharman (North Level). DW and Fran Sykes attended.
	4 October 2007	WFD presentation to Lincolnshire ADA AGM. Mark Grant (Senior Environmental Planning Officer) attended.
	1 November 2007	WFD presentation to Middle Level IDBs AGM. DW attended.
	20 November 2007	AWB/HMWBs meeting with Middle Level Commissioners to agree designations. DW attended.
	10 April 2008	Meeting with Middle Level Commissions to discuss ways of working to classify AWB/HMWBs for GEP. DW attended.
	9 May 2008	IDB GEP classification training. 25 IDBs represented.
	9 June 2008	Discussions on mapping and GEP classification with Black Sluice IDB. DW attended.
	30 June 2008	Navigation Sector meeting - Discussion of measures and Annex 12. DF attended.
	8 July 2008	Agriculture and Land Management Sector meeting - Discussion of Measures and Annex 12. DW, DF and JP attended.
	10 July 2008	Water Industry Sector meeting - Discussion of Measures and Annex 12. DW, DF, and JP attended.
	18 September 2008	Attendance at national Association of Drainage Authorities Catchment 08 event.
	2 October 2008	ADA Lincolnshire Branch meeting to discuss the draft RBMP. DW attended.
	16 October 2008	DW met with Iain Smith to discuss the draft RBMP.

Sectors, Groups and networks	Activity	
	21 May 2009	Witham 4th IDB WFD Presentation
Navigation and Ports	10 July 2006	Lake restoration workshop. DW participated.
	21 August 2006	Presentation to Broads Authority staff on navigation and sediment management. DW attended.
	17 November 2006	East of England Biodiversity Forum workshop. Broads Authority, NGOs, local authorities, and DW attended.
	16 March 2007	Presentation by DW to Inland Waterways Amenity Advisory Committee (IWAAC).
	12 April 2007	Presentation by DW of WFD to EA Regional Navigation Group.
	13 April 2007	DW meeting with Broads Authority (Trudi Wakelin) and NGOs (John Sharpe) to review sector communications and explain SWMI process.
	25 June 2007	DW meeting with Broads Authority (Trudi Wakelin) and Recreation representative (Peter Holloway) to discuss next Panel meeting and communications.
	5 October 2007	DW provided update for Andrea Kelly (Broads Authority).
	29 May 2008	GEP classification meeting between DW and Broads Authority.
	30 June 2008	DF chaired Navigation sector meeting with Ports representative (John Brien), Land Drainage representative (Iain Smith) and Broads Authority (Trudi Wakelin) to discuss Measures and Annex 12.
	11 July 2008	Discussion with Cam Conservators of Measures and Annex 12. DW and DF present.
	10 September 2008	Recreation sub-group meeting to discuss the draft RBMP. DW attended.
	24 September 2008	Meeting with Trudi Wakelin (Broads Authority) to discuss the draft RBMP.
	29 September 2008	Meeting with Harwich Haven to discuss draft Plan.
	5 November 2008	RFERAC meeting. DW gave an update presentation.
Recreation	17 January 2007	RFERAC meeting. WFD update paper issued.

Sectors, Groups and networks	Activity	
	16 March 2007	Presentation by DW to Inland Waterways Amenity Advisory Committee (IWAAC).
	20 March 2007	Meetings with Graham Nelson (EERA), John Brien (Ports) and Peter Holloway (Recreation) to review sector communications and explain SWMI process. DW and Fran Sykes present.
	18 April 2007	RFERAC meeting. Update paper issued.
	25 June 2007	DW meeting with Trudi Wakelin (Broads Authority) and Peter Holloway (Recreation) to discuss next Panel meeting and communications.
	19 September 2007	Update meeting with Peter Holloway (Recreation). DW attended.
	4 February 2008	Recreation sub-group meeting to provide WFD update and discuss local measures/ GEP. DW attended; National Federation of Sea Anglers (NFSA), GOBA, Broads Authority, RYA, British Canoe Union (BCU), and IDBs represented.
	2 April 2008	Recreation sub-group meeting. DW attended; NFSA, GOBA, Broads Authority, RYA, BCU, and IDBs represented.
	14 May 2008	Recreation sub-group meeting. DW attended; NFSA, GOBA, Broads Authority, RYA, BCU, and IDBs represented.
	4 June 2008	RFERAC meeting – DW delivered progress update.
	9 July 2008	Fishing and Conservation sector meeting – discussion of Measures and Annex 12. DW chaired; Angling, Broads Authority, Natural England, NGOs represented.
	9 July 2008	Recreation sub-group meeting to discuss contents of Annex 12. DW attended; NFSA, GOBA, Broads Authority, RYA, BCU, and IDBs represented.
	10 September 2008	Recreation sub-group meeting to discuss the draft RBMP. DW attended.
	5 November 2008	RFERAC meeting. DW gave an update presentation.
Conservation	3 May 2006	NGO workshop to ascertain NGO membership of the Liaison Panel. DW chaired.
	10 July 2006	DW participated in lake restoration workshop. BA and NGOs represented.
	17 November 2006	DW attended East of England Biodiversity Forum workshop. NGOs, BA and Local Authorities involved.

Sectors, Groups and networks	Activity	
	13 April 2007	DW attended meeting with Trudi Wakelin (Broads Authority) & John Sharpe (NGOs) to review sector communications and explain SWMI process.
	5 October 2007	Update meeting between DW and John Sharpe (NGOs).
	17 October 2007	DF delivered WFD presentation to Wash Group.
	13 December 2007	DW gave WFD presentation to St Neots Town Initiative. NGOs and planning authorities represented.
	9 July 2008	Fishing and Conservation sector meeting – discussion of Measures and Annex 12. DW chaired; Angling, Broads Authority, Natural England, and NGOs (RSPB) represented.
	11 February 2009	REPAC Statutory Committee - WFD Presentation
	27 April 2009	National Parks WFD Workshop
	21 April 2009	Wildlife Trust WFD Presentation
	6 July 2006	UKIA Sustainable Farming & Food Strategy open day at Eleveden Farms: DW delivered presentation on WFD to farming groups.
	24 August 2006	Meeting between Environment Agency (DW & Lynsey Craig (Regional Agriculture Officer)) and senior CSF officer to discuss CSF process and linkages to WFD.
	15 November 2006	Fran Sykes attended CSF meeting at Ely with CSF officers.
	15 February 2007	DW gave a presentation to AGM of the Lincolnshire IDBs.
Farming	13 March 2007	DW gave a presentation to the AGM of the Great Ouse Branch of the Association of Drainage Authorities (ADA).
	14 March 2007	DW attended and provided assistance at 'Climate Change and the Fens' workshop organised by Diocese of Ely. Community, Business & Industry, and agricultural representatives involved.
	28 March 2007	DW and Fran Sykes met with Paul Hammett (NFU) and Jane Burch (CLA) to review sector communications and explain SWMI process.
	23 April 2007	DW and Fran Sykes met with Paul Hammett (NFU) to discuss amendments to SWMI document.

Sectors, Groups and networks	Activity	
	2 July 2007	DW and Fran Sykes met with Paul Hammett (NFU) to discuss next panel meeting and communications.
	11 September 2007	DW and Lynsey Craig gave a presentation to Nufarm UK (Agricultural chemicals) about the WFD.
	3 October 2007	DW, DF and Lynsey Craig gave a presentation to agricultural organisations and land managers at the NFU, Newmarket.
	8 November 2007	DW, DF and Lynsey Craig gave a presentation to farmers at the NFU, Newmarket.
	12 February 2008	DF gave a WFD presentation and update at a soils workshop.
	25 February 2008	DF attended ECSFDI project group with AWS & CSF officers to discuss ways of working.
	11 March 2008	Meeting between DW & Steve Scott (Forestry Commission): WFD update and local measures discussion.
	18 March 2008	DF attended ECSFDI steering group & gave a presentation on the PoMs.
	23 May 2008	Environment Agency (DW & DF) and ECSFDI officers meeting to discuss links between WFD/ PR09 and CSF.
	8 July 2008	Agriculture and Land Management sector meeting - discussion of Measures and Annex 12. DW, DF and JP present; NFU, Natural England, CLA and IDBs represented.
	1 October 2008	Meeting with NFU and CLA to discuss the draft Plan.
	26 November 2008	WFD presentation at “Water Works” event organised by The CLA, Bury St Edmunds.
	5 March 2009	Country Land Owners - County Chairmen's meeting, Newmarket
	24 April 2009	NFU Norfolk WFD Presentation
Natural England	15 November 2006	Fran Sykes attended CSF management group meeting.
	28 November 2006	Environment Agency and Natural England dinner.
	19 April 2007	Meeting between DW & Fran Sykes (Environment Agency) and Peter Grimble & David Witherington (Natural England) to review sector communications and explain SWMI process.

Sectors, Groups and networks	Activity	
	22 August 2007	DW & Fran Sykes discussed Hydromorphology Review with Peter Grimble (Natural England).
	23 January 2008	Meeting with David Withrington & Peter Grimble (Natural England) to give a WFD update. DW & JP attended.
	23 September 2008	Meeting with Natural England to discuss draft Plan.
Local Government/ Planning Authorities	22 September 2006	Local Authority seminars: 'Working Together to create a better place' presentation.
	3 October 2006	Local Authority seminars: 'Working Together to create a better place' presentation.
	17 November 2006	DW attended East of England Biodiversity Forum workshop, involving Local Authorities, Broads Authority & NGOs.
	21 November 2006	Meeting between DW and Richard Belfield (Local Government) to discuss sector linkages and communication routes.
	20 March 2007	DW and Fran Sykes attended meetings with Graham Nelson (EERA), John Brien (Ports) and Peter Holloway (Recreation).
	17 April 2007	DW attended Water UK Diffuse Urban Pollution Think Tank in London, involving planning authorities & water companies.
	17 September 2007	Presentation by DW, to Mott MacDonald Ltd, focussing on links between the WFD and planning processes.
	20 September 2007	WFD update given by DW to Richard Belfield (Local Government).
	4 October 2007	Presentation given by DW to East of England Environment Forum at GO EAST.
	19 October 2007	DW provided WFD update for Graham Nelson (EERA).
	13 December 2007	DW provided WFD presentation to St Neots Town Initiative.
	20 February 2008	Meeting with Alan Wheeler (new EERA representative).
	28 March 2008	DW delivered WFD presentation to Lincolnshire County Council Policy Development Group (planners & politicians).
	2 June 2008	DW attended Peterborough City Council Water Cycle Strategy meeting and explained links with WFD.

Sectors, Groups and networks	Activity	
	3 June 2008	DW attended County Surveyors Society Environment Committee: WFD presentation and ways of working with Local Authorities.
	23 June 2008	Urban and Local Government sector meeting – discussion of measures and Annex 12. DW, Richard Whittaker (Planning/ Local Government Advisor), Richard Belfield (Local Government), and Alan Wheeler (EERA) attended.
	22 July 2008	Meeting between DW and Johnathan Reynolds to update EEDA on RBMP progress.
	6 August 2008	DW meeting with Rowena Limb to update GO-EM on RBMP progress.
	9 October 2008	Meeting with EERA to discuss the draft Plan.
	15 October 2008	Meeting with EEDA to discuss the draft Plan.
	15 December 2008	WFD presentation to Luton and South Bedfordshire Water Cycle Strategy group
	28 January 2009	Jonathan Reynolds - EEDA update
	18 March 2009	GO East WFD Presentation
Catchment groups	12 May 2006	Technical teams attended SWMI workshops.
	13 June 2006	DW meeting with WFD pilot - Ribble Valley and site visits.
	15 June 2006	DW attended Environment Agency Statement of Steps workshop.
	30 June 2006	DW attended Anglian/ Humber RBD liaison meeting: discussion of liaison and cross-border issues.
	26 July 2006	DW attended meeting to discuss development of AWB & HMWBs.
	17 August 2006	DW attended marine monitoring co-ordination group.
	6 September 2006	DW attended Weight of Evidence workshop involving development of methodology for SWMI process.
	5 October 2006	Presentation given by DW on WFD to Eastern Area staff.
	12 October 2006	Presentation given by DW on WFD to Central Area staff.
	13 October 2006	Presentation given by DW on WFD to Northern Area staff.

Sectors, Groups and networks	Activity	
	7 November 2006	WFD National Roadshow: presentation on regional impact, and workshop on development of significant issues.
	10 January 2007	DW and Fran Sykes attended workshop on development of SWMI (Northern Area): use of national criteria and local knowledge to determine significant issues.
	15 January 2007	DW and Fran Sykes attended workshop on development of SWMI (Eastern Area): use of national criteria and local knowledge to determine significant issues.
	18 January 2007	DW and Fran Sykes attended workshop on development of SWMI (Central Area): use of national criteria and local knowledge to determine significant issues.
	29 March 2007	DW attended workshop in Northern Area to identify measures and specific examples of issues.
	2 April 2007	DW attended workshop in Central Area to identify measures and specific examples of issues.
	3 April 2007	DW attended workshop in Eastern Area to identify measures and specific examples of issues.
	27 April 2007	DW provided SWMI update to Regional Flood Defence Committee - RFDC (Northern) meeting.
	30 April 2007	DW provided SWMI update to Regional Flood Defence Committee - RFDC (Central) meeting.
	24 May 2007	DW attended Hydromorphology 'rapid designation' feedback meeting.
	7 June 2007	DW attended Eastern Area Management Team (AMT): presentation of WFD developments and resource decisions.
	24 September 2007	DW delivered WFD update for Regional Management Team (RMT).
	5 November 2007	DW and Fran Sykes attended meeting discussing development of AWB & HMWBs in Central Area.
	6 November 2007	DW and Fran Sykes attended meeting discussing development of AWB & HMWBs in Northern Area.
	9 November 2007	DW and Fran Sykes attended meeting discussing development of AWB & HMWBs in Eastern Area.
	26 November 2007	Workshop to develop programme of measures for Northern Area/ Fens and coastal areas. 31 stakeholders from all sectors attended.

Sectors, Groups and networks	Activity	
	28 November 2007	Workshop to develop programme of measures for Eastern Area/ Broads and coastal areas. 60 stakeholders from all sectors attended.
	30 November 2007	Workshop to develop programme of measures for Central Area/ Fens and coastal areas. 32 stakeholders from all sectors attended.
	22 January 2008	DW attended meeting to agree designations of AWB & HMWBs in Northern Area.
	19 February 2008	DW present at cross-border meeting with Humber RBD.
	18 April 2008	Invasive Non-native Species workshop to capture local measures. 11 attendees, mainly Environment Agency staff.
	8 May 2008	Broads Authority GEP classification training. Environment Agency staff and 4 Broads Authority members attended.
	9 May 2008	IDB GEP classification training. 25 IDB representatives.
Academia	24 April 2007	Liaison Panel meeting held at Silsoe College, Cranfield University.
	2 March 2007	DW attended meeting to discuss climate change and the WFD.
	14 July 2008	Universities of Antwerp (Belgium) and Nijmegen (Holland) 'interview' to discuss UK process, with special reference to the River Wensum. DW, DF, JP and Ruth Williams (Chemical monitoring & Data, Eastern Area) attended.
Influencing that took place outside the Panel	8 June 2006	DW attended CIWEM conference on WFD.
	18 July 2006	DW attended National CIWEM Catchment Management Conference: presentation on WFD regional implementation.
	11 October 2006	DW gave WFD presentation to officers from Andhra Pradesh, India.
	30 October 2007	WFD presentation and display of activities by DW to East of England MEPs.
	6 May 2008	DW attended European Conference of the Joint Research Council and Commission Pilot River Basin Project. Discussion of diffuse pollution, ECSFDI and PoMs in the Anglian RBD.
	3 June 2008	DW gave a WFD presentation to the County Surveyor's Society Environment Committee, including Local Authority engagement and spatial planning. Principles of WFD included in RSS 14 East of England plan.

Sectors, Groups and networks	Activity
National and European level	
Department for Environment, Food and Rural Affairs Water Framework Stakeholder Group	Chaired by the Department for Environment, Food and Rural Affairs. This group was established to promote stakeholder participation in the implementation of the Water Framework Directive. Members of the group are able to raise issues of concern and provide input. The Environment Agency lead on items and provide a detailed Water Framework Directive Programme update for each. Examples of members of the Stakeholder Group are given below. Members include people representing the water industry, land management, environmental Non-Governmental Organizations and government organizations. • Water United Kingdom • Natural England • Office of Water Trading • British Waterways • Forestry Commission • National Trust • Country Landowners Association • National Farmers Union • Royal Society for the Protection of Birds
National Liaison Panel for England	Chaired by the Environment Agency. The National Liaison Panel for England has been set up to complement the River Basin District Liaison Panels. The panel consists of around 20 members based around the key co-deliverers, that is, organisations that are responsible for carrying out actions and others who can both represent the public and help drive changes in behaviour. The panel works on a representational system. This means the panel members are expected to represent the views of the whole of their sector and act as a two-way channel between the panel and their sector. Five meetings of the Liaison Panel were held between July 2007 and June 2009. Meeting papers and minutes are available on the website http://www.environment-agency.gov.uk/research/planning/33106.aspx. Members of the public are welcome to attend meetings as observers, by appointment with the Chair.
Wales Stakeholder Group	Chaired by the Welsh Assembly Government. The Environment Strategy for Wales contains a commitment from Welsh Assembly Government to establish a Water Framework Directive Stakeholder Group for Wales. The aim of the group is to provide a focus for communication and consultation on a broad range of Water Framework related issues. The first meeting of the Stakeholder Group took place in Cardiff on 5th March, 2007, and it convenes approximately every 6 months. It brings together a wide-ranging group of Welsh stakeholders: local

Sectors, Groups and networks	Activity
	government, business, agricultural and fisheries interests, land managers, statutory bodies, consumer representatives and the Assembly Government. The group provides strategic support to Welsh Assembly Government for implementation of the Water Framework Directive in Wales. It focuses on national-level policy and planning issues. The group will continue as long as necessary, at least up to the completion of the first River Basin Management Plans in 2009. Minutes and presentations from these meetings are hosted at http://www.euwfd.com/html/england_and_the_wfd.html
Collaborative research programme on economics (CRP)	The Collaborative Research Programme provided a consistent UK-wide basis for the environmental economics assessments for Water Framework Directive implementation. It was managed by the Department for Environment, Food and Rural Affairs and included participation from key interested groups: • Department for Environment, Food and Rural Affairs, Welsh Assembly Government, Scottish Executive, Department of the Environment for Northern Ireland and other Government Departments • Environment Agency, Scottish Environment Protection Agency, Environment and Heritage Service • Natural England (previously English Nature), Office of Water Trading • Industry • Non-governmental organisations The project considered assessment of measures and their benefits, in particular: • a methodology to assess both the cost and effectiveness of measures aimed at protecting water resources; • guidance on deciding when costs are likely to be disproportionate to benefits; • a methodology for assessing the benefits - environmental, social and economic - from measures. Other supporting material was produced, including a database of typical cost ranges for specific measures. The Collaborative Research Programme provided a consistent UK-wide basis for the environmental economics assessments for Water Framework Directive implementation. It was managed by the Department for Environment, Food and Rural Affairs and included participation from key interested groups:

Sectors, Groups and networks	Activity
	• Department for Environment, Food and Rural Affairs, Welsh Assembly Government, Scottish Executive, Department of the Environment for Northern Ireland and other Government Departments • Environment Agency, Scottish Environment Protection Agency, Environment and Heritage Service • Natural England (previously English Nature), Office of Water Trading • Industry • Non-governmental organisations The project considered assessment of measures and their benefits, in particular: • a methodology to assess both the cost and effectiveness of measures aimed at protecting water resources; • guidance on deciding when costs are likely to be disproportionate to benefits; • a methodology for assessing the benefits - environmental, social and economic - from measures. Other supporting material was produced, including a database of typical cost ranges for specific measures.
Tripartite meetings	The Environment Agency meet regularly with Natural England, Countryside Council for Wales and the Joint Nature Conservancy Council. Discussions are held about key policy and legal issues in the implementation of the Water Framework Directive, as well as nature conservation sub-plans, protected areas and monitoring.

Sectors, Groups and networks	Activity
Department for Environment, Food and Rural Affairs Economic Advisory Stakeholder Group (EASG)	The Water Framework Directive Economic Advisory Stakeholder Group in England and Wales met for the first time in December 2003. Established to support the implementation of the Water Framework Directive across in England and Wales. The Economic Advisory Stakeholder Group leads on issues defined as specific to England and Wales. Includes both government, agencies and stakeholders, and complements separate Water Framework Directive arrangements in the devolved administrations. The Economic Advisory Stakeholder Group in England and Wales includes all members of the ESG (government and regulators). Additional non-ESG members are listed below: Aluminium Foundation; Association of Electricity Producers; British Hydropower Association; British Marine Federation; British Water; British Waterways; Chemical Industries Association; The Chartered Institution of Water and Environmental Management; Confederation of British Industry; Confederation of British Wool Textiles; Confederation of Paper Industries; Country Land and Business Association; Crop Protection Association; Department for Environment, Food and Rural Affairs, Communications Directorate; Department for Environment, Food and Rural Affairs, Flood Management; Department for Environment, Food and Rural Affairs, Policy and Corporate Strategy Unit; Department for Environment, Food and Rural Affairs, Regulation Review Team; Department of Business and Regulatory Reform; Environmental Education Forum (EEF); Environmental Campaigns (ENCAMS); Environmental Industries Commission Highways Agency; International Navigation Association (PIANC); Kaolin & Ball Clay Association National Farmers' Union; Royal Society for the Protection of Birds; Royal Yachting Association Salmon and Trout Association; Society of British Water and Wastewater Industries; Surface Engineering Association; Surfers Against Sewage; United Kingdom Centre for Economic and Environmental Development; United Kingdom Major Ports; Water UK; Watervoice; The World Wide Fund for Nature (WWF) Key outputs from group and subgroups have been • Preliminary cost-effectiveness analysis
European Union Common Implementation Strategy	Involvement of European Stakeholder groups in development of common European implementation guidance, including European Environment Bureau, WWF, PIANC (ports and navigation), Eureau and other stakeholder groups.
Conferences and seminars	Numerous conferences and seminars including: • The Chartered Institution of Water and Environmental Management series • Water UK Water Framework Directive conference 2009

Sectors, Groups and networks	Activity
	• Specific conference for liaison panel members on economics March 2009 • Defra Ministerial event 19 March 2009
Other	• Periodic Review in 2009, Catchment Sensitive Farming

defra
Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan Anglian River Basin District

Annex M: Competent authorities

Contents

M1 Introduction

This annex sets out the names and addresses of competent authorities for river basin planning within the river basin district and a note of their legal status and responsibilities. The annex also gives, for external enquirers, our contact points and procedures for obtaining background documentation and information.

M2 Names and addresses of competent authorities

Secretary of State for Environment, Food and Rural Affairs
Nobel House, 17 Smith Square, London, UK SW1P 3JR

Environment Agency
Rio House, Waterside Drive, Aztec West,
Almondsbury, Bristol, UK BS32 4UD

M3 Geographical coverage of river basin district

M4 Legal status of competent authorities

Secretary of State:
The Secretary of State is legally part of the Crown and is not established in legislation.

Environment Agency:
The Environment Agency is a non-departmental public body established by the Environment Act 1995.
http://www.opsi.gov.uk/acts/acts1995/Ukpga_19950025_en_1.htm

M5 Responsibilities of competent authorities

In England, there are two competent authority roles – the “appropriate authority” role undertaken by the Secretary of State and the “Agency” role undertaken by the Environment Agency Protection Agency.

The “appropriate authority” has general responsibility for ensuring the Directive is given effect. That authority also has specific responsibilities for ensuring that appropriate economic analysis is carried out, approving proposals for environmental objectives and programmes of measures, and approving the draft river basin management plans. The appropriate authority may also give guidance or directions to the “Agency”, and any other public body, on the practical implementation of the Directive. The appropriate authority for a river basin district also has the duty to ensure that the requirements of the Directive are given effect in relation to that district as a whole.

The “Agency” is responsible for carrying out the analysis required for characterisation, monitoring, identifying waters used for the abstraction of drinking water, and establishing a register of those waters and other protected areas. It has to prepare proposals for environmental objectives and programmes of measures for each river basin district, and prepare draft river basin management plans. The Agency must also ensure public participation in preparation of the River Basin Management Plan and make certain information required under the Water Framework Directive accessible to the public.

The competent authorities for Anglian river basin district are the Secretary of State and the Environment Agency. The Secretary of State has the “appropriate authority” responsibilities and the Environment Agency has the “Agency” responsibilities.

M6 Membership

Not applicable.

(The Water Framework Directive requires us to record if a competent authority acts as a coordinating body for other competent authorities and, if so, what is the membership of that group).

M7 Contact points and procedures

The initial point of contact is the Anglian river basin district Programme Manager who will co-ordinate a response to queries:

David Whiles
Anglian River Basin Programme Manager
Environment Agency
Kingfisher House
Goldhay Way
Orton Goldhay
PETERBOROUGH
PE2 5ZR

defra
Department for Environment Food and Rural Affairs

Environment Agency

Water for life and livelihoods

River Basin Management Plan
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Annex N: Glossary

Contents

N1 Introduction

This annex provides a list of technical terms and abbreviations used in the main document and annexes of the River Basin Management Plan

N2 Technical terms

The following list aims to provide brief explanations of many of the words, phrases and acronyms to which particular meanings are attached in river basin management.

Term	Explanation
Agency	Environment Agency of England and Wales.
Agri-environment scheme	Land management schemes on farmland that are beneficial for example for the environment, natural resources, biodiversity, landscape.
Alien species	Non-native species. Many species of plants and animals have been introduced to this country since Roman times. Several of these non-native species are invasive and have been causing serious problems to the aquatic and riverine ecology and environment. Problems include detrimental effects on our native species, deoxygenation of water causing fish mortalities, blocking of rivers and drainage channels, predation and competition with our native species, and in some cases pose health risks to the public or livestock.
Alternative objectives	In certain circumstances (set out in Article 4.4 and 4.5 of the Water Framework Directive) Member States may deviate from achieving the default objectives (e.g. good status by 2015). Objectives which are different from the default objectives are referred to in this river basin management plan as alternative objectives. The types of alternative objective are: - an extended deadline, e.g. achieving good ecological status by 2027; - a less stringent objective, e.g. achieving moderate ecological status by 2015; - different objectives for heavily modified or artificial water bodies, e.g. good ecological potential.
Angiosperms	The flowering plants. In transitional and coastal waters they include sea grasses and the flowering plants found in salt marshes.
Aquifer	A subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of

	groundwater or the abstraction of significant quantities of groundwater.
Artificial Water Body	A man-made surface water body, rather than a modified natural water body, which supports important aquatic ecosystems. It includes canals, some docks and some man-made reservoirs.
Asset Management Plan	See Periodic Review.
Bathing Waters Directive	European Community legislation – (76/160/EEC) which requires Member States to take all necessary actions to ensure identified bathing waters meet certain quality standards prescribed for the protection of the environment and public health. The new Bathing Waters Directive (2006/7/EC) will repeal the original Bathing Water Directive by end of 2014 at the latest.
Biodiversity Action Plan	National, local and sector-specific plans established under the United Kingdom Biodiversity Action Plan, with the intention of securing the conservation and sustainable use of biodiversity.
Biological element	A collective term for a particular characteristic group of animals or plants present in an aquatic ecosystem (for example phytoplankton; benthic invertebrates; phytobenthos; macrophytes; macroalgae; phytobenthos; angiosperms; fish).
Biological indicators	A parameter that can be monitored to estimate the value of a biological quality element. Indicators may include the presence or absence of a particularly sensitive species.
Biological quality element	A characteristic or property of a biological element that is specifically listed in Annex V of the Water Framework Directive for the definition of the ecological status of a water body (for example composition of invertebrates; abundance of angiosperms; age structure of fish).
Catchment	The area from which precipitation contributes to the flow from a borehole spring, river or lake. For rivers and lakes this includes tributaries and the areas they drain.
Catchment Abstraction Management Strategies	These are developed for the management of water resources at a local level. They provide information on water resources and licensing practice to allow the needs of abstractors, other water users and the aquatic environment to be considered in consultation with the local community and interested parties.
Catchment Flood Management Plans	These are strategic planning tools through which the Environment Agency seeks to work with other important decision-makers within a river catchment to identify and agree policies for sustainable flood risk management.
Catchment modelling techniques	Methods used to describe and/or predict characteristics of a catchment. Traditionally, these have focused on natural processes or movement of pollutants but they can also include other factors such as demographic, social and economic characteristics.
Characterisation (of water bodies)	A two-stage assessment of water bodies under the Water Framework Directive. Stage 1 identifies water bodies and describes their natural characteristics. Stage 2 assesses the pressures and impacts from human activities on the water environment. The assessment identifies those water bodies that are at risk of not achieving the environmental objectives set out in the Water Framework Directive. The results are used to prioritise both environmental monitoring and further investigations to identify those water bodies where improvement action is required.

Chemical Status	The classification status for the water body against the environmental standards for chemicals that are priority substances and priority hazardous substances. Chemical status is recorded as good or fail. The chemical status classification for the water body, and the confidence in this (high or low), is determined by the worst test result.
Chemical Status (surface waters)	The classification status for the surface water body. This is assessed by compliance with the environmental standards for chemicals that are listed in the Environmental Quality Standards Directive 2008/105/EC, which include priority substances, priority hazardous substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives. Chemical status is recorded as good or fail. The chemical status classification for the water body, and the confidence in this (high or low), is determined by the worst test result.
Chemical Status (groundwater)	An expression of the overall quality of the groundwater body. The classification status for a groundwater body against the environmental criteria set out in the Water Framework Directive and the Groundwater Directive (2006/118/EC), as set out in Common Implementation Strategy (CIS) guidance document No 18. All five of the component tests for chemical status must be assessed as good or poor and the overall chemical status and the confidence in this (high or low) is determined by the worst test result.
Coastal Forums	Organisations formed to look at the long-term issues facing coastal areas to promote a sustainable approach to the management, use and development of the coastal zone.
Co-deliverer	Agencies and institutions with statutory powers or who have it in their power to deliver actions needed to implement River Basin Management Plans.
Common Agricultural Policy	A policy that regulates farming activities across the European Union, providing direct subsidies to farmers and land managers. A small part of these funds support rural development actions that mainly relate to agricultural activities, as well as forestry and environmental improvements on farmland.
Common Implementation Strategy (CIS)	This strategy was agreed by the European Commission, Member States and Norway in 2001. The aim of the strategy is to provide support in the implementation of the Water Framework Directive and its daughter directives, by developing a common understanding and guidance on key elements of the Directives.
Competent Authority	An authority or authorities identified under Article 3(2) or 3(3) of the Water Framework Directive. The Competent Authority will be responsible for the application of the rules of the Directive within each river basin district lying within its territory.
Cost effective	In the context of the Water Framework Directive, it describes the least cost option for meeting an objective. For example, where there are a number of potential actions that could be implemented to achieve Good Ecological Status for a water body, Cost Effectiveness Analysis is used to compare each of the options and identify which option delivers the objective for the least overall cost.
Countryside Council for Wales	The Countryside Council for Wales is the Welsh Assembly Government's statutory adviser on sustaining natural beauty, wildlife and the opportunity for outdoor enjoyment in Wales and its inshore waters. The Countryside Council for Wales is the national wildlife conservation authority for Wales.

Cross compliance	A form of conditionality by which, farmers in receipt of public subsidies are required to comply with all legislation affecting their businesses, including European Union environmental legislation. The requirements of Cross compliance are: i) an obligation to maintain agricultural land in Good Agricultural and Environmental Conditions and ii) an obligation to comply with specified Statutory Management Requirements according to European Union legislation, for example the Nitrates Directive, Groundwater Directive.
Delineation (of water bodies)	Identifying the type and defining the boundary of a water body for rivers, lakes, Transitional and Coastal waters and groundwater under the Water Framework Directive.
Diffuse pollution	Pollution resulting from scattering or dispersed sources that are collectively significant but to which effects are difficult to attribute individually.
Disproportionate cost	The determination of disproportionate cost requires a decision making procedure that assesses whether the benefits of meeting good status in a water body are outweighed by the costs.
Drinking Water Protected Areas	Bodies of water that are used or could be used in the future for the abstraction of water intended for human consumption.
Ecological continuum	The persistence of the ecological structure and functioning of aquatic ecosystems over time and space.
Ecological potential	The status of a heavily modified or artificial water body measured against the maximum ecological quality it could achieve given the constraints imposed upon it by those heavily modified or artificial characteristics necessary for its use. There are five ecological potential classes for Heavily Modified Water Bodies/Artificial Water Bodies (maximum, good, moderate, poor and bad).
Ecological status	Ecological status applies to surface water bodies and is based on the following quality elements: biological quality, general chemical and physico-chemical quality, water quality with respect to specific pollutants (synthetic and non synthetic), and hydromorphological quality. There are five classes of ecological status (high, good, moderate, poor or bad). Ecological status and chemical status together define the overall surface water status of a water
Economic Advisory Stakeholder Group	A group to coordinate the work going forward in England and Wales in relation to the economic analysis required by the Water Framework Directive.
Environment Agency	Environment Agency of England and Wales.
Estuarine	For our purposes by estuarine we mean transitional (see definition).
Eutrophication	The enrichment of waters by inorganic plant nutrients that results in increased production of algae and/or other aquatic plants, which can affect the quality of the water and disturb the balance of organisms present within it.

Exemptions	The environmental objectives of the Water Framework Directive are set out in Article 4. These include the general objective of aiming to achieve good status in all water bodies by 2015 and the principle of preventing any further deterioration in status. There are also a number of exemptions to the general objectives that allow for less stringent objectives, extension of deadline beyond 2015 or the implementation of new projects. Common to all these exemptions are strict conditions that must be met and a justification must be included in the river basin management plan. The conditions and process in which the exemptions can be applied are set out in Article 4.4, 4.5, 4.6 and 4.7.
Favourable Conservation Status	"Favourable Conservation Status (to protect and, where necessary, improve the water or water-dependent environment to the extent necessary to maintain at or restore to favourable conservation status the water-dependent habitats and species for which the Protected Area is designated". Where this term is used in the River Basin Management Plans, the above definition applies.
Fisheries Action Plans	Fisheries Action Plans are local plans developed in partnership between the Environment Agency and local angling and fisheries groups, with input from conservation and other interest groups. Fisheries Action Plans cover canal and still water fisheries as well as rivers. They may cover a wide range of issues from fish habitat, through to angling promotion and land management. Each Fisheries Action Plan is different and reflects the concerns and priorities of local angling and fisheries interests.
Floods Directive	The purpose of the European Union Directive on flooding (2007/60/EC) is to establish a framework for the assessment and management of flood risks aiming at the reduction of the adverse consequences on human health, the environment, cultural heritage and economic activity associated with floods in the Community. It requires member states to undertake flood risk assessments, flood risk mapping and produce flood risk management plans. The Directive was published in early November 2007 and must be transposed into United Kingdom law by 26 November 2009.
Good chemical status (surface waters)	Means that concentrations of chemicals in the water body do not exceed the environmental standards specified in the Environmental Quality Standards Directive 2008/105/EC. These chemicals include Priority Substances, Priority Hazardous Substances and eight other pollutants carried over from the Dangerous Substance Daughter Directives.
Good chemical status (groundwater)	See chemical status (groundwater). Means the concentrations of pollutants in the groundwater body do not exceed the criteria set out in Article 3 of the Groundwater Daughter Directive (2006/118/EC).
Good ecological potential	Those surface waters which are identified as Heavily Modified Water Bodies and Artificial Water Bodies must achieve 'good ecological potential' (good potential is a recognition that changes to morphology may make good ecological status very difficult to meet). In the first cycle of river basin planning good potential may be defined in relation to the mitigation measures required to achieve it.
Good ecological status	The objective for a surface water body to have biological, structural and chemical characteristics similar to those expected under nearly undisturbed conditions.
Good quantitative status	See quantitative status (groundwater). Means the level of groundwater in the groundwater body meets the criteria set out in

(groundwater)	Annex V (2.1.2) of the Water Framework Directive.
Good status	Is a term meaning the status achieved by a surface water body when both the ecological status and its chemical status are at least good or, for groundwater, when both its quantitative status and chemical status are at good status.
Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Habitat Action Plans	See “Biodiversity Action Plans” above.
Hazardous substances	Substances or groups of substances that are toxic, persistent and liable to bioaccumulate, and other substances or groups of substances which give rise to an equivalent level of concern.
Heavily Modified Water Body	A surface water body that does not achieve good ecological status because of substantial changes to its physical character resulting from physical alterations caused by human use, and which has been designated, in accordance with criteria specified in the Water Framework Directive, as ‘heavily modified’.
High ecological status	Is a state, in a surface water body, where the values of the hydromorphological, physico-chemical, and biological quality elements correspond to conditions undisturbed by anthropogenic activities.
Hydromorphology	Describes the hydrological and geomorphological processes and attributes of surface water bodies. For example for rivers, hydromorphology describes the form and function of the channel as well as its connectivity (up and downstream and with groundwater) and flow regime, which defines its ability to allow migration of aquatic organisms and maintain natural continuity of sediment transport through the fluvial system. The Water Framework Directive requires surface waters to be managed in such a way as to safeguard their hydrology and geomorphology so that ecology is protected.
Impact assessment	A tool to enable the Environment Agency to weigh and present the evidence on the positive and negative effects of a plan. For example information on the estimated cost and benefit of proposing actual measures.
Integrated Coastal Zone Management	A voluntary system to manage the complex range of activities in the coastal zone with sustainability and stakeholder involvement at its core. It is a process that brings together all those involved in the development, management and use of the coast within a framework that helps the integration of their interests and responsibilities. The objective is to establish sustainable levels of economic and social activity in coastal areas while protecting the coastal environment.
Integrated River Basin and Coastal Management	A process whereby all pressures in a catchment are assessed and action undertaken in an integrated, proportionate and efficient way. A range of stakeholders are involved in the setting of priorities and their ultimate delivery.
Liaison Panels	A panel consisting of around15 representatives of strategic co-deliverers including bodies with statutory powers and others who will need to put measures into action for the River Basin District. The panel represents all key interests within the River Basin District and is the primary focus for engagement at the River Basin District level.
Local Development Frameworks and Plans	Under the Planning and Compulsory Purchase Act 2004, local plans and unitary development plans in England were replaced by Local Development Frameworks. These are made up of a number of

	statutory and non-statutory local development documents. In Wales, they are called Local Development Plans.
Macroalgae	Multicellular algae such as seaweed.
Macrophyte	Larger plants, typically including flowering plants, mosses and larger algae but not including single-celled phytoplankton or diatoms.
Marine Bill	A bill to ensure greater protection of marine resources and to deliver sustainable development in the marine and coastal environment by addressing both the use and protection of marine resources.
Marine Pollution Monitoring Management Group	Group comprising government departments, agencies and government research institutions. They co-ordinate a United Kingdom programme of estuarine and coastal monitoring designed to satisfy a number of requirements including trend monitoring for the Oslo and Paris Convention, compliance with European Commission Directives and international conventions, local needs and for research and development.
Measure	This term is used in the Water Framework Directive and domestic legislation. It means an action which will be taken on the ground to help achieve Water Framework Directive objectives.
Mechanisms	The policy, legal and financial tools which are used to bring about actions (measures). Mechanisms include for example: legislation, economic instruments; codes of good practice; negotiated agreements; promotion of water efficiency; educational projects; research; development and demonstration projects.
Misconnections	Misconnections of foul sewage into surface water drains are a significant source of urban diffuse pollution in those areas where a separate drainage system is used. Misconnections happen when domestic plumbing has been connected into surface water drains instead of the foul sewer. This means untreated dirty water goes directly into rivers/waterways without receiving treatment.
Morphology	Describes the physical form and condition of a surface water body, for example the width, depth and perimeter of a river channel, the structure and condition of the riverbed and bank.
National	This term refers, in this document, to England and Wales. The Environment Agency covers the whole of England and Wales and is the Competent Authority for the Water Framework Directive in both.
National Assembly for Wales	The National Assembly for Wales consists of 60 Members elected throughout Wales. The Assembly has delegated many of its powers to the First Minister, who leads the Welsh Assembly Government. The Assembly decides on its priorities and allocates the funds made available to it from the Treasury. Within its powers, the Assembly develops and implements policies that reflect the particular needs of the people of Wales.
Natura 2000 sites	Protected Areas established for the protection of habitats or species under the Birds Directive (79/409/European Economic Community) (Special Protection Areas) and the Habitats Directive (92/43/ European Economic Community) (Special Areas of Conservation).
Natural England	The government-funded body whose purpose is to promote the conservation of England's wildlife and natural features. The previously existing organisations English Nature, the Countryside Agency and Rural Development Service were merged to form Natural England.
Nitrate Vulnerable Zone	The land draining to waters that contain, or are likely to contain, 50 mg/l of nitrate, or waters that are eutrophic or likely to become so. Within these zones an action programme under the Nitrates Directive

	is put in place which farmers have to observe to reduce nitrate pollution.
No deterioration (in water body status)	None of the quality elements used in the classification of water body status deteriorates to the extent that the overall status is reduced.
Non-hazardous pollutant	Any substance that is not a hazardous substance but is liable to cause pollution in significant quantities.
Non-native species	See Alien species.
Objective (surface waters)	Three different status objectives for each water body. These are: • Overall status objective • Ecological status or potential objective; and • Chemical status objective These are always accompanied by a date by when the objective will be achieved. Ecological status (or potential) objectives will be derived from the predicted outcomes for the biological elements and physico-chemical elements, plus any reasons for not achieving good ecological status (or potential) by 2015. Chemical status objectives will be derived from the predicted outcomes for the chemical elements plus any reasons for not achieving good chemical status by 2015. Overall status objectives will be derived from the ecological status and chemical status objectives.
Objective (groundwater)	There are three status objectives for each groundwater body: • Overall status objective; • Quantitative status objective; and • Chemical status objective. These are always accompanied by a date by when the objective will be achieved. Overall status objectives will be derived from the quantitative status and chemical status objectives In addition to status objectives there are also additional environmental objectives: to prevent deterioration of status, to prevent or limit the inputs of pollutants to groundwater and to reverse any significant and sustained upward trends in pollutant concentrations.
Office of Water Services	The economic regulator for the water and sewerage industry in England and Wales. Office of Water Services has been renamed the Water Services Regulation Authority.
Oslo and Paris Convention	The 1992 Oslo and Paris Convention is the current instrument guiding international cooperation on the protection of the marine environment of the North-East Atlantic. It combined and up-dated the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution. The work under the convention is managed by the Oslo and Paris Commission, made up of representatives from the Governments of the 15 Contracting Parties and the European Commission.
Periodic Review	This is the process, carried out every five years by the Office of Water Services, to assess the strategic plans for water company spending and investment. The plans include environmental improvements. The investment will often affect water customer charges and incorporates company business plans (called Asset Management Plans).
Phytobenthos	Bottom-dwelling multi-cellular and unicellular aquatic plants such as some species of diatom.

Phytoplankton	Unicellular algae and cyanobacteria, both solitary and colonial that live, at least for part of their lifecycle, in the water column.
Planning Policy Statements	Planning Policy Statements set out the Government's national policies on different aspects of land use planning in England and are produced by the Department for Communities and Local Government (formerly Office of the Deputy Prime Minister).
Point source pollution	Pollution arising from an identifiable and localised area, structure or facility, such as a discharge pipe or landfill.
Pollutant	Any substance liable to cause pollution.
Pollution	The direct or indirect introduction, as a result of human activity, of substances or heat into the air, water or land which: (i) may be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems; (ii) result in damage to material property; or (iii) impair or interfere with amenities and other legitimate uses of the environment.
Predicted outcome	The future status of a quality element or water body based on groups of practical and justified measures and the date when this status will be achieved.
Pressures	Human activities such as abstraction, effluent discharges or engineering works that have the potential to have adverse effects on the water environment.
Priority substances	A pollutant, or group of pollutants, presenting a significant risk to or via the aquatic (surface water) environment that has been identified at Community level under Article 16 of the Water Framework Directive. They include 'priority hazardous substances'.
Programme of Measures	A Programme of Measures, as used in the Water Framework Directive, is a group of actions designed to improve the environment in a river basin district and meet the objectives of the Directive.
Protected Areas	Areas that have been designated as requiring special protection under Community legislation for the protection of their surface water and groundwater or for the protection of habitats and species directly depending on water.
Quality element	A feature of an aquatic (surface water) ecosystem that can be described as a number for the purposes of calculating an ecological quality ratio, such as the concentration of a pollutant; the number of species of a type of plant.
Quantitative status (groundwater)	An expression of the degree to which a body of groundwater is affected by direct and indirect abstractions. The classification status for a groundwater body against the environmental criteria set out in the Water Framework Directive and as set out in Common Implementation Strategy Guidance Document No 18. All four of the component tests for quantitative status must be assessed as good or poor and the overall quantitative status and the confidence in this (high or low) is determined by the worst test result.
Ramsar site	A wetland area designated for its conservation value under The 1971 Convention on Wetlands of International Importance, especially as Waterfowl Habitat. The Ramsar Convention seeks to promote the conservation of listed wetlands and their wise use.
Reference conditions	The benchmark against which the effects on surface water ecosystems of human activities can be measured and reported in the relevant classification scheme. For waters not designated as heavily modified or artificial, the reference conditions are synonymous with the high ecological status class. For waters designated as heavily modified or artificial, they are synonymous with the maximum

	ecological potential class.
Regional Spatial Strategies	These are frameworks in England controlling development across an area or region (for example for tourism, planning, waste, minerals, energy).
Risk	The likelihood of an outcome (usually negative) to a water body or the environment, or the potential impact of a pressure on a water body.
Risk assessment	The analysis that predicts the likelihood that a water body is at significant risk of failing to achieve one or more of the Water Framework Directive objectives.
Risk category	The numerical or descriptive category assigned to water bodies that have been risk assessed, in order to make the risk-based prioritisation of water bodies for action under the Water Framework Directive more manageable.
River basin	A river basin is the area of land from which all surface run-off and spring water flows through a sequence of streams, lakes and rivers into the sea at a single river mouth, estuary or delta. It comprises one or more individual catchments.
River Basin District	A river basin or several river basins, together with associated coastal waters.
River Basin Management	The management and associated planning process that underpins implementation and operation of the Water Framework Directive. It is both an overarching process in terms of existing processes and also defines new sub-processes such as those for hydromorphology. The river basin management plans are plans for river basin management.
River Basin Management Plan	For each River Basin District, the Water Framework Directive requires a River Basin Management Plan to be published. These are plans that set out the environmental objectives for all the water bodies within the River Basin District and how they will be achieved. The plans will be based upon a detailed analysis of the pressures on the water bodies and an assessment of their impacts. The plans must be reviewed and updated every six years.
River Quality Objective	A River Quality Objective is an agreed strategic target, expressed in terms of River Ecosystem Standards, which is used as the planning base for all activities affecting the water quality of a stretch of water. A River Quality Objective is the level of water quality that a river should achieve in order to be suitable for its agreed uses.
Rivers Trusts	Charities and organisations set up to assist in the conservation, protection and improvement of rivers and associated environments.
Rural Development Programme	The England Rural Development Programme and the Rural Development Plan for Wales are schemes in the Government's Public Incentive Programme. These programmes are of major significance for rural land management as they provide substantial funding to land managers conditional on the implementation of environmental (and other) actions.
Safeguard zone	A catchment or other defined zone around a point where the water is abstracted for potable use and where actions may be taken to protect raw water quality and prevent deterioration, so minimising the need for purification treatment. For groundwater they are likely to be based on source protection zones under the Environment Agency's Groundwater Protection Policy.
Saturation zone	Subsurface rock or other geological strata within which the pore spaces between the particles of rock or other strata, and the cracks in those strata are filled with water and for which a water table may be determined.

Significant and sustained upward trend	A statistically significant trend in pollutant concentrations in groundwater that could lead to a future failure of one or more of the environmental objectives for groundwater unless it is reversed.
Site of Special Scientific Interest	An area of land notified under the Wildlife and Countryside Act 1981 by the appropriate nature conservation body (Scottish Natural Heritage in Scotland) as being of special interest by virtue of its flora and fauna, geological or physiogeographical features.
Source Protection Zone	A zone around a well, borehole or spring where groundwater is abstracted for human consumption (for example drinking water or food production), as defined under the Agency's Groundwater Protection Policy (GP3). Zone 1 (SPZ1) is the area closest to the abstraction, representing the highest risk to the source. Zones 2 and 3 are progressively larger. Risk-based Policies to prevent pollution are applied within these zones.
Spatial planning	Spatial planning is wider ranging than land-use planning based on regulation and control of land, and aims to ensure the best use of land by assessing competing demands. Social, economic and environmental factors are taken into account in producing a decision that is more conducive to sustainable development.
Special Area of Conservation	Natura 2000 sites that are designated under the Habitats Directive.
Special Protection Area	Natura 2000 sites that are designated under the Birds Directive.
Specific Pollutant	A substance considered as being discharged to the aquatic environment in significant quantities at the national level and for which Environmental Quality Standards have been established. As part of the ecological classification criteria, and in places where these pollutants are monitored, these standards must be met, in order for a surface water body to be classified as good ecological status.
Stakeholder	Individuals or groups that are or could become interested in, involved in or affected by our policies and activities. Our stakeholders include regulators, statutory bodies, professional organisations, local organisations and members of the public.
Stakeholder forum	A group of interested parties to guide and advice on river basin planning and management.
Strategic Environmental Assessment Directive (2001/42/EC)	European environmental legislation which requires an 'environmental assessment' to be carried out for certain plans and programmes whose formal preparation began after 21 July 2004 (or are prepared but not adopted or submitted by a legislative procedure by 21 July 2006), and which are considered likely to have significant effects on the environment. The term "Strategic Environmental Assessment" is used in United Kingdom guidance to mean an environmental assessment under this Directive.
Status	The physical, chemical, biological, or ecological quality of a water body.
Summary of Significant Water Management Issues	This is a report on each River Basin District that highlights significant water management issues in that River Basin District which will need to be addressed to achieve environmental objectives under the Water Framework Directive.
Supplementary Plans	Plans additional to the River Basin Management Plan which contain additional detail to that within the River Basin Management Plan but which fits wholly within its strategic principles and policies. Supplementary Plans do not cover issues outside the remit of the Water Framework Directive.

Sustainable Drainage Systems	A system of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.
Technical feasibility	Is determined through the assessment of whether the implementation of a measure or programme of measures, designed to achieve the Water Framework Directive objectives, is technically possible either at the national and local level and includes the consideration of uncertainty as well as environmental and socio economic feasibility. Technical feasibility depends upon the availability of a technical solution and information on the cause of the problem and hence the identification of the solution.
Toolkit of Measures	A variety of measures which consist of actions that when implemented can help deliver Water Framework Directive objectives. These may include basic measures (the minimum set of measures that must be available) and supplementary measures.
Transitional water	A Water Framework Directive term for waters that are intermediate between fresh and marine water. Transitional waters include estuaries and saline lagoons.
Typology	The means by which the Water Framework Directive requires surface water bodies to be differentiated according to their physical and physico-chemical characteristics.
Water body	A manageable unit of surface water, being the whole (or part) of a stream, river or canal, lake or reservoir, transitional water (estuary) or stretch of coastal water. A 'body of groundwater' is a distinct volume of groundwater within an aquifer or aquifers.
Water Framework Directive	European Union legislation – Water Framework Directive (2000/60/EC) – establishing a framework for European Community action in the field of water policy.
Water Framework Directive management catchment	An amalgamation of a number of Water Framework Directive river water body catchments that provide a management unit at which level actions are applied.
Water Framework Directive objectives	The objectives set out in Article 4 of the Water Framework Directive together with objectives set out in paragraphs 2 and 3 of Article 7 of the Directive and which are required to be met.
Water Level Management Plans	Water Level Management Plans provide a means by which water level requirements for a range of activities including agriculture, flood defence and conservation can be balanced and integrated.
Water Protection Zones	Areas designated by the Secretary of State, within which activities polluting the water environment can be restricted or forbidden. Water Protection Zones can be designated at any scale (sub-catchment, catchment or a larger area) and restrictions are enforced to combat point and/or diffuse sources of water pollution, over and above other existing statutory powers.
Water Services	All services which provide, for households, public institutions or any economic activity: (a) abstraction, impoundment, storage, treatment and distribution of surface water or groundwater; and (b) waste water collection and treatment facilities which subsequently discharge into surface water.
Water table	The upper limit of the saturation zone.

Water use	Water Services together with any other human activity identified as having a significant impact upon the status of water.
Weight of evidence	A weight of evidence approach integrates results or evidence from several data sources, weighted appropriately, to make risk based decisions.
Welsh Assembly Government	The devolved government in Wales.
Welsh Technical Advice Notes	*Planning Policy Wales* (2002) sets out the land use planning policies of the Welsh Assembly Government (the Assembly Government). It is supplemented by a series of topic based Technical Advice Notes (Wales). Technical Advice Notes may be material to decisions on individual planning applications and will be taken into account by the National Assembly for Wales and planning inspectors in the determination of called-in planning applications and appeals.

N3 Abbreviations

AMP	Asset Management Plan
AWB	Artificial Water Bodies
BGS	British Geological Survey
BOD	Biological outcomes database
BPA	British Ports Association
CAMS	Catchment Abstraction Management Strategy
CAP	Common Agricultural Policy
CCW	Countryside Council for Wales
CEA	Cost Effective Analysis
CEFAS	Centre for the Environment, Fisheries and Aquaculture Science
CFMPs	Catchment Flood Management Plans
CIS	Common Implementation Strategy
CLA	Country Land and Business Association
CRP	Collaborative Research Project
CSFO	Catchment Sensitive Farming Officers
CSPs	Community Strategic Partnerships
DCLG	Department of Communities and Local Government
Defra	Department for Environment, Food and Rural Affairs
DrWPA	Drinking Water Protected Area
EASG	Economic Advisory Stakeholder Group
EC	European Community/Commission
EU	European Union
FAPs	Fisheries Action Plans
FCRM	Flood and Coastal Risk Management
FRS	Fisheries Research Services
GAEC	Good Agricultural and Environmental Conditions
GEP	Good Ecological Potential
GP3	“Groundwater Protection: Policy and Practice” documents
GQA	General Quality Assessment
GWD	Groundwater Directive (2006/118/EC).
HMWB	Heavily Modified Water Bodies
IA	Impact assessment (formerly regulatory impact assessment)
ICZM	Integrated Coastal Zone Management
IRBCM	Integrated River Basin Catchment Management
JNCC	Joint Nature Conservation Committee
LDF	Local Development Framework
LDP	Local Development Plan
LEAP	Local Environment Action Plan
LPO	Local Planning Authority
LSPs	Local Strategic Partnerships
MMO	Marine Management Organisation
MPMMG	Marine Pollution Monitoring Management Group
N2K	Natura 2000 sites
NAW	National Assembly for Wales
NFU	National Farmers’ Union
NGO	Non-governmental organisation
NMMP	National Marine Monitoring Plan
NMP	National Marine Programme
NVZ	Nitrate Vulnerable Zone
ODPM	Office of the Deputy Prime Minister
Ofwat	Water Services Regulation Authority

OSPAR	Oslo and Paris Convention
PPS	Planning Policy Statement
pCEA	Preliminary cost effective analysis
PoMs	Programme of Measures
PR09	Periodic Review in 2009
PSA	Public Service Agreement
RBC	River Basin Characterisation
RBD	River Basin District
RBMP	River Basin Management Plan
RDR	Rural Development Regulation
RDS	Rural Development Service
RIA	Regulatory Impact Assessment
RQO	River Quality Objective
RRDF	Regional Rural Development Framework
RSPB	Royal Society for the Protection of Birds
RSS	Regional Spatial Strategies
RSU	Regional Strategy Units
SAC	Special Area of Conservation
SAPs	Salmon Action Plans
SEAD	Strategic Environmental Assessment Directive
SEPA	Scottish Environment Protection Agency
SFP	Single Farm Payment
SMP	Shoreline Management Plan
SMR	Statutory Management Requirements
SNH	Scottish Natural Heritage
SNIFFER	Scotland and Northern Ireland Forum for Environmental Research
SoS	Secretary of State
SPA	Special Protection Area
SPZ	Source Protection Zone
SSSI	Site of Special Scientific Interest
SSWMI	Summary of Significant Water Management Issues
SUDS	Sustainable Drainage Systems
TANs	Technical Advice Notes
TRaC	Transitional and Coastal
UKCIP	United Kingdom Climate Impacts Programme
UKMPG	United Kingdom Major Ports Group
UKTAG	United Kingdom Technical Advisory Group
UKWIR	United Kingdom Water Industry Research
WFD	Water Framework Directive
WLMPs	Water Level Management Plans
WPZs	Water Protection Zones