Rochford District Council

Local Development Framework Evidence Base

Habitat Regulations Assessment

Rochford District Council
Local Development Framework

Habitats Regulations Assessment (Screening) Report

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1.0 INTRODUCTION

1.1 Rochford District Council is at an advanced stage in preparing its Core Strategy, with pre-submission consultation on the document undertaken in November 2009. The Core Strategy is one of three key documents being prepared as part of Rochford's Local Development Framework (LDF). When adopted, the Core Strategy will provide the planning framework (vision, objectives, spatial development strategy and core policies for spatial planning) to guide development in the District until 2025.

1.2 The Council is required to carry out Habitats Regulations Assessment (HRA) of any spatial development plans it prepares, in accordance with the European Habitats Directive (92/43/EEC), as set out in the UK amended Habitats Regulations (2007). Habitats Regulations Assessment is also commonly referred to as Appropriate Assessment (AA) although the requirement for AA is first determined by an initial 'screening' stage undertaken as part of the full HRA.

1.3 Rochford District Council began work on the HRA screening stage in mid 2009, and has been advised throughout the process by sustainability and environmental consultants, Enfusion. Enfusion were further commissioned to help complete the HRA Screening in December 2009. This report details the key tasks undertaken and the key findings/ recommendations emerging from the screening assessment.

Rochford Core Strategy

1.4 The Rochford Core Strategy proposes additional housing at an average rate of 250 dwellings a year, in accordance with the requirements set out in the East of England Plan. This equates to an overall housing requirement of 4750 dwellings between 2006 and 2025.

1.5 The Core Strategy sets out the general locations for new housing development from 2010-2021 to assist in meeting the East of England Plan targets. It prioritises the reuse of previously developed land and focuses the remaining housing requirement on extensions to the residential envelopes of existing settlements, particularly in the west of the District. The proposed breakdown per settlement is provided in table 1, below.

Table 1: Proposed housing allocations, per settlement.		
Area	**Dwellings by 2015**	**Dwellings 2015-2021**
North of London Rd, Rayleigh		550
West Rochford	450	150
West Hockley	50	
South Hawkwell	175	
East Ashingdon	100	
South West Hullbridge		250
South Canewdon		60
Total	**775**	**1010**

1.6 In addition to housing, the Core Strategy sets out the infrastructure and services required to accompany residential development in individual settlements. It also sets out an aspiration for the delivery of an additional net 3000 local jobs across the District by 2021.

1.7 The Core Strategy includes a Vision and Objectives for the District as follows:

Spatial Vision:

To make Rochford District a place which provides opportunities for the best possible quality of life for all who live, work and visit here.

Key Planning Objectives:

To support the vision, the Council has four main corporate objectives. These are:

- Making a difference to our people
- Making a difference to our community
- Making a difference to our environment
- Making a difference to our local economy

Requirement for Habitats Regulations Assessment

1.8 The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites or European Sites, and comprise Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

1.9 Articles 6 (3) and 6 (4) of the Habitats Directive require Appropriate Assessment(AA) to be undertaken on proposed plans or projects which are likely to have a significant effect on one or more Natura 2000 sites

either individually, or in combination with other plans and projects.[1] In 2007, this requirement was transposed into UK law in Part IVA of the Habitats Regulations (The Conservation (Natural Habitats, &c.)(Amendment) (England and Wales) Regulations 2007). These regulations require the application of AA to all land use plans. Government guidance also requires that Ramsar sites (which support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance [Ramsar Convention]), candidate SACs (cSAC) and potential SPAs (pSPA) are included within HRA/AA.

1.10 The purpose of HRA is to assess the impacts of a land-use plan, in combination with the effects of other plans and projects, against the conservation objectives of a European Site and to determine whether it would adversely affect the integrity[2] of that site. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects. The scope of the AA is dependent on the location, size and significance of the proposed plan or project and is first determined by screening.

1.11 The aim of this report is to carry out an initial 'screening' test and assess the impacts of the policies in the Core Strategy against the conservation objectives of the European sites. The appraisal will then conclude whether the policies either alone or in-combination with other plans and programmes have the potential for likely significant effects on European sites.

Guidance for Habitats Regulations Assessment/Appropriate Assessment

1.12 Draft guidance for AA 'Planning for the Protection of European Sites: Appropriate Assessment', has been produced by the Department for Communities and Local Government (DCLG, August 2006). A partnership of consultants[3] has also prepared guidance (Appropriate Assessment of Plans, August 2007) to assist planning bodies in complying with the Habitats Directive and the Royal Society for the Protection of Birds (RSPB) has also produced guidance on HRA to support the planning community.[4] Most recently Natural England has produced draft guidance 'The Habitats Regulations Assessment of Local Development Documents (D Tyldesley and Associates, Feb 2009) which takes account of recent development in HRA practice.

[1] Determining whether an effect is 'significant' is undertaken in relation to the designated interest features and conservation objectives of the Natura 2000 sites. If an impact on any conservation objective is assessed as being adverse then it should be treated as significant. Where information is limited, or there is uncertainty regarding the likely effects, the precautionary principle applies.
[2] Integrity is described as the sites' coherence, ecological structure and function across the whole area that enables it to sustain the habitat, complex of habitats and/or levels of populations of species for which it was classified, (ODPM, 2005).
[3] Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants.
[4] Dodd AM, Cleary BE, Dawkins JS, Byron HJ, Palframan LJ & Williams GM (2007) The Appropriate Assessment of Spatial plans: a guide to why, when and how to do it. RSPB, Sandy.

1.13 The methods and approach used for this Appropriate Assessment are based on the Natural England draft Guidance and emergent practice

Consultation

1.14 The Habitats Regulations require the plan making/ competent authority [Rochford District Council] to consult the appropriate nature conservation statutory body [Natural England (NE)]. Natural England (Four Counties Team) were contacted in August 2009 to discuss the scope of the assessment and in December 2009 to discuss the approach of the HRA. Further discussion regarding detailed findings was held between Enfusion and NE in January 2010. A Draft HRA Screening Report was sent to NE in January 2010 and the detailed comments along with responses are noted in **Appendix 4**.

2.0 METHOD

2.1 In accordance with the official guidance and current practice, the screening stage of the HRA for the Rochford Core Strategy followed the method outlined in **Table 2** below.

Table 2: HRA Screening Stage 1: Key Tasks	
Task 1 **Identification of Natura 2000 sites & characterisation**	Identification of European sites both within Rochford and in a buffer zone of 15km around the District boundary. Information was obtained for each European site, based on publicly available information and consultation with Natural England where appropriate. This included information relating to the sites' description, qualifying features; conservation objectives, conditions and vulnerabilities/ area of concern.
Task 2 **Strategy review, policy screening and identification of likely impacts**	Screening of the Policy Approaches and the identification of likely impacts (including a review of the strategy to determine likely impacts).
Task 3 **Consideration of other plans and programmes**	Consideration, where appropriate, of other plans and programmes that may have in-combination effects with the Core Strategy Submission draft.
Task 4 **Screening Assessment**	Summary of screening

3.0 HRA SCREENING

Task 1: Identification of European sites & characterisation

3.1 There are five European sites within the Rochford District administrative boundary. Taking into account the potential for transboundary[5] impacts the screening has identified a further ten European sites within a 15km buffer zone of Rochford District's boundary. These sites are listed in **Table 3** below.

Table 3: **European Sites within Rochford District Council administrative boundaries**	**Designation**
Crouch & Roach Estuaries	SPA/ Ramsar
Essex Estuaries	SAC
Foulness	SPA/ Ramsar
European Sites within a 15km search area	
Benfleet and Southend Marshes	SPA/ Ramsar
Blackwater Estuary	SPA/ Ramsar
Dengie	SPA/ Ramsar
Medway Estuary & Marshes	SPA/ Ramsar
Thames Estuary & Marshes	SPA/ Ramsar

3.2 Once the sites were identified, Natural England (Four Counties Team) was approached and subsequently provided the Conservation Objectives for the fifteen requested sites. Characterisations and information for the identified sites can be found in **Appendix 1**.

Task 2: Strategy Review, Policy Screening and Identification of Likely Impacts

3.3 Screening of the submission draft of the Core Strategy involved identifying the policies that may lead to significant effects on European sites-both alone and in-combination. The approach taken was in accordance with NE draft guidance for HRA of Local Development Documents (Tyldesley, D. 2009). In order to complete the policy screening each policy was categorised as to its likely effect on each European site identified in Appendix 1. The four categories of potential effects are as follows:

- **Category A**: elements of the plan /options that would have no negative effect on a European site at all;

[5] It is recognised that plans and programmes have spatial implications that can extend beyond the intended plan area boundaries. Distance is not a definitive guide to the likelihood or severity of an impact as factors such as the prevailing wind direction, river flow direction, and groundwater flow direction will all have a bearing on the relative distance at which an impact can occur.

- **Category B**: elements of the plan /options that could have an effect, but the likelihood is there would be no significant negative effect on a European site either alone or in-combination with other elements of the same plan, or other plans or projects;
- **Category C:** elements of the plan /options that could or would be likely to have a significant effect alone and will require the plan to be subject to an Appropriate Assessment before the plan may be adopted;
- **Category D:** elements of the plan /options that would be likely to have a significant effect in-combination with other elements of the same plan, or other plans or projects and will require the plan to be subject to an Appropriate Assessment before the plan may be adopted.

3.4 Categories A, C and D are subdivided so that the specific reason why a policy has been allocated to a particular category is clear.

3.5 The detail of the screening assessment which considers each of Rochford Council's emerging policies against the categories is provided in **Appendix 3.** Summary results for the policies considered to have the potential for likely significant effects alone are provided in **Table 4**, below:

Table 4: Core Strategy Policies identified as having potential effects alone

Policy	Potential effect
Policy H2 - Extensions to residential envelopes	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution
Policy H3 - Extensions to residential envelopes post 2021	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution
Policy URV2 - Wallasea Island	• Increased disturbance
Policy ENV6 - Large Scale Renewable Energy Projects	• Increased disturbance
Policy ED1 - Employment Growth	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution

Task 3: Consideration of other plans and programmes

3.6 In order to comply with the Habitats Regulations, an assessment of the Core Strategy must consider whether the plan in question would be likely to have significant effects in-combination with other plans and projects. In order to make this assessment manageable and effective, the "in-combination" assessment has focused on those Plans and Programmes (PP) likely to lead to significant infrastructure/ development changes. **Appendix 2** provides a summary of each PP and describes potential impacts that could cause in-combination effects for each document. The findings of this review were used to inform the Strategy Review, Policy Screening and Identification of Likely Impacts (Task 2) and screening assessment (Task 4). The following Plans and Programmes were considered:

Table 5: Other Plans and Programs considered

Regional

1. Draft East of England Plan East of England Regional Assembly 2004

Sub-Regional/ County

2. Essex County Council Local Transport 2006 - 2011
3. Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009
4. The Essex and Southend Waste Local Plan Adopted September 2001
5. Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009
6. Anglian River Basin Management Plan, September 2009
7. Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009
8. The Combined Essex Catchment Abstraction Management Study (CAMS), Feb 2007
9. The Combined Essex Catchment Abstraction Management Study (CAMS) update, March 2008
10. Exceeding Expectations Tourism Growth Strategy for Essex March 2007

Local

11. Basildon District Council Core Strategy Issues paper, 2008
12. Castle Point Borough Council Core Strategy, 2009
13. Chelmsford Borough Council Core Strategy, 2008
14. Maldon District Council Core Strategy, 2009
15. Southend-on-Sea Borough Council Core Strategy, Adopted September 2009
16. Southend-on-Sea Local Transport Plan 2006-2011
17. London Southend Airport Runway Extension and Associated Development, October 2009
18. London Southend Airport & Environs Joint Area Action Plan Preferred Options, 2009

3.7 The types of effects identified in this review include effects on water quality and flow due to abstraction and sewerage treatment; increased disturbance due to recreation arising from population increases and air pollution effects, particularly from increased road traffic.

3.8 This informed the assessment of in-combination effects, which is provided in detail in **Appendix 3.** Summary results of the in-combination effects are provided in **Table 6**, below:

Table 6: Core Strategy Policies identified as having potential effects in-combination

Policy	Potential effect
Policy H2- Extensions to residential envelopes	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution
Policy H3 - Extensions to residential envelopes post 2021	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution
Policy T6 - Cycling and Walking	• Increased disturbance
Policy T7 - Greenways	• Increased disturbance
Policy ED1 - Employment Growth	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution
Policy ED2 - London Southend Airport	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution
Policy ED4 - Future Employment Allocations	• Reduced water levels • Reduced water quality • Increased disturbance • Increased atmospheric pollution

Task 4: Screening Assessment of the Rochford Core Strategy

3.9 The findings of the preceding tasks were then considered in the preparation of the summary of Screening Findings. The findings are summarised below, grouped in order of potential predicted effects.

Reduced Water Levels

3.10 The level of development proposed in the Core Strategy has the potential to act in-combination with development proposed in surrounding areas through increased levels of water abstraction. This

could lead to reduced water levels, with potential for likely significant effects on the identified European sites.

3.11 The Essex Thames Gateway Water Cycle Study (Scoping Study March 2009) identifies that the Essex Thames Gateway area currently does not have sufficient raw water resources to supply existing development during years of drought. At present it relies on the transfer of raw and treated water from the Thames Region and from Norfolk and Suffolk. Future water demand is expected to be met through the proposed increase in storage at Abberton Reservoir and the commensurate increase in abstraction and transfer from the Ely-Ouse transfer scheme, which if approved will come online in 2014. This should address the identified deficit during dry years and meet additional demand from proposed development in the East of England Plan.

3.12 A number of European sites scoped into this screening assessment fall within the study area of the WCS, including the Essex Estuaries SAC; Foulness SPA/ Ramsar; Crouch and Roach Estuaries SPA/ Ramsar and Benfleet and Southend Marshes SPA/ Ramsar. The WCS states with regard to these European sites that, “there is unlikely to be any increase in existing abstractions from surface or groundwater sources and as such it is possible to screen out impacts to the sites within the study area as a result of water resources”. However, it also identifies that a further sixteen European sites outside the WCS study area have the potential to be impacted by increased water demand up to and post 2014.

3.13 Essex & Suffolk Water carried out an HRA of their Draft Water Resource Management Plan (WRMP), which identified that as part of the Final Planning Solution only the Abberton Scheme has the potential for likely significant effects on European sites. After further studies it was concluded, that the scheme would not have adverse effects on the integrity on any European sites. In response to consultation on the WRMP HRA, NE commented that the Abberton scheme is likely to have significant positive effects on the conservation status of the bird species designated under the Abberton Reservoir SPA/ Ramsar.

3.14 The Water Cycle Study (WCS) also identified that there are no pressure or capacity issues in terms of water supply infrastructure that would affect future growth in the area. The next stage of the WCS will consider all of the ways in which new development will impact on the water environment or water infrastructure specifically in relation to where growth is most likely to be targeted. This will be undertaken during consideration of site allocations so that it can inform the decision process in terms of where development will be located. This evidence will help to address uncertainty surrounding the proposed level of growth in the area and its impacts on water resources.

3.15 The Core Strategy currently contains a number of policies that will help to mitigate the contribution of proposed development to the adverse in-combination effects on water resources. These include:

- Policy ENV9 ensures that there will be improvements in water efficiency within the District. As a minimum, Code 3 of the Code for Sustainable Homes will be required for all new residential development. From 2013, Code level 4 will be required as a minimum. The policy also expects developers to go beyond Code level 3 for sustainable development between 2010 and 2013, particularly in terms of water conservation measures.
- Policy ENV10 requires all non-residential buildings, as a minimum, to meet the BREEAM rating of 'Very Good'.

3.16 This HRA recognises that the mitigation currently provided by the Core Strategy Policies (above) cannot be relied upon as a measure to counteract the effects of a plan or project, because its implementation cannot be guaranteed. It is therefore recommended that the following text be included within the supporting text to Policy H1:

'In *line with the Habitats Regulations and in consultation with NE, EA and Essex and Suffolk Water, development proposals must ensure that the water supply necessary for the development can be supplied sustainably (and without adverse effects on European Sites)*. *Any development project that could have an adverse effect on integrity of a European site will not be in accordance with the development plan, within the meaning of S.38(6) of the Planning and Compulsory Purchase Act 2004'.*

3.17 It is also recommended that the findings of this HRA Screening are reviewed once the final stages of the Essex Thames Gateway WCS are complete. The findings of this study will contribute to the evidence base and help to address some of the uncertainties identified within the screening assessment in relation to water resources. Any changes made to the HRA should be undertaken in consultation with NE.

3.18 Subject to these recommendations being adopted, the HRA Screening concludes that the policy will not have likely significant in-combination effects on the identified European sites in relation to water quality.

Reduced Water Quality

3.19 The level of development proposed in the Core Strategy has the potential to act in-combination with development proposed in surrounding areas through increased pressure on sewerage capacity. This has the potential to lead to reduced water quality and therefore likely significant in-combination effects on the identified European sites.

3.20 Whilst it is acknowledged that there are current capacity issues with both Rochford and Southend Treatment works, the Essex Thames

Gateway WCS is required to address these matters to ensure sewer flooding issues are not exacerbated.

3.21 At a strategic level it is difficult for the HRA to conclude with certainty that the level of development proposed in the policy and surrounding areas will not have adverse in-combination effects on the integrity of the identified European sites through reduced water quality.

3.22 The Annual Monitoring Report for the LDF currently records the proportion of applications in which sustainable drainage systems are incorporated. It is recommended that the following indicators are incorporated into the Monitoring Framework:

Indicator	Frequency	Who is responsible?
Chemical water quality of the Crouch and Roach Estuaries	Annually	EA
Biological water quality of the Crouch and Roach Estuaries	Annually	EA

3.23 Incorporating these indicators will allow the Council to monitor any changes in the water quality of the Crouch and Roach Estuaries during the life of the plan. The proposed monitoring indicators seek to address the uncertainty identified in paragraph 3.21 and allow the Council to avoid adverse effects on the Crouch and Roach Estuaries SPA/ Ramsar, including other European sites that are hydrologically connected. If the Annual Monitoring Report (AMR) identifies that the water quality has deteriorated, then the Council should consult with EA and NE to determine the most appropriate course of action. If the recommendations above are incorporated into the Core Strategy, this HRA Screening would be able to conclude that the policy will not have likely significant in-combination effects on the identified European sites through reduced water quality.

Increased Atmospheric Pollution

3.24 The level of development proposed in the Core Strategy has the potential to act in-combination with development proposed in surrounding areas through reduced air quality. The construction of the proposed development and associated infrastructure, as well as the increase in surface and waterborne transport has the potential to increase atmospheric pollution.

3.25 The main source of air pollution in Rochford District is road traffic, on roads including the A127 and A130[6], and development proposed in this plan is likely to increase the level of traffic. The information available on the European sites, including NE's response to the London

[6] Essex Air Quality Consortium (last accessed 17/12/09) Air Quality in Rochford. Available [online]: http://www.essexair.org/

Southend Airport and Environs Joint Area Action Plan DPD (JAAP) Preferred Options consultation, does not identify them as being vulnerable to increased atmospheric pollution, including nitrogen and acid deposition.

3.26 Notwithstanding, the Core Strategy currently contains a number of policies that will help to mitigate the contribution of proposed development to the adverse in-combination effects on air quality; these include:

- Policy ENV5 requires proposed development to include measures that ensure it does not have an adverse impact on air quality.
- Policy T1 requires development to be located and designed in such as way as to reduce reliance on the private car.
- Policy T3 seeks to ensure that development is well related to public transport, or accessible by means other than the private car. In particular, large-scale residential developments will be required to be integrated with public transport and designed in a way that encourages use of alternative forms of transport to the private car.
- Policy T5 requires developments that involve both destination and trip origins and residential developments over 50 units to prepare travel plans.

3.27 Other plans acting in-combination with the Core Strategy also seek to mitigate potential adverse effects on air quality. For example, as part of the latest Local Transport Plan, Essex County Council Highways plan to use the county-wide Traffic Management Strategy to tackle congested junctions in Rochford District.

3.28 Air quality is monitored by the Council on a periodic basis (as required by the 1995 Environment Act) and includes an indicator to monitor the % reduction in NOx and primary PM10 emissions through local authority's estate and operations. Given that air quality is already monitored in the District, the European sites are not considered vulnerable to the effects of increased atmospheric pollution and that there are appropriate mitigations proposed within the Core Strategy Policies, it is assessed that the policy will not have likely significant in-combination effects on the identified European sites through increased atmospheric pollution.

Increased Disturbance

3.29 The level of development proposed in the Core Strategy and surrounding areas has the potential for likely significant in-combination effects on the identified European sites through increased levels of disturbance as a result of new development and therefore increased recreational activity. According to the information available on the identified European sites, they are vulnerable to disturbance from water-based and terrestrial recreational activities.

3.30 The character of the District is split, with a clear east-west divide. European sites are predominantly situated in the sparsely populated, relatively inaccessible east. The west of the District contains the majority of the District's population, has better access to services and fewer physical constraints.

3.31 Given the unique recreational opportunities that the European sites provide and the level of development proposed in the County as a whole, it is not likely that an individual authority alone could avoid, mitigate or compensate for likely significant in-combination effects of increased disturbance on the identified European sites. However, the authority should seek to ensure that its policies address identified issues and put robust measures in place to provide mitigation.

3.32 The Core Strategy currently contains a number of policies that will help to mitigate the contribution of proposed development to the in-combination effects of increased disturbance; these include:

- Policy GB1 seeks to protect and direct development away from the Green Belt, which provides leisure opportunities for the District's residents and visitors.
- Policy URV1 seeks to protect the Upper Roach Valley from development so that it can become a 'vast' area for informal recreational opportunities.
- Policy URV2 seeks to support the RSPB in delivering the Wallasea Island Wild Coast Island project, which aims to enhance the biodiversity value of the area.
- Policy CLT5 requires that any new residential development is accompanied by new public open space. This includes the incorporation of a significant amount of public open space to accompany new residential development in the west of Rayleigh. The policy also protects existing areas of open space and recreation such as; parks; allotments and playing pitches.
- Policy CLT7 requires new residential developments to incorporate appropriate communal play space.
- Policy CLT9 seeks to ensure that leisure facilities across the District are maintained and enhanced. In particular, the policy seeks to enhance recreational opportunities at Rayleigh Leisure Centre and further develop leisure uses at Great Wakering Leisure Centre.
- Appendix H1 (Policy reference H1) outlines infrastructure requirements for each of the key housing locations, and includes links to a green grid and public open space.

3.33 The policies outlined above ensure that new public open space and recreational areas are required to accompany any new residential developments. As the majority of proposed development is focused in existing settlements in the west of the District, the policies therefore assist to 'direct' recreational activity away from the European sites. The Core Strategy also seeks to utilise the potential of the Upper

Roach Valley and Hockley Woods as a large informal recreational areas, which will also assist in providing alternative areas for recreation.

3.34 Information provided by the JNCC indicates that disturbance to feeding and roosting waterfowl by terrestrial recreational activities will be tackled through management schemes for the European sites. Water based recreation such as, water-skiing and sailing, should be largely controlled by the relevant Harbour Authority. Foulness Island is owned by the Ministry of Defence and is used as a proving ground over marsh sands for munitions, with access to it restricted, therefore it is not subject to the same development pressures or public disturbance as the other European sites.

3.35 Given these findings and the mitigations already in place through the Core Strategy policies, it is considered that the Core Strategy will not have likely significant in-combination effects on the identified European sites through increased disturbance.

3.36 **Table 7** summarises the results of the above screening, considering the effect of the Core Strategy, alone and in-combination with other plans and programmes for each European site.

Table 7: Summary Results of Screening Assessment

European Sites within Rochford District Council administrative boundaries	**Screening Result: Effects alone?** ✘ No ✓ Yes	**Screening Result Effects 'in-combination'?** ✘ No ✓ Yes
Crouch & Roach Estuaries SPA/ Ramsar	✘ No	✘ No
Essex Estuaries SAC	✘ No	✘ No
Foulness SPA/ Ramsar	✘ No	✘ No
European Sites within a 15km search area		
Blackwater Estuary SPA/ Ramsar	✘ No	✘ No
Dengie SPA/ Ramsar	✘ No	✘ No
Medway Estuary & Marshes SPA/ Ramsar	✘ No	✘ No
Thames Estuary & Marshes SPA/ Ramsar	✘ No	✘ No

4.0 CONCLUSIONS

4.1 This HRA screening process has considered the potential for likely significant effects arising from the policies within the Rochford District Council Core Strategy.

4.2 The HRA considered five European sites within Rochford District Council's plan boundaries and ten European sites within a 15km search area around the Authority's boundaries. The European sites are predominantly situated in the sparsely populated, relatively inaccessible east of the District. The west contains the majority of the District's population and settlements as there is better access to services and fewer physical constraints. The majority of Development proposed in the Core Strategy is focused on previously developed land in and around existing settlements in the west of the District, thereby minimising the potential for direct effects on European sites in the east of the District, including those along the Essex coastline and Thames Estuaries.

4.3 The assessment found that the Core Strategy had the potential for likely significant effects both alone and in-combination on European sites through; increased disturbance, increased atmospheric pollution and reduced water levels and quality.

4.4 The assessment considered that the mitigation provided by the Core Strategy through the provision for new open space and alternative recreational opportunities - in the west of the District away from the European sites - would be sufficient to avoid likely significant effects as a result of increased disturbance. Similarly, it was considered that the Core Strategy contained sufficient policy mitigation and monitoring measures to avoid likely significant effects on European sites either alone or in-combination through increased atmospheric pollution. However the assessment could not conclude with certainty that the level of development proposed in the Core Strategy and surrounding areas will not have likely significant in-combination effects on European sites via reduced water quality and increased water resource demand. This is due to a number of uncertainties, including data limitations and the implementation uncertainty of the proposed development.

4.5 The assessment makes a number of recommendations to address these uncertainties and mitigate the potential likely significant effects outlined above. The recommendations include the addition of two water quality indicators into the Monitoring Framework, which will allow the Council to determine if developments being implemented through the plan are having adverse effects on the biological and chemical water quality of the European sites. To address the issues identified in relation reduced water levels, the assessment recommends additional supporting text for Policy H1 to ensure that the water supply necessary

for developments can be supplied sustainably, with no adverse effects on European sites. Finally, the assessment also recommends that the findings of this HRA Screening are reviewed once the final stages of the Essex Thames Gateway WCS are complete. The findings of this study will contribute to the evidence base and help to address some of the uncertainties identified within the screening assessment in relation to water resources.

4.6 It was concluded that if the recommendations are incorporated into the Core Strategy and a review of HRA findings is carried out upon completion of the Essex Thames Gateway WCS, the Core Strategy will not have likely significant effects either alone or in-combination on European sites. These recommendations have been subject to review and advice from NE. HRA is an iterative process and will be subject to ongoing advice from NE.

4.7 The findings of this plan level HRA do not obviate the need to undertake HRA for lower level, project scale/ implementation plans where there is potential for significant effect on one or more European Sites. The findings of this HRA should be used to inform any future assessment work.

Appendix 1: European Site Characterisations

Special Areas of Conservation

1. Essex Estuaries SAC

Special Protection Areas

2. Benfleet and Southend Marshes SPA
3. Blackwater Estuary SPA
4. Crouch and Roach Estuaries SPA
5. Dengie SPA
6. Foulness SPA
7. Medway Estuary and Marshes SPA
8. Thames Estuary and Marshes SPA

Ramsar Sites

9. Benfleet and Southend Marshes Ramsar
10. Blackwater Estuary Ramsar
11. Crouch and Roach Estuaries Ramsar
12. Dengie Ramsar
13. Foulness Ramsar
14. Medway Estuary and Marshes Ramsar
15. Thames Estuary and Marshes Ramsar

Special Areas of Conservation (SAC)

Site Name: Essex Estuaries **Location Grid Ref: TM103048** **JNCC Site Code: UK0013690** **Size (ha): 46140.82** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
Site Description	This is a large estuarine site in south-east England, and is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach rivers and is important as an extensive area of contiguous estuarine habitat. Essex Estuaries contains a very wide range of characteristic marine and estuarine sediment communities and some diverse and unusual marine communities in the lower reaches, including rich sponge communities on mixed, tide-swept substrates. Sublittoral areas have a very rich invertebrate fauna, including the reef-building worm *Sabellaria spinulosa*, the brittlestar *Ophiothrix fragilis*, crustaceans and ascidians. The site also has large areas of saltmarsh and other important coastal habitats.
Qualifying Features	**Annex I habitats that are a primary reason for selection of this site:** ▪ Estuaries ▪ Mudflats and sandflats not covered by seawater at low tide ▪ Salicornia and other annuals colonising mud and sand ▪ Spartina swards (*Spartinion maritimae*) ▪ Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) ▪ Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) **Annex I habitats present as a qualifying feature:** ▪ Sandbanks which are slightly covered by sea water all the time
Conservation Objectives	*Draft Conservation Objectives* **Glasswort and other annuals colonising mud and sand - pioneer saltmarsh** Subject to natural change, maintain glasswort and other annuals colonising mud and sand in favourable condition, in particular:

Site Name: Essex Estuaries Location Grid Ref: TM103048 JNCC Site Code: UK0013690 Size (ha): 46140.82 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	▪ Glasswort (*Salicornia agg*) community ▪ Annual seablite (*Suaeda maritima*) community ▪ Sea aster community **Cordgrass swards** Subject to natural change, maintain the cordgrass swards (*Spartinion*) in favourable condition, in particular: ▪ Small cordgrass (*Spartina maritima*) community ▪ Smooth cordgrass (*Spartina alterniflora*) community **Atlantic salt meadows** Subject to natural change, maintain the Atlantic salt meadows (*Glauco-Puccinellietalia*) in favourable condition, in particular: ▪ Low /mid marsh communities ▪ Upper marsh communities ▪ Drift line community **Mediterranean saltmarsh scrubs** Subject to natural change, maintain the Mediterranean and thermo-Atlantic halophilous scrubs (*Arthrocnemetalia fructicosae*) in favourable condition, in particular: ▪ Shrubby seablite (*Suaeda vera*) community ▪ Sea purslane (*Halimione portulacoides*)/sea heath (*Frankenia laevis*) community **Estuaries** To maintain estuaries in favourable condition, taking account of natural change, with particular reference to: ▪ Saltmarsh communities ▪ Intertidal mud and sand flat communities ▪ 'Rock' communities ▪ Subtidal mud communities

<table>
<tr><td>Site Name: Essex Estuaries
Location Grid Ref: TM103048
JNCC Site Code: UK0013690
Size (ha): 46140.82
Designation: SAC</td><td>Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td>

Subtidal mixed sediment communities
Subtidal muddy sand communities

Intertidal mudflats and sandflats
To maintain intertidal mudflats and sandflats in favourable condition subject to natural change, with particular reference to:

Mud communities
Muddy sand communities
Sand and gravel communities

</td></tr>
<tr><td>Component SSSIs</td><td>

Blackwater Estuary
Crouch and Roach Estuaries
Colne Estuary
Foulness
Dengie

</td></tr>
<tr><td>SAC Condition Assessment</td><td>No condition assessment is currently available for the Essex Estuaries SAC, therefore, the condition status of the component SSSIs are provided below.
<table>
<tr><th>% Area meeting PSA[1] target</th><th>% Area favourable</th><th>% Area unfavourable recovering</th><th>% Area unfavourable no change</th><th>% Area unfavourable declining</th><th>% Area destroyed / part destroyed</th></tr>
<tr><td colspan="6">Blackwater Estuary SSSI condition summary[2] (compiled 01 October 2009).</td></tr>
<tr><td>35.42%</td><td>24.62%</td><td>10.80%</td><td>6.75%</td><td>57.83%</td><td>0.00%</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>Site Name: Essex Estuaries
Location Grid Ref: TM103048
JNCC Site Code: UK0013690
Size (ha): 46140.82
Designation: SAC</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td rowspan="8"></td><td colspan="6">Crouch and Roach Estuaries SSSI condition summary[3] (compiled 01 October 2009).</td></tr>
<tr><td>23.50%</td><td>23.50%</td><td>0.00%</td><td>0.67%</td><td>75.83%</td><td>0.00%</td></tr>
<tr><td colspan="6">Colne Estuary SSSI condition summary[4] (compiled 01 October 2009).</td></tr>
<tr><td>47.16%</td><td>47.16%</td><td>0.00%</td><td>0.00%</td><td>52.84%</td><td>0.00%</td></tr>
<tr><td colspan="6">Foulness SSSI condition summary[5] (compiled 01 October 2009).</td></tr>
<tr><td>78.24%</td><td>77.94%</td><td>0.30%</td><td>2.09%</td><td>19.67%</td><td>0.00%</td></tr>
<tr><td colspan="6">Dengie SSSI condition summary[6] (compiled 01 October 2009).</td></tr>
<tr><td>62.77%</td><td>62.77%</td><td>0.00%</td><td>0.00%</td><td>37.23%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat Loss and Fragmentation
■ The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise.
■ Smothering by sediments driven by storm tides and siltation.

Increased Water Pollution
■ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources.</td></tr>
</table>

[1] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.
[2] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1004426
[3] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1002160
[4] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1000666
[5] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1002984
[6] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1000735

Site Name: Essex Estuaries Location Grid Ref: TM103048 JNCC Site Code: UK0013690 Size (ha): 46140.82 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	Physical Disturbance ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ Visual presence (e.g. recreational activity). **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).
HRA/AA Studies undertaken that address this site	**East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar. **The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007**

Site Name: Essex Estuaries **Location Grid Ref: TM103048** **JNCC Site Code: UK0013690** **Size (ha): 46140.82** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Southend Airport Runway Extension and Associated Development: Stage 1 Screening Report - Habitats Regulations Assessment August 2009** The HRA identifies that the construction and operation of the proposal has the potential to result in the following impacts: ▪ Construction/ operational noise and disturbance; ▪ Increase in atmospheric pollutants as a result of increased flight numbers; and ▪ Change to surface run-off and hydrology resulting from increase in area of hard surfaces. The HRA concluded that no significant effects are likely on the qualifying features of the Essex Estuaries SAC as a result of the proposed airport runway extension and associated infrastructure developments, nor will the conservation objectives be compromised. **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009**

Site Name: Essex Estuaries **Location Grid Ref: TM103048** **JNCC Site Code: UK0013690** **Size (ha): 46140.82** **Designation: SAC**	**Habitats Regulations Assessment: Data Proforma**
	The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Special Protection Areas (SPA)

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Benfleet and Southend Marshes are located on the north shore of the outer Thames Estuary in southern England. The site comprises an extensive series of saltmarshes, cockle shell banks, mud-flats, and grassland that supports a diverse flora and fauna. The productive mud-flats, cockle shell banks and diverse saltmarsh communities provide a wide range of feeding and roosting opportunities for internationally important numbers of wintering wildfowl and waders.
Qualifying Features	**Article 4.2 Qualification (79/409/EEC)** Over winter the area regularly supports: ▪ Dark-bellied Brent Goose (*Branta bernicla bernicla*) 1.3% of the population ▪ Dunlin (*Calidris alpina alpine)* 2.1% of the population in Great Britain ▪ Knot (*Calidris canutus)* 2.6% of the population ▪ Ringed Plover (*Charadrius hiaticula)* 1.3% of the population in Great Britain ▪ Grey Plover (*Pluvialis squatarola*) 2.3% of the population **Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage Of Birds** Over winter the area regularly supports: ▪ 34789 waterfowl (5 year peak mean 30/06/1999) Including: *Branta bernicla bernicla*, *Charadrius hiaticula*, *Pluvialis squatarola*, *Calidris canutus*, *Calidris alpine alpina*.
Conservation Objectives	**Conservation objective for the European Interest on the SSSI**

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	The conservation objectives for the European interests on the SSSI are: to maintain*, in favourable condition, the habitats for the populations of the regularly occurring migratory bird species[7], of European importance, with particular reference to: ▪ shell banks ▪ saltmarsh ▪ intertidal mudflat and sandflat communities ▪ eelgrass beds. to maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to: ▪ shell banks ▪ saltmarsh ▪ intertidal mudflat and sandflat communities ▪ eelgrass beds. *maintenance implies restoration if the feature is not currently in favourable condition.
Component SSSIs	▪ Beenfleet and Southend Marshes
SAC Condition Assessment	No condition assessment is currently available for the Benfleet and Southend Marshes SPA, therefore, the condition

[7] Dark-bellied brent geese, grey plover, ringed plover, knot and dunlin

<table>
<tr><td>Site Name: Benfleet and Southend Marshes
Location (Lat & Long):
51 31 42 N
00 41 00 E
JNCC Site Code: UK9009171
Size (ha): 2251.31
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">status of the component SSSI is provided below.</td></tr>
<tr><td></td><td>% Area meeting PSA[8] target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td></td><td colspan="6">Benfleet and Southend Marshes SSSI condition summary[9] (compiled 01 November 2009).</td></tr>
<tr><td></td><td>73.85%</td><td>59.63%</td><td>14.22%</td><td>18.42%</td><td>7.74%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat Loss and Fragmentation
▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise.
▪ Smothering by sediments driven by storm tides and siltation.

Increased Water Pollution
▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources.

Physical Disturbance
▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging.
▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats</td></tr>
</table>

[8] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.
[9] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1004414

Site Name: Benfleet and Southend Marshes Location (Lat & Long): 51 31 42 N 00 41 00 E JNCC Site Code: UK9009171 Size (ha): 2251.31 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ The Natura 2000 data form states that recreational activity is not a problem, however infrastructure works to facilitate visitor attractions are leading to piecemeal development which is dealt with under the planning control provisions of the Habitat Regulations. **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).
HRA/AA Studies undertaken that address this site	**The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination:

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Castle Point Core Strategy Supporting Paper 3: Habitats Regulations Assessment for the Publication Document July 2009** The HRA identified the supply of water and the treatment of waste water and sewage as key issues in relation to the identified European sites. It recommends additional policies and requirements to ensure that development is aligned more closely with the delivery of water infrastructure and that the need for water infrastructure has been fully assessed through a Water Cycle Study. The HRA concludes that there will be no adverse effects on the integrity of the Benfleet and Southend Marshes SPA and Ramsar. **Southend Airport Runway Extension and Associated Development: Stage 1 Screening Report - Habitats Regulations Assessment August 2009** The HRA identifies that the construction and operation of the proposal has the potential to result in the following impacts: ▪ Construction/ operational noise and disturbance; ▪ Increase in atmospheric pollutants as a result of increased flight numbers; and ▪ Change to surface run-off and hydrology resulting from increase in area of hard surfaces.

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	The HRA concluded that no significant effects are likely on the qualifying features of the Benfleet and Southend Marshes SPA and Ramsar as a result of the proposed airport runway extension and associated infrastructure developments, nor will the conservation objectives be compromised. **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK9009171** **Size (ha): 2251.31** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Blackwater Estuary **Location (Lat & Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK9009245** **Size (ha): 4395.15** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Blackwater Estuary is located on the coast of Essex in eastern England. It is the largest estuary in Essex and is one of the largest estuarine complexes in East Anglia. Its mud-flats are fringed by saltmarsh on the upper shores, with shingle, shell banks and offshore islands a feature of the tidal flats. The surrounding terrestrial habitats: the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland, are of high conservation interest. The diversity of estuarine habitats results in the sites being of importance for a wide range of overwintering waterbirds, including raptors, geese, ducks and waders. The site is also important in summer for breeding terns.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **During the breeding season the area regularly supports:**

Site Name: Blackwater Estuary Location (Lat & Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK9009245 Size (ha): 4395.15 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ Little Tern *(Sterna albifrons)* (Eastern Atlantic - breeding) at least 0.9% of the GB breeding population 5 year mean, 1992-1996 **Over winter the area regularly supports:** ▪ Hen Harrier *(Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987/8-1991/2 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **During the breeding season the area regularly supports:** ▪ Common Pochard *(Aythya ferina)* (North-western/North-eastern Europe) up to 6% of the population in Great Britain 5 year mean, 1987-1991 ▪ Ringed Plover *(Charadrius hiaticula)* (Europe/Northern Africa - wintering) up to 1.6% of the population in Great Britain 5 year mean, 1987-1991 **Over winter the area regularly supports:** ▪ Brant Goose (*Branta bernicla bernicla)* (Western Siberia/Western Europe) 5.1% of the population 5 year peak mean 1991/92-1995/96 ▪ *Dunlin (Calidris alpina alpine)* (Northern Siberia/Europe/Western Africa) 2.4% of the population 5 year peak mean 1991/92-1995/96 ▪ Ringed Plover *(Charadrius hiaticula)* 0.7% of the population 5 year peak mean 1991/92-1995/96 ▪ Black-tailed Godwit *(Limosa limosa islandica)* (Iceland - breeding) 2% of the population 5 year peak mean 1991/92-1995/96 ▪ Grey Plover *Pluvialis squatarola* (Eastern Atlantic - wintering) 3% of the population 5 year peak mean 1991/92-

Site Name: Blackwater Estuary **Location (Lat & Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK9009245** **Size (ha): 4395.15** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **Over winter the area regularly supports:** ▪ 109964 waterfowl (5 year peak mean 01/04/1998) ▪ Including: *Branta bernicla bernicla , Charadrius hiaticula , Pluvialis squatarola , Calidris alpina alpina , Limosa limosa islandica .*
Conservation Objectives	**The conservation objectives for the European SAC interests on the SSSI are :** Subject to natural change, to maintain*, in favourable condition the: ▪ Glasswort and other annuals colonising mud and sand ▪ Cordgrass swards (*Spartinion*), ▪ Atlantic salt meadows (*Glauco-Puccinellietalia*), ▪ Mediterranean and thermo-Atlantic halophilous scrubs (*Arthrocnemetalia fructicosae*), ▪ Estuaries ▪ Intertidal mudflats and sandflats to maintain*, in favourable condition, the habitats for the populations of the Annex 1 bird species +, of European importance, with particular reference to: ▪ semi/improved grassland ▪ unimproved grazing marsh inc. ditches ▪ semi-improved grazing marsh

Site Name: Blackwater Estuary Location (Lat & Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK9009245 Size (ha): 4395.15 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ London clay with deep water fish fauna (inc. cliffs) ▪ Swamp with open waterintertidal mud and saltmarsh ▪ intertidal mud ▪ intertidal mud with shingle and sand ▪ sand ▪ shingle ▪ saltmarsh ▪ saltmarsh and shingle ▪ coastal lagoon and sea wall with borrow dyke. + little tern and hen harrier. to maintain*, in favourable condition, the habitats for the populations of the regularly occurring migratory bird species +, of European importance, with particular reference to: ▪ Semi/improved grassland ▪ unimproved grazing marsh inc. ditches semi-improved grazing marsh ▪ London clay with deep water fish fauna (inc. cliffs) ▪ swamp with open water ▪ intertidal mud and saltmarsh ▪ intertidal mud ▪ intertidal mud with shingle and sand ▪ sand ▪ shingle ▪ saltmarsh

<table>
<tr><td>Site Name: Blackwater Estuary
Location (Lat & Long):
51 45 13 N
00 51 59 E
JNCC Site Code: UK9009245
Size (ha): 4395.15
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">▪ saltmarsh and shingle
▪ coastal lagoon and sea wall with borrow dyke.
+ pochard, bearded tit, dark-bellied brent goose, grey plover, dunlin and black-tailed godwit

The Conservation Objectives for Blackwater Estuary Special Protection Area are, in accordance with para C 10 of PPG 9, the reasons for which the SPA was classified. The entry of 25 August 1998 on the Register of European Sites gives the reasons for which the SPA was classified.</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Blackwater Estuary SSSI</td></tr>
<tr><td rowspan="3">SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td colspan="6">Blackwater Estuary SSSI</td></tr>
<tr><td>35.42%</td><td>24.62%</td><td>10.80%</td><td>6.75%</td><td>57.83%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Coastal erosion
▪ The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain. The situation is worsened with increasing winter storm events, whilst the hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland. This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast, which seeks to provide a blueprint for managing the coastline sustainably.

Nutrient enrichment
▪ Nutrient enrichment occurs from agricultural run-off and treated sewage effluent. This problem will be addressed through the Essex Estuaries candidate SAC scheme of management as well as review of discharge consents under the Habitats Regulations.

Water-based recreation</td></tr>
</table>

Site Name: Blackwater Estuary Location (Lat & Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK9009245 Size (ha): 4395.15 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ The control of motorised craft (with particular reference to jet-skis) is being addressed through the Blackwater Estuary Management Plan. Enforcement of speed limits should ensure that roosting birds are not subjected to disturbance and saltmarsh habitats are protected from damage by jet-skis. **Drought** ▪ The droughts over the last five years have resulted in lowered water tables in grazing marshes. Attempts are being made to restore this by pumping water from adjacent ditches and use of tertiary treated sewage effluent.
HRA/AA Studies undertaken that address this site	**Habitats Regulations Assessment of the draft Nuclear National Policy, November 2009** The HRA identified Blackwater Estuary SPA/Ramsar as a site which adverse effects on its integrity cannot be ruled out at plan level due to the proximity to Bradwell Nuclear Powerstation. Potential Effects Arising from Development: ▪ Water resources and quality ▪ Habitat (and species) loss and fragmentation ▪ Coastal squeeze ▪ Disturbance (noise, light, visual) ▪ Air quality **East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar.

Site Name: Blackwater Estuary Location (Lat & Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK9009245 Size (ha): 4395.15 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009 The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific

Site Name: Blackwater Estuary **Location (Lat & Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK9009245** **Size (ha): 4395.15** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	detail, as the Preferred Options for site allocations are determined.

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Crouch and Roach Estuaries are located on the coast of south Essex in eastern England. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brick earth and loams with patches of sand and gravel. The intertidal zone along the Rivers Crouch and Roach is 'squeezed' between the sea walls along both banks and the river channel. Unlike more extensive estuaries elsewhere in Essex, this leaves a relatively narrow strip of tidal mud which, nonetheless, is used by significant numbers of birds. The site is of importance for wintering waterbirds, especially Dark-bellied Brent Goose. The Crouch and Roach Estuary is an integral component of the phased Mid-Essex Coast SPA.
Qualifying Features	**Article 4.1 Qualification (79/409/EEC)** Over winter the area regularly supports: ▪ Hen Harrier (*Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987-1991 **Article 4.2 Qualification (79/409/EEC)**

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Over winter the area regularly supports: ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 1% of the population 5 year peak mean 1991/92-1995/96 (Western Siberia/Western Europe) **Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage Of Birds** Over winter the area regularly supports: ▪ 18607 waterfowl (5 year peak mean 30/06/1999) Including: Brent Goose (*Branta bernicla bernicla*)
Conservation Objectives	**Component SSSI: Crouch and Roach Estuaries** **Conservation objective for the European Interest on the SSSI** **The conservation objectives for the European interests on the SSSI are:** Subject to natural change, to maintain*, in favourable condition the: ▪ Glasswort and other annuals colonising mud and sand ▪ Cordgrass swards *(Spartinion*) ▪ Atlantic salt meadows (*Glauco-Puccinellietalia*) ▪ Mediterranean and thermo-Atlantic halophilous scrubs (*Arthrocnemetalia fructicosae*) ▪ Estuaries ▪ Intertidal mudflats and sandflats

Site Name: Crouch and Roach Estuaries SPA Location (Lat & Long): 51 38 23 N 00 43 06 E JNCC Site Code: UK9009244 Size (ha): 1735.58 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	to maintain*, in favourable condition the habitats for the populations of the Annex 1 bird species[10] of European importance, with particular reference to: ▪ semi/improved grassland ▪ unimproved grazing marsh inc. ditches ▪ semi-improved grazing marsh ▪ sea wall with borrow dyke. to maintain*, in favourable condition, the habitats for the populations of the migratory bird species[11] of European importance, with particular reference to: ▪ Grazing marsh ▪ Improved grassland with ditches ▪ Tidal inner estuary with sea wall ▪ Tidal inner estuary without sea wall or saltmarsh ▪ Tidal inner estuary without sea wall ▪ Tidal outer estuarine ▪ Saltmarsh/grassland transition. to maintain*, in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:

[10] Hen Harrier
[11] Dark-bellied brent goose

<table>
<tr><td>Site Name: Crouch and Roach Estuaries SPA
Location (Lat & Long):
51 38 23 N
00 43 06 E
JNCC Site Code: UK9009244
Size (ha): 1735.58
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">▪ Grazing marsh
▪ Improved grassland with ditches
▪ Freshwater lagoon with brackish creek
▪ Open brackish water
▪ Tidal outer estuarine
▪ Tidal inner estuary with sea wall(including Sea wall and borrow dyke)
▪ Tidal inner estuary without sea wall or saltmarsh
▪ Tidal inner estuary without sea wall
▪ Saltmarsh/grassland transition
▪ Coastal lagoon with reeds.

* maintenance implies restoration if the feature is not currently in favourable condition</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Crouch and Roach Estuaries</td></tr>
<tr><td>SAC Condition Assessment</td><td colspan="6">No condition assessment is currently available for the Crouch and Roach Estuaries SPA, therefore, the condition status of the component SSSI is provided below.</td></tr>
<tr><td></td><td>% Area meeting PSA[12] target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
</table>

[12] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.

<table>
<tr><td>Site Name: Crouch and Roach Estuaries SPA
Location (Lat & Long):
51 38 23 N
00 43 06 E
JNCC Site Code: UK9009244
Size (ha): 1735.58
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">Crouch and Roach Estuaries SSSI condition summary[13] (compiled 01 October 2009).</td></tr>
<tr><td></td><td>23.50%</td><td>23.50%</td><td>0.00%</td><td>0.67%</td><td>75.83%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat Loss and Fragmentation
■ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise.
■ Smothering by sediments driven by storm tides and siltation.

Increased Water Pollution
■ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources.

Physical Disturbance
■ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging.
■ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers.
■ Selective Extraction of minerals (e.g. aggregate dredging)
■ Low water levels as a result of increased abstraction.</td></tr>
</table>

[13] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1002160

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Non-physical Disturbance ▪ Noise (e.g. boat and plane activity). ▪ Visual presence (e.g. recreational activity). ▪ Some disturbance of feeding and roosting waterfowl is likely through recreational use of sea wall footpaths by dog walkers, bird watchers etc. **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).
HRA/AA Studies undertaken that address this site	**East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar. **The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Castle Point Core Strategy Supporting Paper 3: Habitats Regulations Assessment for the Publication Document July 2009** The HRA identified the supply of water and the treatment of waste water and sewage as key issues in relation to the identified European sites. It recommends additional policies and requirements to ensure that development is aligned more closely with the delivery of water infrastructure and that the need for water infrastructure has been fully assessed through a Water Cycle Study. The HRA concludes that there will be no adverse effects on the integrity of the Crouch and Roach Estuaries SPA. **Southend Airport Runway Extension and Associated Development: Stage 1 Screening Report - Habitats Regulations Assessment August 2009** The HRA identifies that the construction and operation of the proposal has the potential to result in the following impacts: ▪ Construction/ operational noise and disturbance; ▪ Increase in atmospheric pollutants as a result of increased flight numbers; and

Site Name: Crouch and Roach Estuaries SPA Location (Lat & Long): 51 38 23 N 00 43 06 E JNCC Site Code: UK9009244 Size (ha): 1735.58 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ Change to surface run-off and hydrology resulting from increase in area of hard surfaces. The HRA Screening identified that the project has the potential to increase disturbance of the qualifying bird species and assemblages of the Crouch and Roach Estuaries SPA/ Ramsar. It concluded that this impact however, is likely to be temporary as typical altitude of flights would remain unchanged from that currently employed, and taking into account the ability of most birds to become habituated to regularly-occurring noise disturbance the increased frequency of these flights would pose little disturbance to the bird species and assemblages. This conclusion was supported by Natural England in their consultation response to the JAAP. The HRA concluded that no significant effects are likely on the qualifying features of the Crouch and Roach Estuaries SPA as a result of the proposed airport runway extension and associated infrastructure developments, nor will the conservation objectives be compromised. **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance

Site Name: Crouch and Roach Estuaries SPA **Location (Lat & Long):** **51 38 23 N** **00 43 06 E** **JNCC Site Code: UK9009244** **Size (ha): 1735.58** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Dengie **Location Grid Ref (Lat & Long):** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK9009242** **Size: 3127.23** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Dengie is located on the coast of Essex in eastern England. It is a large and remote area of tidal mud-flats and saltmarshes at the eastern end of the Dengie peninsula, between the adjacent Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an

Site Name: Dengie **Location Grid Ref (Lat & Long):** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK9009242** **Size: 3127.23** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	outstanding assemblage of rare coastal flora. It is of importance for wintering populations of Hen Harrier *Circus cyaneus*, wildfowl and waders.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Hen Harrier *(Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987-1991 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Brant Goose (*Branta bernicla bernicla)* (Western Siberia/Western Europe) 0.8% of the population 5 year peak mean 1991/92-1995/96 ▪ Red Knot *(Calidris canutus)* (North-eastern Canada/Greenland/Iceland/Northwestern Europe) ▪ Grey Plover *Pluvialis squatarola* (Eastern Atlantic - wintering) 1.4% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **Over winter the area regularly supports:** ▪ 31454 waterfowl (5 year peak mean 01/04/1998) ▪ Including: *Branta bernicla bernicla, Pluvialis squatarola, Calidris canutus.*
Conservation Objectives	**Conservation objective for the European Interest on the SSSI**

Site Name: Dengie **Location Grid Ref (Lat & Long):** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK9009242** **Size: 3127.23** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	The conservation objectives for the European interests on the SSSI are : Subject to natural change, to maintain*, in favourable condition the: ▪ Glasswort and other annuals colonising mud and sand ▪ Cordgrass swards (*Spartinion*) ▪ Atlantic salt meadows (*Glauco-Puccinellietalia*) ▪ Mediterranean and thermo-Atlantic halophilous scrubs (*Arthrocnemetalia fructicosae)* ▪ Estuaries ▪ Intertidal mudflats and sandflats To maintain* in favourable condition the habitats for the populations of the Annex 1 species + of European importance, with particular reference to: ▪ saltmarsh ▪ intertidal mud ▪ sea wall and borrowdyke. + hen harrier to maintain* in favourable condition the habitats for the populations of the migratory bird species + of European importance with particular reference to: ▪ saltmarsh ▪ intertidal mud ▪ sea wall and borrowdyke. + dark-bellied brent goose, grey plover and knot.

<table>
<tr><td>Site Name: Dengie
Location Grid Ref (Lat & Long):
51 41 26 N
00 57 34 E
JNCC Site Code: UK9009242
Size: 3127.23
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">to maintain* in favourable condition the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance with particular reference to:
▪ saltmarsh
▪ intertidal mud
▪ sea wall and borrowdyke.

* maintenance implies restoration if the feature is not currently in favourable condition.</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Dengie SSSI</td></tr>
<tr><td rowspan="3">SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td colspan="6">Dengie SSSI</td></tr>
<tr><td>62.77%</td><td>62.77%</td><td>0.00%</td><td>0.00%</td><td>37.23%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat Loss
▪ The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain. The situation is worsened with increasing winter storm events, whilst the hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland. This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast which seeks to provide a blueprint for managing the coastline sustainably.

Disturbance
▪ The Thames Fishery is coming under increased pressure from boats that previously fished the Wash for cockles. Controls over the fishery have been put in place by Kent and Essex Sea Fisheries Committee.
▪ A management plan for English Nature details a policy of non-intervention to prevent damage to the site from human intervention. This and other management issues will be addressed through the European marine site management</td></tr>
</table>

Site Name: Dengie Location Grid Ref (Lat & Long): 51 41 26 N 00 57 34 E JNCC Site Code: UK9009242 Size: 3127.23 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	scheme.
HRA/AA Studies undertaken that address this site	**Habitats Regulations Assessment of the draft Nuclear National Policy, November 2009** The HRA identified Dengie Estuary SPA/Ramsar as a site which adverse effects on its integrity cannot be ruled out at plan level due to the proximity to Bradwell Nuclear Powerstation. Potential Effects Arising from Development: ▪ Water resources and quality ▪ Habitat (and species) loss and fragmentation ▪ Coastal squeeze ▪ Disturbance (noise, light, visual) ▪ Air quality **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance

Site Name: Dengie Location Grid Ref (Lat & Long): 51 41 26 N 00 57 34 E JNCC Site Code: UK9009242 Size: 3127.23 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined. **Appropriate Assessment of the Draft South East Plan, 2006** ▪ Development may result in increased volumes of effluent disposal into the Estuary. Some of this may reach the Dengie Ramsar site and lead to a decline in water quality, principally due to increased nutrient inputs. However, given the distance of the site from the points of discharge within the southeast, any contribution is likely to be minor. ▪ May also result in increased recreational pressure on the Ramsar site, due to tourism. However, given the distance of this site from the southeast, any contribution is likely to be minor. ▪ Assessment identified a potential for In-combination effects on Dengie Ramsar/SPA ▪ Assessment concluded that there was no risk of a significant effect on Dengie Ramsar/SPA **East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of

Site Name: Dengie **Location Grid Ref (Lat & Long):** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK9009242** **Size: 3127.23** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar.

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Foulness is located on the coast of Essex, on the east coast of England north of the mouth of the Thames estuary. The site is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mud-flats, cockle-shell banks and sand-flats. It includes one of the three largest continuous sand-silt flats in the UK. The diversity of high quality coastal habitats present support important populations of breeding, migratory and wintering waterbirds, notably very important concentrations of Dark-bellied Brent Goose *Branta bernicla bernicla.*
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** During the breeding season the area regularly supports: ▪ Avocet (*Recurvirostra avosetta)* up to 5.8% of the GB breeding population 5 year mean, 1987-1991 ▪ Little Tern *(Sterna albifrons)*at least 1% of the GB breeding population 5 year mean, 1992-1996 ▪ Common Tern *(Sterna hirundo)*up to 1.8% of the GB breeding population Count, as at 1996 ▪ Sandwich Tern *(Sandwich Tern)* up to 2.3% of the GB breeding population 5 year mean, 1992-1996 Over winter the area regularly supports:

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	▪ Hen Harrier *(Circus cyaneus)* up to 2.5% of the GB population 5 year mean, 1987/8-1991/2 ▪ Bar-tailed Godwit *(Limosa lapponica)* 14.6% of the GB population 5 year peak mean 1991/92-1995/96 ▪ Avocet (*Recurvirostra avosetta)* 7.9% of the GB population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** During the breeding season the area regularly supports: ▪ Ringed Plover *(Charadrius hiaticula)* up to 1.6% of the population in Great Britain 5 year mean, 1987/8-1991/2 Over winter the area regularly supports: ▪ Brant Goose *(Branta bernicla bernicla) 4.4% of the population 5 year peak mean 1991/92-1995/96* ▪ Red Knot (*Calidris canutus)* 11.7% of the population 5 year peak mean 1991/92-1995/96 ▪ Eurasian Oystercatcher *(Haematopus ostralegus)*1.3% of the population 5 year peak mean 1991/92-1995/96 ▪ Grey Plover *(Pluvialis squatarola)* 2.5% of the population 5 year peak mean 1991/92-1995/96 ▪ Common Redshank *(Tringa totanus)* 0.8% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** Over winter the area regularly supports: ▪ 107999 waterfowl (5 year peak mean 01/04/1998) ▪ Including: Brant Goose *(Branta bernicla bernicla)* , Eurasian Oystercatcher *(Haematopus ostralegus),* Avocet *(Recurvirostra avosetta)* , Grey Plover *(Pluvialis squatarola)* , Red Knot *(Calidris Canutus)* , Bar-tailed Godwit *(Limosa lapponica)* , Common Redshank *(Tringa totanus).*
Conservation Objectives	**Component SSSI: Foulness**

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Conservation objectives for the European interest on the SSSI **The conservation objectives for the European interest on the SSSI are:** Subject to natural change, to maintain* in favourable condition *Salicornia* and other annuals colonising mud and sand, in particular: ▪ glasswort/ annual sea-blite community ▪ Sea aster community Subject to natural change, to maintain* in favourable condition the *Spartina* swards *(Spartinion)*, in particular: ▪ small cordgrass community ▪ smooth cordgrass community Subject to natural change, to maintain* in favourable condition the Atlantic salt meadows (Glauco-Puccinellietalia, in particular: ▪ Low/ mid marsh communities ▪ Upper marsh communities ▪ Upper marsh transitional communities ▪ Drift line community Subject to natural change, to maintain* in favourable condition the estuaries in particular:

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	▪ Saltmarsh communities ▪ Intertidal mudflat and sandflat communities ▪ Rock communities ▪ Subtidal mud communities ▪ Subtidal muddy sand communities ▪ Subtidal mixed sediment communities Subject to natural change, to maintain* in favourable condition the mudflats and sandflats not covered by seawater at low tide, in particular: ▪ Mud communities ▪ Muddy sand communities ▪ Sand and gravel communities to maintain*, in favourable, condition the habitats for the populations of Annex 1 species + of European importance, with particular reference to: ▪ woodland heath/scrub/acid grass/open water mosaic ▪ improved grassland with ditches ▪ grazing marsh with ditches ▪ coastal lagoon ▪ shell, sand and gravel shores ▪ intertidal mudflats andsandflats ▪ Saltmarsh

Site Name: Foulness Location (Lat & Long): 51 34 26 N 00 55 17 E JNCC Site Code: UK9009246 Size (ha) : 10968.9 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ coastal shallow waters + Avocet, sandwich tern, common tern, little tern and hen harrier. to maintain*, in favourable condition , the habitats for the populations of migratory bird species + of European importance with particular reference to: ▪ Woodland heath/scrub/acid grass/open water mosaic ▪ Improved grassland with ditches ▪ Grazing marsh with ditches ▪ Coastal lagoon ▪ Saltmarsh ▪ Intertidal mudflats and sandflats ▪ Boulder and cobble shores + Ringed plover, dark-bellied brent geese, oystercatcher, grey plover, knot, bar-tailed godwit and redshank to maintain* in favourable condition the habitats for the waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to: ▪ Woodland heath/scrub/acid grass/open water mosaic ▪ Improved grassland with ditches ▪ Grazing marsh with ditches ▪ Coastal lagoon ▪ Saltmarsh

<table>
<tr><td>Site Name: Foulness
Location (Lat & Long):
51 34 26 N
00 55 17 E
JNCC Site Code: UK9009246
Size (ha) : 10968.9
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">▪ Intertidal mudflats and sandflats
▪ Boulder and cobble shores

* Maintenance implies restoration if the feature is not currently in favourable condition.</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Foulness SSSI</td></tr>
<tr><td rowspan="3">SAC Condition Assessment</td><td>Area meeting PSA target</td><td>Area favourable</td><td>Area unfavourable recovering</td><td>Area unfavourable no change</td><td>Area unfavourable declining</td><td>Area destroyed / part destroyed</td></tr>
<tr><td colspan="6">Foulness SSSI (shared with Southend-on-sea Borough)</td></tr>
<tr><td>78.24%</td><td>77.94%</td><td>0.30%</td><td>2.09%</td><td>19.67%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Much of the area is owned by the Ministry of Defence and is not, therefore, subject to development pressures or public disturbance.

Habitat Loss and Fragmentation
▪ Natural processes are adversely affecting the south-east coastline and saltmarshes are being eroded.
▪ Maintenance of the integrity of the intertidal and saltmarsh habitats of the Mid-Essex Coast Ramsar sites as a whole is being addressed by soft sea defence measures, managed retreat and foreshore recharge.
▪ The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise.
▪ Smothering by sediments driven by storm tides and siltation.

Disturbance
▪ The cockel beds on the Maplin Sands support internationally important numbers of wading birds: the Kent and Essex Sea Fisheries Committee control the cockle fishery through regulatory orders.</td></tr>
</table>

Site Name: Foulness Location (Lat & Long): 51 34 26 N 00 55 17 E JNCC Site Code: UK9009246 Size (ha) : 10968.9 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	Physical Disturbance ▪ Lower levels of rainfall and changes in drainage for agriculture have led to aridification, although this is compensated for by the addition of sea water. ▪ Offshore aggregate dredging and seismic surveys could possibly adversely affect the Maplin sands, will be addressed through the Essex Estuaries marine Special Area of Conservation (SAC) management scheme, of which Foulness is part.
HRA/AA Studies undertaken that address this site	**The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009**

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined. **Habitats Regulations Assessment Site Report for Kingsnorth: EN-6: Draft National Policy Statement for Nuclear Power Generation, November 2009**

Site Name: Foulness **Location (Lat & Long):** **51 34 26 N** **00 55 17 E** **JNCC Site Code: UK9009246** **Size (ha) : 10968.9** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Taking into account the strategic nature of the plan and the information available, AA at this strategic level cannot rule out potential adverse effects on the Medway Estuary and Marshes SPA/Ramsar, Swale SPA/Ramsar, Benfleet and Southend Marshes SPA/Ramsar, Thames Estuary and Marshes SPA/Ramsar, Foulness SPA/Ramsar and Essex Estuary SAC Potential for negative impacts on: ▪ water resources and quality, ▪ air quality, ▪ habitat and species loss and fragmentation ▪ coastal squeeze and; ▪ disturbance

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E** **JNCC Site Code: UK9012031** **Size: 4684.36** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and Sheerness. It has a complex arrangement of tidal channels, which drain around large islands of saltmarsh and peninsulas of grazing marsh. The mud-flats are rich in invertebrates and also support beds of E*nteromorpha* and some Eelgrass *Zostera* spp. Small shell beaches occur, particularly in the outer part of the estuary. Grazing marshes are present inside the sea walls around the estuary. The complex and diverse mixes of coastal habitats support important numbers of waterbirds throughout the year. In summer, the estuary supports breeding waders and terns, whilst in winter it holds important numbers of geese, ducks, grebes and waders. The site is also of importance during spring and autumn migration periods, especially for waders.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **During the breeding season the area regularly supports:** ▪ Avocet *(Recurvirostra avosetta)* (Western Europe/Western Mediterranean - breeding) 6.2% of the GB breeding population 5 year mean, 1988-1992 ▪ Little Tern *(Sterna albifrons)* (Eastern Atlantic - breeding) *1.2% of the GB breeding population 5 year mean, 1991-1995* ▪ *Sterna hirundo* (Northern/Eastern Europe - breeding) 0.6% of the GB breeding population Count, as at 1994 **Over winter the area regularly supports:** ▪ Bewick's swan *(Cygnus columbianus bewickii)* (Western Siberia/North-eastern & North-western Europe) 0.2% of the GB population 5 year peak mean 1991/92-1995/96 ▪ *Avocet (Recurvirostra avosetta)* (Western Europe/Western Mediterranean - breeding) 24.7% of the GB population 5 year peak mean 1991/92-1995/96

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 24 02 N** **00 40 38 E** **JNCC Site Code: UK9012031** **Size: 4684.36** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	ARTICLE 4.2 QUALIFICATION (79/409/EEC) **Over winter the area regularly supports:** ▪ Northern Pintail ***(****Anas acuta)* (North-western Europe) 1.2% of the population 5 year peak mean 1991/92-1995/96 ▪ Northern Shoveler *(Anas clypeata)* (North-western/Central Europe) 0.8% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Common Teal *(Anas crecca)* (North-western Europe) 1.3% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Eurasian Wigeon *(Anas Penelope)* (Western Siberia/North-western/North-eastern Europe) 1.6% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Ruddy Turnstone *(Arenaria interpres)* (Western Palearctic - wintering) 0.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Brant Goose *(Branta bernicla bernicla)* (Western Siberia/Western Europe) 1.1% of the population 5 year peak mean 1991/92-1995/96 ▪ Dunlin *(Calidris alpina alpine)* (Northern Siberia/Europe/Western Africa) 1.9% of the population 5 year peak mean 1991/92-1995/96 ▪ Red Knot *(Calidris canutus)* (North-eastern Canada/Greenland/Iceland/Northwestern Europe) 0.2% of the population 5 year peak mean 1991/92-1995/96 ▪ Ringed Plover *(Charadrius hiaticula)* (Europe/Northern Africa - wintering) 1.6% of the population 5 year peak mean 1991/92-1995/96 ▪ Eurasian Oystercatcher *(Haematopus ostralegus)* (Europe & Northern/Western Africa) 1% of the population in Great Britain 5 year peak mean 1991/92-1995/96

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK9012031 Size: 4684.36 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ Black-tailed Godwit *(Limosa limosa islandica)* (Iceland – breeding) 12.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Eurasian Curlew *(Numenius arquata)* (Europe - breeding) 1.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ▪ Grey Plover *(Pluvialis squatarola)* (Eastern Atlantic - wintering) 2% of the population 5 year peak mean 1991/92-1995/96 ▪ Common Shelduck *(Tadorna tadorna)* (North-western Europe) 1.5% of the population 5 year peak mean 1991/92-1995/96 ▪ Greenshank *(Tringa nebularia)* (Europe/Western Africa) 2.6% of the population in Great Britain No count period specified. ▪ Common Redshank *(Tringa totanus)* (Eastern Atlantic - wintering) 2.1% of the population 5 year peak mean 1991/92-1995/96 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **During the breeding season the area regularly supports:** ▪ *Alcedo atthis, Anas platyrhynchos , Asio flammeus, Aythya ferina , Circus cyaneus, Falco columbarius, Gavia stellata , Phalacrocorax carbo , Vanellus vanellus .* **Over winter the area regularly supports:** ▪ 65496 waterfowl (5 year peak mean 01/04/1998) ▪ Including: *Gavia stellata , Podiceps cristatus , Phalacrocorax carbo , Cygnus columbianus bewickii , Branta bernicla*

<table>
<tr><td>Site Name: Medway Estuary & Marshes
Location Grid Ref (Lat & Long):
51 24 02 N
00 40 38 E
JNCC Site Code: UK9012031
Size: 4684.36
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">bernicla , Tadorna tadorna , Anas penelope , Anas crecca , Anas platyrhynchos , Anas acuta , Anas clypeata , Aythya ferina , Haematopus ostralegus , Recurvirostra avosetta , Charadrius hiaticula , Pluvialis squatarola , Vanellus vanellus , Calidris canutus , Calidris alpina alpina , Limosa limosa islandica , Numenius arquata , Tringa totanus , Tringa nebularia , Arenaria interpres.</td></tr>
<tr><td>Conservation Objectives</td><td colspan="6">The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).

Habitat Types represented (Biodiversity Action Plan categories)
▪ Improved Grassland
▪ Fen, Marsh and Swamp
▪ Littoral Sediment
▪ Coastal Lagoon

Geological features (Geological SiteTypes)
N/A

(*) or restored to favourable condition if features are judged to be unfavourable.</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Medway and Estuary Marshes SSSI</td></tr>
<tr><td>SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
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<table>
<tr><td>Site Name: Medway Estuary & Marshes
Location Grid Ref (Lat & Long):
51 24 02 N
00 40 38 E
JNCC Site Code: UK9012031
Size: 4684.36
Designation: SPA</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">Medway and Estuary Marshes SSSI</td></tr>
<tr><td></td><td>98.84%</td><td>98.84%</td><td>0.00%</td><td>0.68%</td><td>0.00%</td><td>0.48%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat fragmentation/Loss
▪ There is evidence of rapid erosion of intertidal habitat within the site due to natural processes. Research on mudflat recharge using dredging spoil is being investigated as a means of countering the erosion.
▪ Also a threat of erosion from the effects of sea defences development and clay extraction

Physical Disturbance
▪ The intertidal area is vulnerable to disturbance from water borne recreation. This is being addressed as part of an estuary management plan.
▪ Pressures from proposed transport and industrial developments are being addressed through the planning system and under the provisions of the Habitat Regulations.
▪ The effects of abstraction on the availability of water through abstraction for other land uses and drainage for arable cultivation will be addressed through the consent review process under the Habitats Regulations.
▪ The terrestrial ecosystem is reliant on grazing practices and water management and changes to these may pose a threat.</td></tr>
<tr><td>HRA/AA Studies undertaken that address this site</td><td colspan="6">Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009

The HRA identified the following potential impacts for each Option:
▪ Aggregate Recycling
o Habitat Loss
o Emissions
o Human Disturbance</td></tr>
</table>

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 24 02 N** **00 40 38 E** **JNCC Site Code: UK9012031** **Size: 4684.36** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined. **Appropriate Assessment of the Draft South East Plan, 2006** Proposed development could possibly: ▪ Increase recreational pressure given that this site is already under extensive recreational pressure (from waterborne users in addition to walkers, microlight aircraft etc). Difficult to manage. ▪ Contribute to coastal squeeze and thus, loss of habitat ▪ Increase atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats for on which the species

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK9012031 Size: 4684.36 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	of European importance depend. ▪ Result in loss of valuable off-site foraging habitat designated species. ▪ Assessment identifies that there is a risk of a significant effect on the site. **East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar. **Dartford Borough Council Habitats Regulations Assessment screening of Town Centre AAP: Preferred Options** ▪ Development of new homes in Dartford may result in, increased pollution (atmospheric and water based) as well as greater recreational pressures. Additional recreational pressures including water-based recreation are unlikely to result from the AAP, which includes key policies focused on maintaining and developing Town Centre based leisure and recreation opportunities for the resident and expanding population. ▪ On Environment Agency advice, it is not considered that the development of new homes and increased volumes of effluent disposal will exacerbate high nutrient levels leading to adverse effects on sites.

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E** **JNCC Site Code: UK9012021** **Size: 4838.94** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Thames Estuary and Marshes SPA is located on the south side of the Thames Estuary in southern England. The marshes extend for about 15 km along the south side of the estuary and also include intertidal areas on the north side of the estuary. To the south of the river, much of the area is brackish grazing marsh, although some of this has been converted to arable use. At Cliffe, there are flooded clay and chalk pits, some of which have been infilled with dredgings. Outside the sea wall, there is a small extent of saltmarsh and broad intertidal mud-flats. The estuary and adjacent grazing marsh areas support an important assemblage of wintering waterbirds including grebes, geese, ducks and waders. The site is also important in spring and autumn migration periods.
Qualifying Features	**ARTICLE 4.1 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Hen Harrier *(Circus cyaneus)* 1% of the population in Great Britain Five year peak mean for 1993/94 to 1997/98 ▪ Avocet *(Recurvirostra avosetta)* (Western Europe/Western Mediterranean - breeding) **ARTICLE 4.2 QUALIFICATION (79/409/EEC)** **Over winter the area regularly supports:** ▪ Dunlin *(Calidris alpina alpina)*(Northern Siberia/Europe/Western Africa) 2.1% of the population Five year peak mean for 1993/94 to 1997/98 ▪ Red Knot *(Calidris canutus)* (North-eastern Canada/Greenland/Iceland/Northwestern Europe) 1.4% of the population Five year peak mean for 1993/94 to 1997/98 ▪ Black-tailed Godwit *(Limosa limosa islandica)* (Iceland - breeding) 2.4% of the population Five year peak mean for 1993/94 to 1997/98 ▪ Grey Plover *(Pluvialis squatarola)* (Eastern Atlantic - wintering) 1.7% of the population Five year peak mean for

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E** **JNCC Site Code: UK9012021** **Size: 4838.94** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	1993/94 to 1997/98 ▪ Common Redshank *(Tringa totanus)* (Eastern Atlantic - wintering) 2.2% of the population Five year peak mean for 1993/94 to 1997/98 **On passage the area regularly supports:** ▪ Ringed Plover *(Charadrius hiaticula)* (Europe/Northern Africa - wintering) 2.6% of the population Five year peak mean for 1993/94 to 1997/98 **ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS** **Over winter the area regularly supports:** ▪ 75019 waterfowl (5 year peak mean 21/03/2000) ▪ Including: *Recurvirostra avosetta , Pluvialis squatarola , Calidris canutus , Calidris alpina alpina , Limosa limosa islandica , Tringa totanus .*
Conservation Objectives	**The conservation objective for the internationally important populations of regularly occurring Annex 1 bird species** Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring Annex 1 bird species, under the Birds Directive, in particular: ▪ Intertidal mudflats ▪ Intertidal sandflats **The conservation objective for the internationally important populations of regularly occurring migratory bird species**

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 29 08 N** **00 35 47 E** **JNCC Site Code: UK9012021** **Size: 4838.94** **Designation: SPA**	**Habitats Regulations Assessment: Data Proforma**
	Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring migratory bird species, under the Birds Directive, in particular: ▪ Saltmarsh ▪ Intertidal mudflats ▪ Intertidal shingle **The conservation objective for the internationally important assemblage of waterfowl** Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of waterfowl under the Birds Directive, in particular: ▪ Saltmarsh ▪ Intertidal mudflats ▪ Intertidal shingle
Component SSSIs	▪ South Thames Estuary And Marshes SSSI ▪ Medway Estuary & Marshes SSSI ▪ Foulness SSSI ▪ Benfleet & Southend Marshes SSSI ▪ Mucking Flats and Marshes SSSI

% Area meeting PSA target	**% Area favourable**	**% Area unfavourable recovering**	**% Area unfavourable no change**	**% Area unfavourable declining**	**% Area destroyed / part destroyed**
South Thames Estuary And Marshes SSSI					
97.63%	95.28%	2.35%	0.59%	1.79%	0.00%
Medway Estuary & Marshes SSSI					

Site Name: Thames Estuary & Marshes Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E JNCC Site Code: UK9012021 Size: 4838.94 Designation: SPA	Habitats Regulations Assessment: Data Proforma					
	98.84%	98.84%	0.00%	0.68%	0.00%	0.48%
	Foulness SSSI					
	78.24%	77.94%	0.30%	2.09%	19.67%	0.00%
	Benfleet & Southend Marshes SSSI					
	73.85%	59.63%	14.22%	18.42%	7.74%	0.00%
	Mucking Flats and Marshes SSSI					
	94.13%	94.13%	0.00%	5.87%	0.00%	0.00%
Vulnerabilities (includes existing pressures and trends)	**Habitat fragmentation/ loss** ▪ There is evidence of coastal squeeze and erosion of intertidal habitat within the site. English Nature is in discussion with the port authority on the role of port dredging in intertidal habitat loss. ▪ The terrestrial part of the site depends on appropriate grazing and management of water. The availability of livestock may be affected by changes in agricultural markets. Evidence suggests that the water supply to grazing marsh has decreased. A water level management plan may address this. **Disturbance** ▪ The intertidal area is also vulnerable to disturbance from water borne recreation. This is being addressed by information dissemination as part of an estuary management plan. ▪ Development pressure can lead to both direct landtake from the site and indirect disturbance and hydrological effects. These effects will be addressed through the Habitats Regulations 1994. **Water Pollution** ▪ Studies by the Environment Agency indicate that the waters in the Thames estuary are hyper-nutrified for nitrogen and phosphorus.					
HRA/AA Studies undertaken that address this site	**Appropriate Assessment of the Draft South East Plan, 2006** Proposed development could lead to:					

Site Name: Thames Estuary & Marshes Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E JNCC Site Code: UK9012021 Size: 4838.94 Designation: SPA	Habitats Regulations Assessment: Data Proforma
	▪ Increased recreational pressure lead to increased atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats for on which the species of European importance depend. ▪ Result in loss of valuable off-site foraging habitat designated species. ▪ Contribute to coastal squeeze and thus, loss of habitat. **The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA

Ramsar Sites

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Benfleet and Southend Marshes are located on the north shore of the outer Thames Estuary in southern England. The site comprises an extensive series of saltmarshes, cockle shell banks, mud-flats, and grassland that supports a diverse flora and fauna. The productive mud-flats, cockle shell banks and diverse saltmarsh communities provide a wide range of feeding and roosting opportunities for internationally important numbers of wintering wildfowl and waders.
Qualifying Features	**Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 32867 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 - species/populations occurring at levels of international importance.** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 4532 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3) **Species with peak counts in winter:** ▪ Grey plover (*Pluvialis squatarola*) E Atlantic/W Africa - wintering 1710 individuals, representing an average of 3.2% of

<table>
<tr><td>Site Name: Benfleet and Southend Marshes
Location (Lat & Long):
51 31 42 N
00 41 00 E
JNCC Site Code: UK11006
Size (ha): 2251.31
Designation: Ramsar</td><td>Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td>the GB population (5 year peak mean 1998/9-2002/3)
▪ Red knot (Calidris canutus islandica) W & Southern Africa (wintering) 6307 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in winter:

▪ Dunlin (Calidris alpina alpine) W Siberia/W Europe 17591 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/9-2002/3)</td></tr>
<tr><td>Conservation Objectives</td><td>▪ None available, however, please refer to the conservation objectives for the Benfleet and Southend Marshes SPA.</td></tr>
<tr><td>Component SSSIs</td><td>▪ Beenfleet and Southend Marshes</td></tr>
<tr><td>SAC Condition Assessment</td><td>No condition assessment is currently available for the Benfleet and Southend Marshes Ramsar, therefore, the condition status of the component SSSI is provided below.
<table>
<tr><th>% Area meeting PSA[14] target</th><th>% Area favourable</th><th>% Area unfavourable recovering</th><th>% Area unfavourable no change</th><th>% Area unfavourable declining</th><th>% Area destroyed / part destroyed</th></tr>
<tr><td colspan="6">Beenfleet and Southend Marshes SSSI condition summary[15] (compiled 01 November 2009).</td></tr>
</table></td></tr>
</table>

[14] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.
[15] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1004414

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**					
	73.85%	59.63%	14.22%	18.42%	7.74%	0.00%
Vulnerabilities (includes existing pressures and trends)	**Habitat Loss and Fragmentation** ▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation. **Increased Water Pollution** ▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ The SPA Natura 2000 data form states that recreational activity is not a problem, however infrastructure works to facilitate visitor attractions are leading to piecemeal development which is dealt with under the planning control					

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	provisions of the Habitat Regulations. ▪ The information sheet for the Ramsar identifies **Biological Disturbance** ▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).
HRA/AA Studies undertaken that address this site	**The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Castle Point Core Strategy Supporting Paper 3: Habitats Regulations Assessment for the Publication Document**

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	July 2009 The HRA identified the supply of water and the treatment of waste water and sewage as key issues in relation to the identified European sites. It recommends additional policies and requirements to ensure that development is aligned more closely with the delivery of water infrastructure and that the need for water infrastructure has been fully assessed through a Water Cycle Study. The HRA concludes that there will be no adverse effects on the integrity of the Benfleet and Southend Marshes SPA and Ramsar. **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss

Site Name: Benfleet and Southend Marshes **Location (Lat & Long):** **51 31 42 N** **00 41 00 E** **JNCC Site Code: UK11006** **Size (ha): 2251.31** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	○ Emissions ○ Flooding and Water Use ○ Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites ○ Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Blackwater Estuary is a large estuary between the Dengie peninsula and Mersea Island on the Essex coast. It stretches from immediately adjacent to Maldon and about 8 km south of Colchester. The Blackwater Estuary is the largest estuary in Essex north of the Thames and, is one of the largest estuarine complexes in East Anglia. Its mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering waterfowl. Shingle and shell banks and offshore islands are also a feature of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. This rich mosaic of habitats supports an outstanding assemblage of nationally

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	scarce plants and a nationally important assemblage of rare invertebrates. There are 16 British Red Data Book species and 94 notable and local species.
Qualifying Features	**Ramsar criterion 1** Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237 ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. **Ramsar criterion 2** The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In descending order of rarity these are: Endangered: a water beetle *Paracymus aeneus*; Vulnerable: a damselfly *Lestes dryas*, the flies *Aedes flavescens*, *Erioptera bivittata*, *Hybomitra expollicata* and the spiders *Heliophanus auratus* and *Trichopterna cito*; Rare: the beetles *Baris scolopacea*, *Philonthus punctus*, *Graptodytes bilineatus* and *Malachius vulneratus*, the flies *Campsicemus magius* and *Myopites eximia*, the moths *Idaea ochrata* and *Malacosoma castrensis* and the spider *Euophrys*. **Ramsar criterion 3** This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 105061 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 – species/populations occurring at levels of international importance.**

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Qualifying Species/populations (as identified at designation): **Species with peak counts in winter:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 8689 individuals, representing an average of 4% of the population (5 year peak mean 1998/9- 2002/3) ▪ Grey plover (*Pluvialis squatarola*) E Atlantic/W Africa –wintering 4215 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3) ▪ Dunlin (*Calidris alpina alpine)* W Siberia/W Europe 27655 individuals, representing an average of 2% of the population (5 year peak mean 1998/9- 2002/3) ▪ Black-tailed godwit (*Limosa limosa islandica)* Iceland/W Europe 2174 individuals, representing an average of 6.2% of the population (5 year peak mean 1998/9-2002/3) **Species/populations identified subsequent to designation for possible future consideration under criterion 6.** **Species with peak counts in winter:** ▪ Common shelduck (*Tadorna tadorna)* NW 3141 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)Europe ▪ European golden plover (*Pluvialis apricaria apricaria)* P. a. altifrons Iceland & Faroes/E 16083 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3)Atlantic ▪ Common redshank (*Tringa totanus totanus)* 4169 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	▪ None available, however, please refer to the conservation objectives for the Blackwater Estuary SPA and SAC.
Component SSSIs	▪ Blackwater Estuary SSSI

<table>
<tr><td>Site Name: Blackwater Estuary
Location (Lat and Long):
51 45 13 N
00 51 59 E
JNCC Site Code: UK11007
Size: 4395.15
Designation: Ramsar</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6"></td></tr>
<tr><td></td><td colspan="6">Blackwater Estuary SSSI</td></tr>
<tr><td rowspan="2">SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td>35.42%</td><td>24.62%</td><td>10.80%</td><td>6.75%</td><td>57.83%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat Loss
▪ Erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain.
▪ The situation is worsened with increasing winter storm events,
▪ Hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland.
Nutrient enrichment
▪ Arable agriculture surrounds the coastal wetland and runoff from fields enters the site, leading to nutrient enrichment. This problem will be addressed through the Essex Estuaries candidate SAC scheme of management as well as review of discharge consents under the Habitats Regulations.

Disturbance
▪ Disturbance through recreational activities is being minimised through restrictions on jet ski use.

Drought
▪ The droughts over the last five years have resulted in lowered water tables in grazing marshes leading to aridification. Water is being added from alternative sources to raise the water table.</td></tr>
<tr><td>HRA/AA Studies undertaken that address this site</td><td colspan="6">Habitats Regulations Assessment of the draft Nuclear National Policy, November 2009
The HRA identified Blackwater Estuary SPA/Ramsar as a site which adverse effects on its integrity cannot be ruled out at plan level due to the proximity to Bradwell Nuclear Powerstation.</td></tr>
</table>

Site Name: Blackwater Estuary **Location (Lat and Long):** **51 45 13 N** **00 51 59 E** **JNCC Site Code: UK11007** **Size: 4395.15** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Potential Effects Arising from Development: ▪ Water resources and quality ▪ Habitat (and species) loss and fragmentation ▪ Coastal squeeze ▪ Disturbance (noise, light, visual) ▪ Air quality **East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar. **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss

Site Name: Blackwater Estuary Location (Lat and Long): 51 45 13 N 00 51 59 E JNCC Site Code: UK11007 Size: 4395.15 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	○ Emissions ○ Flooding and Water Use ○ Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County ○ Habitat Loss ○ Emissions ○ Flooding and Water Use ○ Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites ○ Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Crouch and Roach Estuaries **Location (Lat & Long):** **51 38 16 N** **00 40 10 E** **JNCC Site Code: UK11058** **Size (ha): 1735.58** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	The Rivers Crouch and Roach are situated in South Essex. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brick earth and loams with patches of sand and gravel. The intertidal zone along the Rivers Crouch and Roach is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud unlike other estuaries in the county, which, nonetheless, is used by significant numbers of birds. One species is present in internationally important numbers, and three other species of wader and wildfowl occur in nationally important numbers. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants.
Qualifying Features	**Ramsar criterion 2** Supports an appreciable assemblage of rare, vulnerable or endangered species or subspecies of plant and animal including 13 nationally scarce plant species: slender hare's ear *Bupleurum tenuissimum*, divided sedge *Carex divisa*, sea barley *Hordeum marinum*, golden-samphire *Inula crithmoides*, laxflowered sea-lavender *Limonium humile*, curved hard-grass *Parapholis incurva*, Borrer's saltmarsh grass *Puccinellia fasciculata*, stiff saltmarsh grass *Puccinellia rupestris*, spiral tasselweed *Ruppia cirrhosa*, one-flowered glasswort *Salicornia pusilla*, small cord-grass *Spartina maritima*, shrubby seablite *Suaeda vera* and sea clover *Trifolium squamosum*. Several important invertebrate species are also present on the site, including scarce emerald damselfly *Lestes dryas*, the shorefly *Parydroptera discomyzina*, the rare soldier fly *Stratiomys singularior*, the large horsefly *Hybomitra expollicata*, the beetles *Graptodytes bilineatus* and *Malachius vulneratus*, the ground lackey moth *Malacosoma castrensis* and *Eucosoma catoprana*. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 16970 waterfowl (5 year peak mean 1998/99-2002/2003)

<table>
<tr><td>Site Name: Crouch and Roach Estuaries
Location (Lat & Long):
51 38 16 N
00 40 10 E
JNCC Site Code: UK11058
Size (ha): 1735.58
Designation: Ramsar</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">Ramsar criterion 6 - species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):
Species with peak counts in winter:
▪ Dark-bellied brent goose (Branta bernicla bernicla) 2103 individuals, representing an average of 2.1% of the GB population (5 year peak mean 1998/9-2002/3)</td></tr>
<tr><td>Conservation Objectives</td><td colspan="6">▪ None available, however, please refer to the conservation objectives for the Crouch and Roach Estuaries SPA.</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Crouch and Roach Estuaries</td></tr>
<tr><td>SAC Condition Assessment</td><td colspan="6">No condition assessment is currently available for the Crouch and Roach Estuaries Ramsar site, therefore, the condition status of the component SSSI is provided below.</td></tr>
<tr><td></td><td>% Area meeting PSA[16] target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td></td><td colspan="6">Crouch and Roach Estuaries SSSI condition summary[17] (compiled 01 October 2009).</td></tr>
<tr><td></td><td>23.50%</td><td>23.50%</td><td>0.00%</td><td>0.67%</td><td>75.83%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes</td><td colspan="6">Habitat Loss and Fragmentation</td></tr>
</table>

[16] PSA target - The Government's Public Service Agreement (PSA) target to have 95% of the SSSI area in favourable or recovering condition by 2010.
[17] Natural England SSSI condition summary. Available [online]:
http://www.sssi.naturalengland.org.uk/Special/sssi/reportAction.cfm?report=sdrt18&category=S&reference=1002160

Site Name: Crouch and Roach Estuaries Location (Lat & Long): 51 38 16 N 00 40 10 E JNCC Site Code: UK11058 Size (ha): 1735.58 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
existing pressures and trends)	▪ The saltmarshes and mudflats designated under the Essex Estuaries SAC and used by birds are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. ▪ Smothering by sediments driven by storm tides and siltation. **Increased Water Pollution** ▪ Sources of potential water quality pressures include inputs from sewage effluent, agricultural (and urban) run-off, landfill leachates and the atmosphere. Shipping and recreational boating and other offshore activities add to these land-based sources. **Physical Disturbance** ▪ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall) management/ mowing and channel dredging. ▪ Disturbance from water-based and terrestrial recreational activities, such as, abrasion by the action of moored boats and trampling by walkers. ▪ Selective Extraction of minerals (e.g. aggregate dredging) ▪ Low water levels as a result of increased abstraction. **Non-physical Disturbance** ▪ Noise (e.g. boat and plane activity). ▪ Visual presence (e.g. recreational activity). ▪ Some disturbance of feeding and roosting waterfowl is likely through recreational use of sea wall footpaths by dog walkers, bird watchers etc. **Biological Disturbance**

Site Name: Crouch and Roach Estuaries **Location (Lat & Long):** **51 38 16 N** **00 40 10 E** **JNCC Site Code: UK11058** **Size (ha): 1735.58** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Introduction of microbial pathogens. ▪ Introduction of non-native species and translocation. ▪ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).
HRA/AA Studies undertaken that address this site	**East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar. **The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC

Site Name: Crouch and Roach Estuaries Location (Lat & Long): 51 38 16 N 00 40 10 E JNCC Site Code: UK11058 Size (ha): 1735.58 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Castle Point Core Strategy Supporting Paper 3: Habitats Regulations Assessment for the Publication Document July 2009** The HRA identified the supply of water and the treatment of waste water and sewage as key issues in relation to the identified European sites. It recommends additional policies and requirements to ensure that development is aligned more closely with the delivery of water infrastructure and that the need for water infrastructure has been fully assessed through a Water Cycle Study. The HRA concludes that there will be no adverse effects on the integrity of the Crouch and Roach Estuaries SPA. **Southend Airport Runway Extension and Associated Development: Stage 1 Screening Report - Habitats Regulations Assessment August 2009** The HRA identifies that the construction and operation of the proposal has the potential to result in the following impacts: ▪ Construction/ operational noise and disturbance; ▪ Increase in atmospheric pollutants as a result of increased flight numbers; and ▪ Change to surface run-off and hydrology resulting from increase in area of hard surfaces. The HRA Screening identified that the project has the potential to increase disturbance of the qualifying bird species and assemblages of the Crouch and Roach Estuaries SPA/ Ramsar. It concluded that this impact however, is likely to be temporary as typical altitude of flights would remain unchanged from that currently employed, and taking into account the ability of most birds to become habituated to regularly-occurring noise disturbance the increased frequency of these flights would pose little disturbance to the bird species and assemblages. This conclusion was supported by Natural

Site Name: Crouch and Roach Estuaries Location (Lat & Long): 51 38 16 N 00 40 10 E JNCC Site Code: UK11058 Size (ha): 1735.58 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	England in their consultation response to the JAAP. The HRA concluded that no significant effects are likely on the qualifying features of the Crouch and Roach Estuaries SPA as a result of the proposed airport runway extension and associated infrastructure developments, nor will the conservation objectives be compromised. **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance

Site Name: Crouch and Roach Estuaries **Location (Lat & Long):** **51 38 16 N** **00 40 10 E** **JNCC Site Code: UK11058** **Size (ha): 1735.58** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Dengie is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie Peninsula, between the Blackwater and Crouch Estuaries in Essex. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It hosts internationally and nationally important wintering populations of wildfowl and waders, and in summer supports a range of breeding coastal birds including rarities. The formation of cockleshell spits and beaches is of geomorphological interest.
Qualifying Features	**Ramsar criterion 1** ▪ Qualifies by virtue of the extent and diversity of saltmarsh habitat present. Dengie, and the four other sites in the Mid-Essex Coast Ramsar site complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. **Ramsar criterion 2**

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	▪ Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants: sea kale *Crambe maritima*, sea barley *Hordeum marinum*, golden samphire *Inula crithmoides*, lax flowered sea lavender *Limonium humile*, the glassworts *Sarcocornia perennis* and *Salicornia pusilla*, small cord-grass *Spartina maritima*, shrubby sea-blite *Suaeda vera*, and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltei*. The invertebrate fauna includes the following Red Data Book species: a weevil *Baris scolopacea*, a horsefly *Atylotus latistriatus* and a jumping spider *Euophrys browningi*. **Ramsar criterion 3** ▪ This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 43828 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 – species/populations occurring at levels of international importance.** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in winter:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 2000 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)

<table>
<tr><td>Site Name: Dengie
Location Grid Ref:
51 41 26 N
00 57 34 E
JNCC Site Code: UK11018
Size: 3127.23
Designation: Ramsar</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">▪ Grey plover (Pluvialis squatarola) E Atlantic/W Africa – wintering 4582 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3)
▪ Red knot (Calidris canutus islandica) W & Southern Africa1998/9-2002/3) 14528 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in winter:

▪ Bar-tailed godwit (Limosa lapponica lapponica) W Palearctic 2593 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3)</td></tr>
<tr><td>Conservation Objectives</td><td colspan="6">None available, however, please refer to the conservation objectives for the Dengie SPA</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Dengie SSSI</td></tr>
<tr><td></td><td colspan="6">Dengie SSSI</td></tr>
<tr><td rowspan="2">SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td>62.77%</td><td>62.77%</td><td>0.00%</td><td>0.00%</td><td>37.23%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat Fragmentation/Loss
▪ The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain.
▪ The situation is worsened with increasing winter storm events.
▪ Hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland, leading to</td></tr>
</table>

Site Name: Dengie Location Grid Ref: 51 41 26 N 00 57 34 E JNCC Site Code: UK11018 Size: 3127.23 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	a loss of habitats. ▪ This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast which seeks to provide a blueprint for managing the coastline sustainably. **Disturbance** ▪ Increased pressure from boats that previously fished the Wash for cockles. Controls over the fishery have been put in place by Kent and Essex Sea Fisheries Committee. ▪ A management plan for English Nature details a policy of non-intervention to prevent damage to the site from human intervention. This and other management issues will be addressed through the European marine site management scheme. ▪ Bradwell Power Station has a visitor centre that uses the Dengie for guided tours. This could lead to increased recreational pressure.
HRA/AA Studies undertaken that address this site	**Habitats Regulations Assessment of the draft Nuclear National Policy, November 2009** The HRA identified Dengie Estuary SPA/Ramsar as a site which adverse effects on its integrity cannot be ruled out at plan level due to the proximity to Bradwell Nuclear Powerstation. Potential Effects Arising from Development: ▪ Water resources and quality ▪ Habitat (and species) loss and fragmentation ▪ Coastal squeeze ▪ Disturbance (noise, light, visual) ▪ Air quality **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment**

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Screening Report January 2009 The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Dengie **Location Grid Ref:** **51 41 26 N** **00 57 34 E** **JNCC Site Code: UK11018** **Size: 3127.23** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Appropriate Assessment of the Draft South East Plan, 2006 ▪ Development may result in increased volumes of effluent disposal into the Estuary. Some of this may reach the Dengie Ramsar site and lead to a decline in water quality, principally due to increased nutrient inputs. However, given the distance of the site from the points of discharge within the southeast, any contribution is likely to be minor. ▪ May also result in increased recreational pressure on the Ramsar site, due to tourism. However, given the distance of this site from the southeast, any contribution is likely to be minor. ▪ Assessment identified a potential for In-combination effects on Dengie Ramsar/SPA ▪ Assessment concluded that there was no risk of a significant effect on Dengie Ramsar/SPA **East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar.

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Foulness is located on the coast of Essex, on the east coast of England north of the mouth of the Thames estuary. The site is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mudflats and sandflats which support nationally rare and nationally scarce plants, and nationally and internationally important populations of breeding, migratory and wintering waterfowl. Foulness Ramsar includes one of the three largest continuous sand-silt flats in the UK.
Qualifying Features	**Ramsar criterion 1** This site qualifies by virtue of the extent and diversity of saltmarsh habitat present. This and four other sites in the Mid-Essex Coast Ramsar site complex, include a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. **Ramsar criterion 2** The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates. **Ramsar criterion 3** The site contains extensive saltmarsh habitat, with areas supporting full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 82148 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 – species/populations occurring at levels of international importance.**

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Qualifying Species/populations (as identified at designation): **Species with peak counts in spring/autumn:** ▪ Common redshank (*Tringa totanus totanus) 2586 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)* **Species with peak counts in winter:** ▪ Dark-bellied brent goose (*Branta bernicla bernicla) 6475 individuals, representing an average of 3% of the population (5 year peak mean 1998/9- 2002/3)* ▪ Eurasian oystercatcher (*Haematopus ostralegus ostralegus)* Europe & NW Africa –wintering 14674 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3) ▪ Grey plover *(Pluvialis squatarola)* E Atlantic/W Africa -wintering 4343 individuals, representing an average of 1.7% of the population (5 year peak mean 1998/9-2002/3) ▪ Red knot *(Calidris canutus islandica)* W & Southern Africa (wintering) 22439 individuals, representing an average of 4.9% of the population (5 year peak mean 1998/9-2002/3) ▪ Bar-tailed godwit *(Limosa lapponica lapponica)* W Palearctic 4095 individuals, representing an average of 3.4% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	None available, however, please refer to the conservation objectives for the Foulness SPA.
Component SSSIs	▪ Foulness

	Area meeting PSA target	**Area favourable**	**Area unfavourable**	**Area unfavourable no**	**Area unfavourable**	**Area destroyed / part destroyed**

<table>
<tr><td>Site Name: Foulness
Location Grid Ref:
51 34 25 N
00 55 17 E
JNCC Site Code: UK11026
Size (ha): 10932.95
Designation: Ramsar</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td></td><td></td><td>recovering</td><td>change</td><td>declining</td><td></td></tr>
<tr><td></td><td colspan="6">Foulness SSSI (shared with Southend-on-sea Borough)</td></tr>
<tr><td></td><td>78.24%</td><td>77.94%</td><td>0.30%</td><td>2.09%</td><td>19.67%</td><td>0.00%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Much of the area is owned by the Ministry of Defence and is not, therefore, subject to development pressures or public disturbance.

Habitat Loss and Fragmentation
▪ Natural processes are adversely affecting the south-east coastline and saltmarshes are being eroded.
▪ Maintenance of the integrity of the intertidal and saltmarsh habitats of the Mid-Essex Coast Ramsar sites as a whole is being addressed by soft sea defence measures, managed retreat and foreshore recharge.
▪ The saltmarshes and mudflats are under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise.
▪ Smothering by sediments driven by storm tides and siltation.

Disturbance
▪ The cockel beds on the Maplin Sands support internationally important numbers of wading birds: the Kent and Essex Sea Fisheries Committee control the cockle fishery through regulatory orders.

Physical Disturbance
▪ Lower levels of rainfall and changes in drainage for agriculture have led to aridification, although this is compensated for by the addition of sea water.
▪ Offshore aggregate dredging and seismic surveys could possibly adversely affect the Maplin sands, will be addressed through the Essex Estuaries marine Special Area of Conservation (SAC) management scheme, of which Foulness is part.</td></tr>
<tr><td>HRA/AA Studies undertaken</td><td colspan="6">Habitats Regulations Assessment Site Report for Kingsnorth: EN-6: Draft National Policy Statement for Nuclear</td></tr>
</table>

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
that address this site	**Power Generation, November 2009** Taking into account the strategic nature of the plan and the information available, AA at this strategic level cannot rule out potential adverse effects on the Medway Estuary and Marshes SPA/Ramsar, Swale SPA/Ramsar, Benfleet and Southend Marshes SPA/Ramsar, Thames Estuary and Marshes SPA/Ramsar, Foulness SPA/Ramsar and Essex Estuary SAC Potential for negative impacts on: ▪ water resources and quality, ▪ air quality, ▪ habitat and species loss and fragmentation ▪ coastal squeeze and; ▪ disturbance **The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA

Site Name: Foulness Location Grid Ref: 51 34 25 N 00 55 17 E JNCC Site Code: UK11026 Size (ha): 10932.95 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA **Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use

Site Name: Foulness **Location Grid Ref:** **51 34 25 N** **00 55 17 E** **JNCC Site Code: UK11026** **Size (ha): 10932.95** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 24 02 N** **00 40 38 E** **JNCC Site Code: UK11040** **Size: 4684.36** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Medway Estuary and Marshes is located on the north coast of Kent, within the Greater Thames estuary. It is a complex of rain-fed, brackish, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.
Qualifying Features	**Ramsar criterion 2** ▪ The site supports a number of species of rare plants and animals. The site holds several nationally scarce plants, including sea barley *Hordeum marinum*, curved hard-grass *Parapholis incurva*, annual beard-grass *Polypogon monspeliensis*, Borrer's saltmarsh-grass *Puccinellia fasciculata*, slender hare`s-ear *Bupleurum tenuissimum*, sea clover *Trifolium squamosum*, saltmarsh goose-foot *Chenopodium chenopodioides*, golden samphire *Inula crithmoides*, perennial glasswort *Sarcocornia perennis* and one-flowered glasswort *Salicornia pusilla*.

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK11040 Size: 4684.36 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	▪ A total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site. These include a ground beetle *Polistichus connexus*, a fly *Cephalops perspicuus*, a dancefly *Poecilobothrus ducalis*, a fly *Anagnota collini*, a weevil *Baris scolopacea*, a water beetle *Berosus spinosus*, a beetle *Malachius vulneratus*, a rove beetle *Philonthus punctus*, the ground lackey moth *Malacosoma castrensis*, a horsefly *Atylotus latistriatuus*, a fly *Campsicnemus magius*, a solider beetle, *Cantharis fusca*, and a cranefly *Limonia danica*. A significant number of non-wetland British Red Data Book species also occur. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 47637 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 – species/populations occurring at levels of international importance:** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** ▪ Grey plover , *Pluvialis squatarola*, E Atlantic/W Africa – wintering 3103 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/9-2002/3) ▪ Common redshank (*Tringa totanus totanus)* 3709 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3)

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 24 02 N** **00 40 38 E** **JNCC Site Code: UK11040** **Size: 4684.36** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	Species with peak counts in winter: ▪ Dark-bellied brent goose (*Branta bernicla bernicla*) 2575 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3) ▪ Common shelduck (*Tadorna tadorna*) NW Europe 2627 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Northern pintail (*Anas acuta)* NW Europe 1118 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3) ▪ Ringed plover (*Charadrius hiaticula*) Europe/Northwest Africa 540 individuals, representing an average of 1.6% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Red knot (*Calidris canutus islandica)* W & Southern Africa (wintering) 3021 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3) ▪ Dunlin , *Calidris alpina alpina*, W Siberia/W Europe 8263 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3) **Species/populations identified subsequent to designation for possible future consideration under criterion 6.** **Species with peak counts in spring/autumn:** Black-tailed godwit (*Limosa limosa islandica)* Iceland/W Europe 721 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	The Conservation Objectives for this site are, subject to natural change, to maintain the following habitats and geological features in favourable condition (*), with particular reference to any dependent component special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated (SSSI, cSAC, SPA, Ramsar).

<table>
<tr><td>Site Name: Medway Estuary & Marshes
Location Grid Ref (Lat & Long):
51 24 02 N
00 40 38 E
JNCC Site Code: UK11040
Size: 4684.36
Designation: Ramsar</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">Habitat Types represented (Biodiversity Action Plan categories)
▪ Improved Grassland
▪ Fen, Marsh and Swamp
▪ Littoral Sediment
▪ Coastal Lagoon

Geological features (Geological SiteTypes)
N/A

(*) or restored to favourable condition if features are judged to be unfavourable.</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ Medway and Estuary Marshes SSSI</td></tr>
<tr><td></td><td colspan="6">Medway and Estuary Marshes SSSI</td></tr>
<tr><td rowspan="2">SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td>98.84%</td><td>98.84%</td><td>0.00%</td><td>0.68%</td><td>0.00%</td><td>0.48%</td></tr>
<tr><td>Vulnerabilities (includes existing pressures and trends)</td><td colspan="6">Habitat fragmentation/Loss
▪ There is evidence of rapid erosion of intertidal habitat within the site due to natural processes. Research on mudflat recharge using dredging spoil is being investigated as a means of countering the erosion.
▪ Also a threat of erosion from the effects of sea defences development and clay extraction

Physical Disturbance
▪ The intertidal area is vulnerable to disturbance from water borne recreation. This is being addressed as part of an</td></tr>
</table>

Site Name: Medway Estuary & Marshes **Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E** **JNCC Site Code: UK11040** **Size: 4684.36** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
	estuary management plan. ▪ Pressures from proposed transport and industrial developments are being addressed through the planning system and under the provisions of the Habitat Regulations. ▪ The effects of abstraction on the availability of water through abstraction for other land uses and drainage for arable cultivation will be addressed through the consent review process under the Habitats Regulations. ▪ The terrestrial ecosystem is reliant on grazing practices and water management and changes to these may pose a threat.
HRA/AA Studies undertaken that address this site	**Essex County Council Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009** The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK11040 Size: 4684.36 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	○ Flooding and Water Use ○ Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites ○ Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined. **Appropriate Assessment of the Draft South East Plan, 2006** Proposed development could possibly: ▪ Increase recreational pressure given that this site is already under extensive recreational pressure (from waterborne users in addition to walkers, microlight aircraft etc). Difficult to manage. ▪ Contribute to coastal squeeze and thus, loss of habitat ▪ Increase atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats for on which the species of European importance depend. ▪ Result in loss of valuable off-site foraging habitat designated species. ▪ Assessment identifies that there is a risk of a significant effect on the site. **East of England Plan - Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008** The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of

Site Name: Medway Estuary & Marshes Location Grid Ref (Lat & Long): 51 24 02 N 00 40 38 E JNCC Site Code: UK11040 Size: 4684.36 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma
	the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar. **Dartford Borough Council Habitats Regulations Assessment screening of Town Centre AAP: Preferred Options** ▪ Development of new homes in Dartford may result in, increased pollution (atmospheric and water based) as well as greater recreational pressures. Additional recreational pressures including water-based recreation are unlikely to result from the AAP, which includes key policies focused on maintaining and developing Town Centre based leisure and recreation opportunities for the resident and expanding population. ▪ On Environment Agency advice it is not considered that the development of new homes and increased volumes of effluent disposal will exacerbate high nutrient levels leading to adverse effects on sites.

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 29 08 N** **00 35 47 E** **JNCC Site Code: UK11069** **Size: 4838.94** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
Site Description	Thames Estuary and Marshes straddles the Thames Estuary containing part of the north coast of Kent and part of the southern coast of Essex. The site is a complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.
Qualifying Features	**Ramsar criterion 2** ▪ The site supports one endangered plant species and at least 14 nationally scarce plants of wetland habitats. The site also supports more than 20 British Red Data Book invertebrates. **Ramsar criterion 5** **Assemblages of international importance:** **Species with peak counts in winter:** ▪ 45118 waterfowl (5 year peak mean 1998/99-2002/2003) **Ramsar criterion 6 - species/populations occurring at levels of international importance.** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** ▪ Ringed plover (*Charadrius hiaticula*) Europe/Northwest Africa 595 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)

<table>
<tr><td>Site Name: Thames Estuary & Marshes
Location Grid Ref (Lat & Long):
51 29 08 N
00 35 47 E
JNCC Site Code: UK11069
Size: 4838.94
Designation: Ramsar</td><td colspan="6">Habitats Regulations Assessment: Data Proforma</td></tr>
<tr><td></td><td colspan="6">▪ Black-tailed godwit (Limosa limosa islandica) Iceland/W Europe 1640 individuals, representing an average of 4.6% of the population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:
▪ Grey plover (Pluvialis squatarola) E Atlantic/W Africa –wintering 1643 individuals, representing an average of 3.1% of the GB population (5 year peak mean 1998/9-2002/3)
▪ Red knot (Calidris canutus islandica) W & Southern Africa (wintering) 7279 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
▪ Dunlin (Calidris alpina alpine) W Siberia/W Europe 15171 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
▪ Common redshank (Tringa totanus totanus) 1178 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9- 2002/3)</td></tr>
<tr><td>Conservation Objectives</td><td colspan="6">None available, however, please refer to the conservation objectives for the Thames Estuary & Marshes SPA</td></tr>
<tr><td>Component SSSIs</td><td colspan="6">▪ South Thames Estuary And Marshes SSSI
▪ Medway Estuary & Marshes SSSI
▪ Foulness SSSI
▪ Benfleet & Southend Marshes SSSI
▪ Mucking Flats and Marshes SSSI</td></tr>
<tr><td>SAC Condition Assessment</td><td>% Area meeting PSA target</td><td>% Area favourable</td><td>% Area unfavourable recovering</td><td>% Area unfavourable no change</td><td>% Area unfavourable declining</td><td>% Area destroyed / part destroyed</td></tr>
<tr><td></td><td colspan="6">South Thames Estuary And Marshes SSSI</td></tr>
</table>

Site Name: Thames Estuary & Marshes Location Grid Ref (Lat & Long): 51 29 08 N 00 35 47 E JNCC Site Code: UK11069 Size: 4838.94 Designation: Ramsar	Habitats Regulations Assessment: Data Proforma					
	97.63%	95.28%	2.35%	0.59%	1.79%	0.00%
	Medway Estuary & Marshes SSSI					
	98.84%	98.84%	0.00%	0.68%	0.00%	0.48%
	Foulness SSSI					
	78.24%	77.94%	0.30%	2.09%	19.67%	0.00%
	Benfleet & Southend Marshes SSSI					
	73.85%	59.63%	14.22%	18.42%	7.74%	0.00%
	Mucking Flats and Marshes SSSI					
	94.13%	94.13%	0.00%	5.87%	0.00%	0.00%
Vulnerabilities (includes existing pressures and trends)	**Habitat fragmentation/ loss** ▪ There is evidence of coastal squeeze and erosion of intertidal habitat within the site. English Nature is in discussion with the port authority on the role of port dredging in intertidal habitat loss. ▪ The terrestrial part of the site depends on appropriate grazing and management of water. The availability of livestock may be affected by changes in agricultural markets. Evidence suggests that the water supply to grazing marsh has decreased. A water level management plan may address this. **Disturbance** ▪ The intertidal area is also vulnerable to disturbance from water borne recreation. This is being addressed by information dissemination as part of an estuary management plan. ▪ Development pressure can lead to both direct landtake from the site and indirect disturbance and hydrological effects. These effects will be addressed through the Habitats Regulations 1994. **Water Pollution** ▪ Studies by the Environment Agency indicate that the waters in the Thames estuary are hyper-nutrified for nitrogen and phosphorus.					

Site Name: Thames Estuary & Marshes **Location Grid Ref (Lat & Long):** **51 29 08 N** **00 35 47 E** **JNCC Site Code: UK11069** **Size: 4838.94** **Designation: Ramsar**	**Habitats Regulations Assessment: Data Proforma**
HRA/AA Studies undertaken that address this site	**Appropriate Assessment of the Draft South East Plan, 2006** Proposed development could lead to: ▪ Increased recreational pressure lead to increased atmospheric pollution and nitrogen enrichment, resulting in changes to the habitats for on which the species of European importance depend. ▪ Result in loss of valuable off-site foraging habitat designated species. ▪ Contribute to coastal squeeze and thus, loss of habitat. **The HRA (including AA) of proposed changes to Southend on Sea Core Strategy DPD July 2007** The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA ▪ Thames Estuary & Marshes SPA

Appendix 2: Plans and Programmes Review

Regional

1. Draft East of England Plan East of England Regional Assembly 2004

Sub-Regional/ County

2. Essex County Council Local Transport 2006 - 2011
3. Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009
4. The Essex and Southend Waste Local Plan Adopted September 2001
5. Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009
6. Anglian River Basin Management Plan, September 2009
7. Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009
8. The Combined Essex Catchment Abstraction Management Study (CAMS), Feb 2007
9. The Combined Essex Catchment Abstraction Management Study (CAMS) update, March 2008
10. Exceeding Expectations Tourism Growth Strategy for Essex March 2007

Local

11. Basildon District Council Core Strategy Issues paper, 2008
12. Castle Point Borough Council Core Strategy, 2009
13. Chelmsford Borough Council Core Strategy, 2008
14. Maldon District Council Core Strategy, 2009
15. Southend-on-Sea Borough Council Core Strategy, Adopted September 2009
16. Southend-on-Sea Local Transport Plan 2006-2011
17. London Southend Airport Runway Extension and Associated Development, October 2009
18. London Southend Airport & Environs Joint Area Action Plan Preferred Options, 2009

Regional

East of England Plan - The Revision to the Regional Spatial Strategy for the East of England 2008	
Plan Type	**Regional Spatial Strategy**
Plan Owner/ Competent Authority	**East of England Regional Assembly**
Currency	**2001 - 2021**
Region/Geographic Coverage	**Government Office for the East of England**
Sector	**Planning**
Related work HRA/AA	**Habitats Regulations Assessment in response to the Further Proposed Changes consultation May 2008**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Draft spatial strategy to guide development in the East of England for at least the next 20 years to sustain and improve the quality of life for all people who live in, work in, or visit the region, by developing a more sustainable, prosperous and outward-looking region, while respecting its diversity and enhancing its assets. ▪ 60% of development to be on previously developed land. ▪ regeneration, extension and diversification of the region's tourist industry. ▪ support is given to the expansion of Southend Airport to meet local demand and contribute to local economic development. ▪ facilitate the delivery of at least 508,000 net additional dwellings over the period 2001 to 2021. Taking account of completions of 105,550 between 2001 and 2006 the minimum regional housing target 2006 to 2021 is 402,540. ▪ provide a minimum of 127,000 dwellings in Essex, Thurrock and Southend between 2001 and 2021. ▪ improvements to the strategic road network including the A130 and A127.	▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of housing, employment and transport growth. ▪ **Water Pollution** - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ **Water Abstraction** - as a result of proposed development, potential for reduced water levels. ▪ **Land Take** - as a result of proposed development. ▪ Coastal Squeeze ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow. The HRA concluded that water levels and water quality of the Essex Estuaries SAC, and the Crouch and Roach Estuaries SPA/Ramsar Site will not be adversely affected as a result of the growth proposed for the catchment area of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar, and that policies

East of England Plan - The Revision to the Regional Spatial Strategy for the East of England 2008	
▪ access to the region's airports should be managed and enhanced to support development and enable them to contribute to national and regional objectives for economic growth and regeneration ▪ Essex and Southend should plan for the following quantity of waste during the life of the plan - 9,120 annual tonnages of waste (thousand tonnes). ▪ Essex, Southend and Thurrock should maintain 4.55 million tonnes pa of sand and gravel during the life of the plan.	SS3, H1, WAT2, ETG1, ETG4, ETG5 and CH1 of the draft East of England RSS will have no effect on the integrity of the Essex Estuaries SAC, the Crouch and Roach Estuaries SPA/Ramsar.

Sub-Regional/ County

Essex County Council Local Transport Plan 2006 - 2011	
Plan Type	**Local Transport Plan**
Plan Owner/ Competent Authority	**Essex County Council**
Currency	**2006 - 2011**
Region/Geographic Coverage	**Essex County Council's administrative boundary**
Sector	**Transport**
Related work HRA/AA	**None**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Essex LTP is meant to provide a roadmap for, and integrate approaches to, sustainable transport policy across the county. This will cascade downwards national and regional policy and set a framework for Local Development Frameworks. Some of its key objectives are the following: ▪ Ensure consistency with national policies for transport, aviation and ports ▪ Achieve a sustainable approach for all modes of transport ▪ Support the initiatives for both the Thames Gateway and M11/Stansted Growth Areas ▪ Minimise the environmental impact of travel ▪ Deliver more integrated patterns of land-use, movement and development ▪ Improve social inclusion and accessibility ▪ Increase the regeneration of town centres ensuring that current deficiencies are resolved and development requirements met **Rural Road Hierarchy Development** Within rural areas, lower categories of road hierarchy will be	▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of increased traffic. ▪ **Water Pollution** - through increased atmospheric pollution. ▪ **Land Take** - as a result of proposed development. ▪ Coastal Squeeze ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow.

Essex County Council Local Transport Plan 2006 - 2011	
maintained to serve as the main access points to substantial rural populations and to act as distributors between borough/district areas leading to towns and higher categories of road. Other than in exceptional circumstances, it is not proposed to undertake major improvements to these roads or to plan for village bypasses. **Inter Urban** The County Council's highest priority for improvements to the inter urban infrastructure is the corridors of A120 (M11-A12), the A12 (M25-A120 Marks Tey) and A130 (A12 to A127 and A130/A13 Sadlers Farm Junction). Planned improvements being promoted by the County Council are: ▪ A130 (A12 to A127) ▪ A131 Great Leighs Bypass ▪ A136 Parkeston Bypass (Harwich) ▪ A130/A13 Sadlers Farm Junction ▪ A120 (M11 Stansted Airport to Braintree) ▪ A120 (M11-Stansted Airport slip roads) ▪ A12 Hatfield Peverel to Witham Link Road	

Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009	
Plan Type	**Minerals Development Document**
Plan Owner/ Competent Authority	**Essex County Council**
Currency	**2026**

Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009	
Region/Geographic Coverage	**Essex County Council administrative boundaries**
Sector	**Minerals**
Related work HRA/AA	**Minerals Development Documents: Issues an Options: Appropriate Assessment Screening Report January 2009**
Document Details	**Potential impacts that could cause 'in-combination' effects**
Essex County Council is required to produce a Development Plan Document for minerals, which plans for the future provision of minerals setting out how the demand for minerals will be met between now and 2026. The 'Minerals Development Document' (MDD) will set out the vision, objectives, strategy to meet the mineral supply hierarchy and thematic and development control policies as well as the preferred sites to meet the future requirements. All of these issues and the options available were raised in the most recent consultation on the Plan held in January 2009 the "Minerals Development Document Further Issues and Options Paper". This Site Allocations Issues and Options Paper, sets out 9 new suggested extraction sites and 7 revised sites boundaries.	The HRA identified the following potential impacts for each Option: ▪ **Aggregate Recycling** o Habitat Loss o Emissions o Human Disturbance ▪ **Option 1 -** Predominantly Extensions to Existing Extraction Sites o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 2 -** Dispersed Spread of Sites Across the County o Habitat Loss o Emissions o Flooding and Water Use o Human Disturbance ▪ **Option 3 -** Concentrated Supply of Sites with Some Dispersed Sites o Flooding and Water Use The screening report concluded that due to the large number of European sites and the potential impact of minerals and waste sites, the screening stage of the Appropriate Assessment should be carried out again, with greater site-specific detail, as the Preferred Options for site allocations are determined.

<table>
<tr><th colspan="2">The Essex and Southend Waste Local Plan Adopted September 2001</th></tr>
<tr><td>Plan Type</td><td>Waste Local Plan</td></tr>
<tr><td>Plan Owner/ Competent Authority</td><td>Essex County Council and Southend Unitary Authority</td></tr>
<tr><td>Currency</td><td>2010</td></tr>
<tr><td>Region/Geographic Coverage</td><td>Essex County Council and Southend Unitary Authority administrative boundaries</td></tr>
<tr><td>Sector</td><td>Waste</td></tr>
<tr><td>Related work HRA/AA</td><td>None</td></tr>
<tr><td>Document Details</td><td>Potential impacts that could cause ‘in-combination’ effects</td></tr>
<tr><td>The Essex and Southend Waste Local Plan sets out waste planning policies and proposals in accordance with the governments principles of sustainability. Six key waste management sites are identified and the plan outlines how planning applications for waste management facilities are considered.

Preferred locations for waste management

District/ Borough — Location
Braintree — Rivenhall Airfield, Silver End
Colchester — Land East Of Warren Lane, Stanway
Whitehall Road, Colchester
Epping Forest — North Weald Airfield, North Weald Bassett
Basildon — Courtauld Road, Basildon
Chelmsford — Sandon, Chelmsford

The Waste Local Plan policies have been saved until the adoption of the WDD, which is likely to be in 2013.</td><td>Overarching Development Pressures

Recycling
Air Pollution/ Disturbance
▪ Transport and energy emissions generated by collection, sorting and processing
▪ Dust, noise and odour associated with industrial process
Composting
Air/ Water Pollution, Introduced/Invasive Species
▪ Odour, litter, possible vermin generation
▪ Release of spores [non-native], requirement for buffer zones (at least 250 metres between composting operations and sensitive receptors)
▪ Production of liquid pollutant
▪ Potential for combustion
Mechanical Biological Treatment (MBT)
Air Pollution, Land Take, Hydrology
▪ Emissions, traffic impacts, land take and wider environmental impacts analogous with industrial process
▪ Processes produce residue</td></tr>
</table>

The Essex and Southend Waste Local Plan Adopted September 2001	
	Refuse Derived Fuel (energy from waste) Air Pollution ▪ Emission concerns, particulates and potentially dioxins **Anaerobic Digestion (energy from Waste)** Air/Water Pollution ▪ Emissions to air – odour (during collection, transport and pre-treatment) ▪ Wastewater – potential for high concentrations of metals, dissolved nitrogen and organic material **Incineration with Energy Recovery** Air/ Water Pollution ▪ Noise, dust, traffic, visual amenity, potential to impact fauna and flora ▪ Deposition of substances on surface water ▪ Solid, liquid emissions ▪ Gaseous emissions include odour, acid gas, heavy metals, particulates, organic compounds ▪ Ash residues comprising fine particles, [need to landfill ash/ scrap] dioxins, heavy metals salts, unreacted lime and carbon ▪ Contamination, accumulation of toxic substance (food chain)] **Landfill & Landraise** Air/ Water Pollution, Invasive Species, Land Take ▪ Methane and carbon monoxide emissions ▪ Leachate, salts, heavy metals, biodegradable and persistent organics ▪ Accumulation of hazardous substances in soil ▪ Topography alteration, visual intrusion ▪ Soil occupancy, prevention of other land uses ▪ Attraction of vermin ▪ Contamination, accumulation of toxic substances ▪ Potential exposure to hazardous substances ▪ Impact on surface water runoff, flood risk

The Essex and Southend Waste Local Plan Adopted September 2001	

Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009	
Plan Type	**Water Cycle Study**
Plan Owner/ Competent Authority	**Basildon District Council; Castle Point Borough Council; Rochford District Council; Southend-on-Sea Borough Council; and Essex County Council.**
Currency	**2009**
Region/Geographic Coverage	**South Essex**
Sector	**Water**

Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009	
Related work HRA/AA	**None**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The overall objective is to provide an integrated approach to managing flood risk, water supply, and wastewater infrastructure in the study area, while being mindful of the environmental constraints. This is to ensure that all the elements of the water cycle and water infrastructure can be addressed as part of the delivery of the long term planning provision for growth in the area. ▪ The Essex Thames Gateway area does not have sufficient raw water resources to supply existing development; ▪ This means that there is limited water is available for further abstraction from surface or groundwater sources and therefore further transfer of water resources will be required to supply water to new developments within the Essex Thames Gateway area; ▪ Increased storage at Abberton Reservoir is expected to meet future water demand and the commensurate increase in abstraction and transfer from the Ely-Ouse transfer scheme, which if approved will come online in 2014. Until the scheme is in place and operational, there will be a deficit in available water resources during drought years in Essex Thames Gateway area; ▪ There are no immediate limitations on supply infrastructure pipelines, reservoirs, water treatment works or pumping stations. ▪ In the majority of cases there is sufficient treatment capacity and capacity in the network to allow planned development in the study area up to 2015. Development beyond this in most cases will require upgrades to the treatment capacity of several of the WWTW and the construction of new strategic sewer mains to service new development; this will need to be defined and assessed in the next stage of the WCS.	The Water Cycle Study identifies that there is "***unlikely to be any increase in existing abstractions from surface or groundwater sources and as such it is possible to screen out impacts to the sites within the study area as a result of water resources***." However, there is still the **potential for discharges of wastewater to have an impact** on European sites.

Anglian River Basin Management Plan September 2009	
Plan Type	**River Basin Management Plan**
Plan Owner/ Competent Authority	**Environment Agency**
Currency	**2009 - 2015**
Region/Geographic Coverage	**Anglian River Basin District**
Sector	**Water**
Related work HRA/AA	**Habitats Regulations Assessment will be available in December 2009**[1]
Document Details	**Potential impacts that could cause 'in-combination' effects**
The draft River Basin Management Plan describes the main issues for the Anglian river basin district and highlights some key actions proposed for dealing with them set out in brief the actions the EA propose should be taken. The document sets out detailed proposals for the next six years and beyond. Some key actions for the Combined Essex Catchment: ▪ Installation of elver passes to provide habitat improvement in river	The HRA concluded that the River Basin Management Plan is unlikely to have any significant negative effects on any Natura 2000 sites and therefore does not require further assessment under the Habitats Regulations. This conclusion relied upon 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.

[1] EA Website: Anglian River Basin Management Plan documents submitted to Ministers for approval: http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/anglian/Intro.aspx

Anglian River Basin Management Plan September 2009	
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.	

Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009	
Plan Type	**Water Resource Management Plan**
Plan Owner/ Competent Authority	**Essex and Suffolk Water**
Currency	**2010 - 2025**
Region/Geographic Coverage	**Essex and Suffolk Resource Zones**
Sector	**Water**
Related work HRA/AA	**Not available**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The Water Resources Management Plan sets out how Essex and Suffolk Water propose to ensure that there is sufficient security of water supplies to meet the anticipated demands of its customers over the 25-year planning period from 2010 to 2035. **Essex Resource Zone** For the Essex resource the final planning solution to address the current and predicted future deficits in the balance of supply is summarised as follows: ▪ Universal Metering by 2020 ▪ Dagenham Supply Pipe Replacement ▪ Generic Mains Replacement	HRA work undertaken on the WRMP only identified the Abberton Scheme as having the potential to have likely significant effects on European sites, namely the Ouse Washes, The Wash, the Stour Estuary and Abberton Reservoir. The HRA concluded that the scheme would not have likely significant effects on the Ouse Washes, The Wash and the Stour Estuary. Further studies were undertaken and helped to conclude that the scheme would not have significant adverse effects on the integrity of the site and so an Appropriate Assessment was not required. Indeed, Natural England stated that, "In our view, the Abberton Reservoir Scheme is likely to have a significant positive effect on the conservation status of the migratory and wintering waterfowl assemblages in the short-, medium- and long-term future of the statutorily designated site." The Environment Agency has advised Essex and Suffolk Water of those licences

Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009	
▪ Abberton Scheme ▪ Implementation of water efficiency measures employed to meet Ofwat water efficiency targets The draft WRMP states that implementing the final planning solutions will substantially reduce the risk of needing to implement restrictions or of experiencing supply failures under a sustained period of dry weather.	that have the potential to be affected by sustainability changes as a result of the review of consents process. The EA have provided ESW with indicative and definite sustainability changes. The WRMP identifies that if changes were included as reductions then: ▪ In the Essex zone the deficit identified from 2010 onwards would be increased by 5 Ml/d. This would mean that the case for implementation of water resource management options to address the total deficit would be even stronger.

Combined Essex Catchment Abstraction Management Strategy (CAMS) Feb 2007 Combined Essex Catchment Abstraction Management Strategy Update March 2008	
Plan Type	**Catchment Abstraction Management Plan**
Plan Owner/ Competent Authority	**Environment Agency**
Currency	**2014**
Region/Geographic Coverage	**Combined Essex Catchment, which includes the South Essex Catchment**
Sector	**Water**
Related work HRA/AA	**HRA of the Review of Consents Process**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The document sets out how the Environment Agency Wales will manage water abstraction from the Combined Essex Catchment until 2009. The strategy provides the framework for any decision on an abstraction license application. The South Essex Catchment has been split into 5 Water Resource Management Units (WRMU). The CAMS update assesses: ▪ WRMU 1 as 'water available' ▪ WRMU 2 as 'water available' ▪ WRMU 3 as 'water available'	Under the Habitats Regulations the Environment Agency has a duty to assess the effects of existing abstraction licences and any new applications to make sure they are not impacting on internationally important nature conservation sites. Water efficiency is also tested by the EA before a new license is granted. If the assessment of a new application shows that it could have an impact on a SAC/SPA the EA will have to follow strict rules in setting a time limit for that license.

Combined Essex Catchment Abstraction Management Strategy (CAMS) Feb 2007 Combined Essex Catchment Abstraction Management Strategy Update March 2008	
▪ WRMU 4 as 'no water available' ▪ WRMU 5 as 'no water available'	

Exceeding Expectations Tourism Growth Strategy for Essex, March 2007	
Plan Type	**Tourism Growth Strategy**
Plan Owner/ Competent Authority	**The Tourism Network**
Currency	**N/A**
Region/Geographic Coverage	**Essex**
Sector	
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
VISION The vision for this Strategy is that over the next five years increased visitor spend within Essex will support a vibrant economy and that an improving and expanding visitor offer will not only make Essex a great place to visit, but also a great place to live and work. Essex will become: ▪ An area where people visit rather just travel through; ▪ A destination of choice for people in London and the South East for a high quality short break or weekend away; ▪ Known for its cultural offering, activity and special interest tourism; ▪ Known as an accessible and affordable destination for conferences and meetings and an alternative to London. **THE STRATEGIC AIMS**	The HRA found that the vision and the strategic aims of the document have the potential for significant effects on the county of Essex. Tourism can lead to a number of in-combination effects which may adversely effect the Natura 2000 sites located in Essex. The increased volume of traffic can decrease air quality, increase light and noise pollution and cause disturbance in the surrounding area. Further disturbance can be caused from visitors entering into protected sites for leisure activities. Tourism can also lead to an increase in development which in turn would lead to habitat loss for species living in settlement peripheries.

Exceeding Expectations Tourism Growth Strategy for Essex, March 2007	
1. Increase the value of tourism to Essex by 4% per annum to over £2,000,000,000 within 5 years. 2. To create an additional 7,000 jobs within 5 years	

Local

Basildon District Council Core Strategy Issues paper, 2009	
Plan Type	**Core Strategy, Development Plan Document**
Plan Owner/ Competent Authority	**Basildon District Council**
Currency	**N/A**
Region/Geographic Coverage	**Basildon District Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
The core strategy is at an early stage of development and as such not specific policies have been produced. There the broad aims are listed below. **Housing** ▪ 4,886 units, the location of which, in broad terms, remains to be identified in the Core Strategy. **Climate Change and renewable energy** ▪ The draft RSS sets a target for the region of a minimum of 1,192 megawatts of electricity generated by renewable energy methods by 2010, with a minimum of 4,250 megawatts by 2020. **Employment** ▪ 8,800 of the expected 11,000 jobs (named in the RSS) for the period 2001 to 2021 had already been created by 2005. The remainders are likely to be created over the next few years through developments in the town centres and continuing trends in intensification of land use in the business estates.	Due to the very limited information provided in the current iteration of the Basildon Core Strategy, it was difficult to examine the in-combination effects that could occur. However, there is a proposal for nearly 5,000 houses, and although the areas of development are not defined, this level of construction will bring a number of negative effects for the surrounding areas. ▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of housing, employment and transport growth. ▪ **Water Pollution** - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ **Water Abstraction** - as a result of proposed development, potential for reduced water levels. ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow. ▪ **Land Take** - as a result of proposed development.

Basildon District Council Core Strategy Issues paper, 2009	
	▪ Coastal Squeeze

Castle Point Borough Council Core Strategy, 2009	
Plan Type	**Core Strategy, Development Plan Document**
Plan Owner/ Competent Authority	**Castle Point Borough Council**
Currency	**N/A**
Region/Geographic Coverage	**Castle Point Borough Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
Housing ▪ 5,000 new homes in Castle Point between 2001 and 2026 that are well integrated with community service locations. ▪ At least 70% of new homes on previously developed land ▪ Canvey Town Centre – 400 homes ▪ Canvey seafront – 150 homes ▪ Hadleigh Town Centre – 500 homes ▪ Manor Trading Estate – 200 homes ▪ The Point Industrial Estate – 150 homes ▪ Land to the East of Canvey Road – 400 homes ▪ Castle View School will be redeveloped – 50 homes	▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of housing, employment and transport growth. ▪ **Water Pollution** - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ **Water Abstraction** - as a result of proposed development, potential for reduced water levels. ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow.

Castle Point Borough Council Core Strategy, 2009	
▪ Land to the north of Kiln Road – 250 homes ▪ 650 new homes on PDL in Canvey Island between 2008-2006 ▪ 800 new homes on PDL in Benfleet, Hadleigh and Thundersley between 2008-2006 **Employment** ▪ At least 2,500 additional jobs in Castle Point between 2001 and 2026. ▪ South West Canvey – 18ha of employment land ▪ Manor Trading Estate – 4ha of employment land ▪ Rayleigh Weir – 3ha of employment land **Transport** Improvements to public transport provision in Castle Point including: ▪ Delivery of the A13 Passenger Transport corridor through Castle Point by 2011; ▪ Extension of similar Passenger Transport corridor features from the A13 to Canvey Island by 2016; ▪ The delivery of the South Essex Rapid Transit project with connections to the Borough by 2021. Improvements to opportunities for walking and cycling in Castle Point including: ▪ Delivery National Cycle Network Routes, and Greenways identified in the Green Grid Strategy; and ▪ Work with ECC to identify and deliver, or improve existing footpaths and cycle routes, and make roads safer for pedestrians and cyclists.	▪ **Land Take** - as a result of proposed development. ▪ Coastal Squeeze

Chelmsford Borough Council Core Strategy, 2008	
Plan Type	**Core Strategy, Development Plan Document**
Plan Owner/ Competent Authority	**Chelmsford Borough Council**
Currency	**N/A**
Region/Geographic Coverage	**Chelmsford Borough Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
Housing ▪ 700 new homes per annum during the period 2001-2021 ▪ Provision is made for a minimum increase of 14,000 dwellings (net) in the Borough in the period 2001-2021 ▪ Borough Council's Housing Trajectory, indicates that a total of 16,170 new dwellings will be delivered in the Plan period **Economic** ▪ 9,600 new jobs in the period 2001-2021 ▪ extend the primary shopping area to accommodate the identified need for retail growth of up to 100,000 sq. m. **Transport** ▪ Chelmsford North-East By-pass and Cross Valley Link Road ▪ New Railway Station north-east of Chelmsford ▪ Capacity improvements at Chelmsford Railway Station ▪ Transport links between new neighbourhoods and Chelmsford Town Centre ▪ The encouragement of public transport use and sustainable ▪ Additional Park and Ride sites to serve Chelmsford ▪ Bus Priority and rapid transit measures	▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of housing, employment and transport growth. ▪ **Water Pollution** - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ **Water Abstraction** - as a result of proposed development, potential for reduced water levels. ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow. ▪ **Land Take** - as a result of proposed development. ▪ Coastal Squeeze

Maldon District Council Core Strategy, 2009	
Plan Type	**Core Strategy, Development Plan Document**
Plan Owner/ Competent Authority	**Malden District Council**
Currency	**N/A**
Region/Geographic Coverage	**Malden District**
Sector	**Planning**
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
Housing ▪ The Council will allocate deliverable housing sites to supply 2,400 new dwellings between 2001 and 2021 as required by the East of England Plan (GO-East, 2008). ▪ An additional 600 new units between 2021-2026 (a total of 3,000 units 2001 – 2026) ▪ New housing development will be focused within the Strategic Housing Locations of Maldon, Heybridge, Burnham-on-Crouch and Southminster. ▪ If located within villages, housing must be within the development boundary. **Economic** Employment Allocations will be maintained for the following sites up to 2026: ▪ The Causeway, Maldon ▪ Wycke Hill, Maldon ▪ West station Industrial Park, Maldon ▪ Burnham Business Park, Burnham-on-Crouch ▪ Springfield Industrial Estate, Burnham-on-Crouch	The Malden District Core Strategy, at this stage of its development, is yet to allocate specific amounts of employment growth but has allocated the proposed housing development. The proposed housing development will have a number of different effects: ▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of housing, employment and transport growth. ▪ **Water Pollution** - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ **Water Abstraction** - as a result of proposed development, potential for reduced water levels. ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow. ▪ **Land Take** - as a result of proposed development. ▪ Coastal Squeeze Development in Malden town in particular has the potential for a negative effect due to its proximity to Blackwater estuary SPA/Ramsar. With increase housing

Maldon District Council Core Strategy, 2009	
▪ Station Approach Industrial Area, Burnham-on-Crouch ▪ Oval Park, Langford ▪ Water Works, Langford ▪ Bard wells Yard, Cold Norton ▪ Maple dean Industrial Estate, Latchingdon ▪ Mayfair Industrial Estate, Latchingdon ▪ Mayland Industrial Estate, Mayland ▪ Hall Road Estate, Southminster ▪ Scott's Hill, Southminster ▪ Beckingham Business Park, Tolleshunt Major ▪ Wood rolfe Road, Tollesbury Developments within Employment Allocations will be limited to office, industrial, warehousing and other B-class uses as stated in the Use Class Order. Any proposal for new office development exceeding 2,500 m^2 of net floorspace within employment allocations will be in or around Maldon and Heybridge employment areas. **Accessibility** All new development must: ▪ be located close to and have ready access to areas with an established transport network and public transport services so as to reduce reliance to travel by private car; ▪ not have a detrimental impact on the existing main road networks; ▪ seek to assist and contribute to the provision and maintenance of infrastructures, transport facilities and resources to support public transport services; ▪ Provide and/or enhance safe and convenient dedicated footpaths	development, economic expansion and tourism promotion there is a great potential for disturbance, pollution and land take on the SPA/Ramsar site.

Maldon District Council Core Strategy, 2009	
for pedestrians, including those with mobility difficulties and cyclists that enhance connectivity and can be used by all; ▪ Improve accessibility to buildings, streets and public spaces for all users especially for those with mobility impairments; ▪ Where appropriate, provide green travel plans together with implementation and monitoring strategies that aim to minimise the need to travel and show a preference for more environmental friendly choices; ▪ Provide adequate parking facilities, especially for mobility equipment and bicycles, in accordance with Parking Standards to be agreed by the Council; and, ▪ Take into account the cumulative impact they would have and where appropriate be accompanied by a Transport Statement. ▪ Major developments should be supported by a Transport Assessment, which will take into account any potential impacts of transport and assess measures to improve access by public transport, walking and cycling.	

Southend-on-Sea Borough Council Core Strategy Adopted, December 2007	
Plan Type	**Local Development Framework**
Plan Owner/ Competent Authority	**Southend-on-Sea Borough Council**
Currency	**2021**
Region/Geographic Coverage	**Southend-on-Sea Borough Council administrative boundaries**
Sector	**Planning**
Related work HRA/AA	**The HRA (including AA) of proposed changes to Southend-on-Sea Core Strategy DPD July 2007**
Document Details	**Potential impacts that could cause 'in-combination' effects**

Southend-on-Sea Borough Council Core Strategy Adopted, December 2007	
The Core Strategy forms part of the Southend-on-Sea Local Development Framework and provides the vision, objectives and planning strategy for the spatial development of the whole Borough of Southend-on-Sea until 2021, including the distribution of growth and the policy context for a 10 year housing supply. **Housing and Employment Growth** The primary focus of regeneration and growth will be in Southend Town Centre and Central Area - to provide for 6,500 new jobs and providing for at least 2,000 additional homes in conjunction with the upgrading of strategic and local passenger transport accessibility, including development of Southend Central and Southend Victoria Stations as strategic transport interchanges and related travel centres. In addition, appropriate regeneration and growth will be focussed in the following locations: ▪ Seafront - to enhance the Seafront's role as a successful leisure and tourist attraction and place to live, and make the best use of the River Thames, subject to the safeguarding of the biodiversity importance of the foreshore. ▪ Shoeburyness - to provide an additional 1,500 jobs and 1,400 additional dwellings. ▪ Priority Urban Areas – these comprise: a. The District Centres of Westcliff (Hamlet Court Road) and Leigh (Leigh Broadway, Elm Road and Rectory Grove), the Southchurch Road shopping area, and the West Road/Ness Road shopping area of Shoebury; b. The main Industrial/employment areas as identified on the Key Diagram, and c. The Cluny Square Renewal Area. Provision is made for 3,350 net additional dwellings between 2001	▪ **Disturbance** - as a result of development near/ adjacent to European sites, including: o Recreation o Light Pollution o Noise Pollution ▪ **Atmospheric Pollution** - generated as a result of housing, employment and transport growth. ▪ **Water Pollution** - increased pressure on sewerage capacity and an increase in non-permeable surfaces. ▪ **Water Abstraction** - as a result of proposed development, potential for reduced water levels. ▪ **Land Take** - as a result of proposed development. ▪ Coastal Squeeze ▪ **Modified Drainage** - as a result of proposed development altering surface and groundwater flow. The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required. The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination: ▪ Benfleet and Southend Marshes SPA ▪ Foulness SPA and ▪ Essex Estuaries SAC ▪ Crouch and Roach Estuaries SPA

Southend-on-Sea Borough Council Core Strategy Adopted, December 2007	
and 2011 and for 3,150 net additional dwellings between 2011 and 2021. Provision is made for not less than 6,500 net additional jobs by 2011, and not less than 13,000 net additional jobs by 2021, distributed as follows: Town Centre and Central Area 6,500 Shoeburyness 1,500 Seafront 750 Priority Urban Areas 2,750 Intensification 1,500 **TOTAL** **13,000** **Transport** ▪ Improvements to the A127/A1159 east-west strategic transport and freight corridor including junction improvements at Progress Road, Kent Elms, The Bell, Cuckoo Corner, Sutton Road, Fairfax Drive, East/West Street and Victoria Circus; ▪ Improving accessibility to key development opportunity sites, including improved access to Shoeburyness and London Southend Airport to support the potential of the Airport to function as a catalyst for economic growth; ▪ Providing for the development of high quality transport interchanges at Southend and the key urban interchanges at Leigh Railway Station, Shoeburyness Railway Station, Southend Hospital and London Southend Airport;	▪ Thames Estuary & Marshes SPA

Southend Local Transport Plan 2006-2011	
Plan Type	**Transport Plan**
Plan Owner/ Competent Authority	**Southend Borough Council**
Currency	**N/A**
Region/Geographic Coverage	**Southend Borough**
Sector	**Planning**
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
Shared Objectives ▪ Tackling congestion by the more efficient use of road capacity; providing for quality public transport; placing greater emphasis on travel plans and 'smarter choices' of travel; and improving conditions for motorists, cyclists, pedestrians and motorists. Both in the Borough and cross boundary with Essex. ▪ Delivering Accessibility by working with local groups to improve and encourage access to places of work, learning, health care, shopping and leisure services; and encourage sustainable modes of transport, especially for people from disadvantaged groups and areas in the town. ▪ Providing for Safer Roads by taking forward the Southend Road Safety Strategy in partnership, improving road and bridge maintenance; slower speeds within Environmental Rooms and near schools; road safety measures; improved safety for cyclists and pedestrians; and safety awareness, particularly amongst children. ▪ Achieving Better Air Quality by reducing congestion, driver distances travelled and number of vehicle trips made. ▪ Achieving a Better Quality of Life by addressing wider quality of life issues including a quality public realm, landscaping, safer communities, health and reduction in traffic noise **Local Objectives**	

Southend Local Transport Plan 2006-2011	
▪ Regeneration of Southend by Improving the Economy by promoting and supporting sustainable economic growth in appropriate locations ▪ Achieving an Efficient Transport System by ensuring that land use and transport (all modes) planning are integrated. ▪ Raising Community Awareness by publicising the effects of continuing traffic growth and the benefits and availability of alternative transport modes. ▪ Improving the Highway by pursuing effective maintenance procedures that achieve value for money solutions whilst keeping the quality of life and urban renaissance objectives by improving the street scene.	

London Southend Airport Runway Extension and Associated Development Oct 2009	
Plan Type	**Planning Application**
Plan Owner/ Competent Authority	**London Southend Airport Company Ltd**
Currency	**N/A**
Region/Geographic Coverage	**London Southend Airport Boundary**
Sector	**Planning**
Related work HRA/AA	**Stage 1 Screening Report - Habitats Regulation Assessment August 2009**
Document Details	**Potential impacts that could cause 'in-combination' effects**
The planning application seeks permission for the following: ▪ Runway extension (approx 300m plus 80m starter strip) and repositioning of landing lights; ▪ Diversion of Eastwoodbury Lane as this currently crosses the site of the proposed runway extension; ▪ Alterations to the pedestrian and vehicular access to St	The HRA Screening identified that the project has the potential to increase disturbance of the qualifying bird species and assemblages of the Crouch and Roach Estuaries SPA/ Ramsar. It concluded that this impact however, is likely to be temporary as typical altitude of flights would remain unchanged from that currently employed, and taking into account the ability of most birds to become habituated to regularly-occurring noise disturbance the increased frequency of these flights would pose little disturbance to the bird species and assemblages.

London Southend Airport Runway Extension and Associated Development Oct 2009	
Laurence and ▪ All Saints Church, and removal and reinstatement of part of the churchyard wall ▪ Drainage facilities for the extended runway and road diversion; ▪ Demolition of four cottages on the south side of the runway extension area, and an additional two on the north side.	This conclusion was supported by Natural England in their consultation response to the JAAP.

London Southend Airport & Environs Joint Area Action Plan Preferred Options, February 2009	
Plan Type	**Area Action Plan**
Plan Owner/ Competent Authority	**Rochford District Council** **Southend-on-Sea Borough Council**
Currency	**N/A**
Region/Geographic Coverage	**London Southend Airport Boundary**
Sector	**Planning**
Related work HRA/AA	
Document Details	**Potential impacts that could cause 'in-combination' effects**
The shared Vision for the future development of London Southend Airport and its environs (i.e. the JAAP) is: *'An area that realises its potential as a driver for the sub-regional economy, providing significant employment opportunities and ensuring the quality of life for its residents and workers. To achieve this, the area's assets and opportunities for employment need to be supported and developed'* The objectives are: ▪ Creation of sustainable and high value employment and other land uses within the study area; ▪ Maximising the economic benefits of a thriving airport and related	Airports can increase disturbance to wildlife in the surrounding area. Considering that Southend airport is in close proximity to the Crouch and Roach estuaries SPA/Ramsar there is the potential for a negative impact from disturbance and also bird strikes. However, the Area Action Plan objectives do not specifically aim to expand the airport, meaning that the impact upon the surrounding wildlife is likely to remain at a similar level to at present.

London Southend Airport & Environs Joint Area Action Plan Preferred Options, February 2009	
activity; ▪ Ensuring appropriate improvements in sustainable transport ▪ accessibility and facilities; ▪ Ensuring a high quality environment for residents whether expressed through noise pollution management or protection of green space; ▪ Maximum return on public investment through attracting inward investment; and ▪ Efficient use of existing employment land resources.	

Appendix 3: Screening Matrix

Policy Screening: Categorising the Potential Effects of the Plan	
Criteria Category	**Rationale**
Category A: No negative effect	
A1	Options/ policies that will not themselves lead to development e.g. because they relate to design or other qualitative criteria for development, or they are not a land use planning policy.
A2	Options/ policies intended to protect the natural environment, including biodiversity.
A3	Options/ policies intended to conserve or enhance the natural, built or historic environment, where enhancement measures will not be likely to have any negative effect on a European site.
A4	Options/ policies that positively steer development away from European sites and associated sensitive areas.
A5	Options/ policies that would have no effect because no development could occur through the policy itself, the development being implemented through later policies in the same plan, which are more specific and therefore more appropriate to access for their effects on European Sites and associated sensitive areas.
Category B: No significant effect	
B	Options/ policies that could have an effect but would not be likely to have a significant (negative) effect on a European site (alone or in-combination with other plans or projects) because the effects are trivial or 'de minimis' even if combined with other effects.
Category C: Likely significant effect alone	
C1	The option, policy could **directly affect** a European site because it provides for, or steers, a quantity or type of development onto a European site, or adjacent to it.
C2	The option, policy could **indirectly affect** a European site e.g. because it provides for, or steers, a quantity or type of development that may be very close to it, or ecologically, hydrologically or physically connected to it or it may increase disturbance as a result of increased recreational pressure.
C3	Proposals for a **magnitude of development** that, no matter where it is located, the development would be likely to have a significant effect on a European site.
C4	An option, or policy that makes provision for a quantity/ type of development (and may indicate one or more broad locations e.g. a particular part of the plan area), but the effects are uncertain because the detailed location of the development is to be

Policy Screening: Categorising the Potential Effects of the Plan	
Criteria Category	**Rationale**
	selected following **consideration of options in a later, more specific plan**. The consideration of options in the later plan will assess potential effects on European Sites, but because the development could possibly affect a European site a significant effect cannot be ruled out on the basis of objective information
C5	Options, policies or proposals for developments or infrastructure projects that **could block options or alternatives** for the provision of other development or projects in the future, which will be required in the public interest, that may lead to adverse effects on European sites, which would otherwise be avoided.
C6	Options, policies or proposals which **depend on how the policies etc are implemented** in due course, for example, through the development management process. There is a theoretical possibility that if implemented in one or more particular ways, the proposal could possibly have a significant effect on a European site
C7	Any other options, policies or proposals that would be **vulnerable to failure** under the Habitats Regulations at project assessment stage; to include them in the plan would be regarded by the EC as 'faulty planning'.
C8	Any other proposal that may have an adverse effect on a European site, which might try to pass the tests of the Habitats Regulations at project assessment stage by arguing that the **plan provides the imperative reasons** of overriding public interest to justify its consent despite a negative assessment.
Category D: Likely significant effects in combination	
D1	The option, policy or proposal alone would not be likely to have significant effects but if its effects are combined with the effects of other policies or proposals **provided for or coordinated** by the Local Development Document (internally) the **cumulative** effects would be likely to be significant.
D2	Options, policies or proposals that alone would not be likely to have significant effects but if their effects are **combined with the effects of other plans and projects** and possibly the effects of other developments provided for in the Local Development Document as well, the combined effects are likely to be significant.
D3	Options or proposals that are, or could be, part of a **programme or sequence of development** delivered over a period, where the implementation of the early stages would not have a significant effect on European sites, but which would dictate the nature, scale, duration, location, timing of the whole project, the later stages of which could have adverse effects on such sites.

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Policy H1 - The efficient use of land for housing	A5	N/A	No	N/A	No
Policy H2 - Extensions to residential envelopes and phasing	C4	▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution The policy proposes the development of 1785 new residential dwellings in broad locations throughout the District. There is the potential for the policy alone to have likely significant effects on the identified[1] European sites as a result of increased disturbance, increased atmospheric pollution and reduced water levels and quality. The potential likely significant effects of the policy in-combination with other development proposed in surrounding areas is likely to be of greater significance than the effects of this policy alone. Therefore, a detailed assessment of the potential likely significant in-combination effects is carried out in the row below and the recommendations and mitigation proposed for the in-combination effects are also applicable to the likely significant effects identified above. The policy makes provision for a quantity of residential development in broad locations but the effects are uncertain with regard to the individual allocations because the detailed location and quantum of development is to be identified in the emerging Site Allocations DPD. The HRA of the Site Allocations DPD will assess potential effects of individual development allocations on European Sites, identifying more precisely the nature, scale and	Yes Please refer to the in-combination effects assessment below.	No Please refer to the in-combination effects assessment below.

[1] European sites identified within the preceding column.

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
			location of development and thus its potential effects.		
	D2	▪ Benfleet & Southend Marshes SPA/ Ramsar ▪ Crouch and Roach SPA/ Ramsar ▪ Dengie SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution Please refer to the detailed commentary at the end of this matrix.	Yes Please see the recommendations made in the detailed commentary at the end of this matrix.	No If the recommendations made by the HRA are incorporated into the Core Strategy and a review of HRA findings is carried out upon completion of the Essex Thames Gateway WCS, this HRA Screening would be able to conclude that the policy will not have likely significant in-combination effects on the identified European sites.
Policy H3 - Extensions to residential envelopes post 2021	C4	▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution Please refer to the assessment for Policy H2.	Yes Please refer to the assessment for Policy H2.	No Please refer to the assessment for Policy H2.
	D2	▪ Benfleet & Southend	▪ Reduced water levels	Yes	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
		Marshes SPA/ Ramsar ▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution Please refer to the assessment for Policy H2.	Please refer to the assessment for Policy H2.	Please refer to the assessment for Policy H2.
Policy H4 - Affordable Housing	A1	N/A	No	N/A	No
Policy H5 - Dwelling Types	A1	N/A	No	N/A	No
Policy H6 - Lifetime Homes	A1	N/A	No	N/A	No
Policy H7 - Gypsy and Traveller Accommodation	A5	N/A	No	N/A	No
Policy CP1 - Design	A1	N/A	No	N/A	No
Policy CP2 - Conservation Area	A1	N/A	No	N/A	No
Policy CP3 - Local List	A1	N/A	No	N/A	No
Policy GB1 - Green Belt Protection	A1	N/A	No	N/A	No
Policy GB2 - Rural Diversification and	B	N/A	No	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Recreational Uses					
Policy URV1 - Upper Roach Valley	A3	N/A	No	N/A	No
Policy URV2 - Wallasea Island	C2	▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Increased disturbance The policy supports the delivery of the RSPB Wallasea Island Wild Coast project, which aims to restore Wallasea Island for both people and wildlife. The policy also promotes recreational use and additional marina facilities in the area, along with access improvements, which have the potential to increase recreational activity and therefore disturbance. Given that these activities will be undertaken in conjunction with the RSPB project and that development will only be supported if any adverse ecological impacts are avoided or mitigated for, it is assessed that the policy will not have likely significant in-combination effects on the identified European sites through increased disturbance.	N/A	No
Policy ENV 1 - Protection and Enhancement of the Natural Landscape and Habitats and the Protection of Historical and Archaeological Sites	A2	N/A	No	N/A	No
Policy ENV2 - Coastal Protection Belt	A1	N/A	No	N/A	No
Policy ENV3 - Flood Risk	A1	N/A	No	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Policy ENV4 - Sustainable Drainage Systems (SUDS)	A1	N/A	No	N/A	No
Policy ENV5 - Air Quality	A1	N/A	No	N/A	No
Policy ENV6 - Large Scale Renewable Energy Projects	C4	N/A	▪ Increased disturbance The policy supports the development of large scale renewable energy projects as long as the development is not within an area designated for its ecological value or if it can be shown that the integrity of the sites would not be adversely affected. No potential locations for development are provided within the policy as there are currently no plans for developing large-scale renewable energy projects within the District. Any large-scale renewable energy development would also be subject to HRA at the project level as a matter of law. The policy clearly states that no development would occur unless it can be shown that the integrity of the site would not be adversely affected. Given this and that HRA at project level is a matter of law; it is assessed that the policy will not have likely significant in-combination effects on the identified European sites through increased disturbance.	N/A	No
Policy ENV7 - Small Scale Renewable Energy Projects	A1	N/A	No	N/A	No
Policy ENV8 - On site Renewable and Low Carbon Energy Generation	A1	N/A	No	N/A	No
Policy ENV9 - Code for	A1	N/A	No	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Sustainable Homes					
Policy ENV10 - BREEAM	A1	N/A	No	N/A	No
Policy ENV11 - Contaminated Land	A1	N/A	No	N/A	No
Policy CLT1 - Planning Obligations and Standard Charges	A1	N/A	No	N/A	No
Policy CLT2 - Primary Education, Early Years and Childcare Facilities	A5	N/A	No	N/A	No
Policy CLT3 - Secondary Education	A5	N/A	No	N/A	No
Policy CLT4 - Healthcare	A1	N/A	No	N/A	No
Policy CLT5 - Open Space	A1	N/A	No	N/A	No
Policy CLT6 - Community Facilities	A5	N/A	No	N/A	No
Policy CLT7 - Play Space	A1	N/A	No	N/A	No
Policy CLT8 - Youth Facilities	A5	N/A	No	N/A	No
Policy CLT9 - Leisure Facilities	A5	N/A	No	N/A	No
Policy CLT10 - Playing Pitches	A5	N/A	No	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Policy CLT11 - Tourism	A5	N/A	No	N/A	No
Policy T1 - Highways	A1	N/A	No	N/A	No
Policy T2 - Highways Improvements	B	N/A	The policy identifies a number of priority highway improvements; however, none of these are in close proximity to the identified European sites. The policy also notes that the Council is not responsible for the highway network; however, the Council will work closely with the Highways Authority and Essex County Council to ensure that proposed schemes within the District are given the appropriate priority.	N/A	No
Policy T3 - Public Transport	A1	N/A	No	N/A	No
Policy T4 - South Essex Rapid Transit (SERT)	A1	N/A	No	N/A	No
Policy T5 - Travel Plans	A1	N/A	No	N/A	No
Policy T6 - Cycling and Walking	D2	N/A	▪ Increased disturbance The policy seeks to ensure that a safe and convenient network of cycle and pedestrian routes is put in place to link homes, workplaces, services and town centres. The policy does not identify any locations for improvement or development; however, the majority of improvements to the cycle and walking network are likely to happen in the west of the District away from European sites as this is where the majority of proposed residential and employment development is focussed. Given this the contribution of this policy to the in-combination effects of increased disturbance is likely to be minimal. It is assessed that the policy will not have likely significant in-combination effects on the identified European	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
			sites through increased disturbance.		
Policy T7 - Greenways	D2	▪ Crouch and Roach SPA/ Ramsar	▪ Increased disturbance This policy seeks to work in conjunction with landowners and Essex County Council to implement the greenways identified in the Thames Gateway GreenGrid Strategy. The GreenGrid Strategy is a long-term project to develop a network of open spaces and green links throughout Thames Gateway South Essex. A number of the proposed greenways are in close proximity to the Crouch and Roach Estuaries SPA/ Ramsar and therefore have the potential to contribute to increased levels of recreation at this European site. However, it is more likely that the implementation of greenways will have positive impacts on the Crouch and Roach Estuaries. The greenways will contribute to green infrastructure in the District; therefore reducing the potential for habitat fragmentation and providing the opportunity for climate change adaptation. Given this it is assessed that the policy will not have likely significant in-combination effects on the Crouch and Roach Estuaries through increased disturbance.	N/A	No
Policy T8 - Parking Standards	A1	N/A	No	N/A	No
Policy ED1 - Employment Growth	C4	▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution Please refer to the assessment for Policy H2.	Yes Please refer to the assessment for Policy H2.	No Please refer to the assessment for Policy H2.

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
	D2	▪ Benfleet & Southend Marshes SPA/ Ramsar ▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution Please refer to the assessment for Policy H2.	Yes Please refer to the assessment for Policy H2.	No Please refer to the assessment for Policy H2.
Policy ED2 - London Southend Airport	D2	▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/ Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution The policy supports the development potential of London Southend Airport as a catalyst for economic growth and employment generation. The proposed development will be facilitated through the London Southend Airport and Environs Joint Area Action Plan (JAAP). The development proposed within the policy has the potential to contribute to the likely significant in-combination effects identified above. Please refer to the assessment for Policy H2. The HRA of the JAAP, which is currently underway, will identify the nature, scale and location of development and thus its potential effects.	Yes Please refer to the assessment for Policy H2.	No Please refer to the assessment for Policy H2.
Policy ED3 -	A5	N/A	No	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Existing Employment Land					
Policy ED4 - Future Employment Allocations	D2	▪ Crouch and Roach SPA/ Ramsar ▪ Essex Estuaries SAC ▪ Foulness SPA/Ramsar	▪ Reduced water levels ▪ Reduced water quality ▪ Increased disturbance ▪ Increased atmospheric pollution The policy allocates 18 ha of industrial land to compensate for the de-allocated land set out in Policy ED3. No specific sites are identified, however broad locations are provided for future employment growth. The in-combination effects assessment for Policy H2 is also applicable to this policy. An HRA of the Site Allocations DPD will assess potential effects of individual employment allocations on European Sites, identifying the nature, scale and location of development and thus its potential effects.	Yes Please refer to the assessment for Policy H2.	No Please refer to the assessment for Policy H2.
Policy RTC1 - Retail in town centres	A1	N/A	No	N/A	No
Policy RTC2 - Sequential approach to retail development	A1	N/A	No	N/A	No
Policy RTC3 - Village and Neighbourhood Shops	A1	N/A	No	N/A	No
Policy RTC4 - Rayleigh Town Centre	A1	N/A	No	N/A	No
Policy RTC5 - Rochford Town	A1	N/A	No	N/A	No

Core Strategy Preferred Options and Policies	Assessment Category	European Site[s]	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Centre					
Policy RTC6 - Hockley Centre	A1	N/A	No	N/A	No

Detailed Commentary

Reduced Water Levels

The level of development proposed in the policy has the potential to act in-combination with development proposed in surrounding areas through increased levels of water abstraction. Increased abstraction has the potential to lead to reduced water levels, which has the potential for likely significant effects on the identified European sites. The following plans and programmes have the potential to act in-combination with the policy:

- Draft East of England Plan- East of England Regional Assembly 2004
- Anglian River Basin Management Plan
- Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009
- The Combined Essex Catchment Abstraction Management Study (CAMS) Environment Agency 2004
- The Crouch and Roach Estuary Management Plan
- Southend Borough Council Core Strategy
- Basildon District Council Core Strategy
- Castle Point Borough Council Core Strategy
- Chelmsford Borough Council Core Strategy
- Maldon District Council Core Strategy
- London Southend Airport and Environs Joint Area Action Plan
- Rochford Area Action Plan

- Hockley Area Action Plan
- Rayleigh Area Action Plan
- London Southend Airport Runway Extension and Associated Development Planning Application

The Essex Thames Gateway Water Cycle Study (Scoping Study March 2009) identifies that the Essex Thames Gateway area currently does not have sufficient raw water resources to supply existing development during years of drought. At present it relies on the transfer of raw and treated water from the Thames Region and from Norfolk and Suffolk. Future water demand is expected to be met through the proposed increase in storage at Abberton Reservoir and the commensurate increase in abstraction and transfer from the Ely-Ouse transfer scheme, which if approved will come online in 2014. This should address the identified deficit during dry years and meet additional demand from proposed development in the East of England Plan.

A number of European sites scoped into this screening assessment fall within the study area of the WCS, including the Essex Estuaries SAC; Foulness SPA/ Ramsar; Crouch and Roach Estuaries SPA/ Ramsar and Benfleet and Southend Marshes SPA/ Ramsar. The WCS states with regard to these European sites that, "there is unlikely to be any increase in existing abstractions from surface or groundwater sources and as such it is possible to screen out impacts to the sites within the study area as a result of water resources". However, it also identifies that a further sixteen European sites outside the WCS study area have the potential to be impacted by increased water demand up to and post 2014.

Essex & Suffolk Water carried out an HRA of their Draft Water Resource Management Plan (WRMP), which identified that as part of the Final Planning Solution only the Abberton Scheme has the potential for likely significant effects on European sites. After further studies it was concluded, that the scheme would not have adverse effects on the integrity on any European sites. In response to consultation on the WRMP HRA, NE commented that the Abberton scheme is likely to have significant positive effects on the conservation status of the bird species designated under the Abberton Reservoir SPA/ Ramsar.

The Water Cycle Study (WCS) also identified that there are no pressure or capacity issues in terms of water supply infrastructure that would affect future growth in the area. The next stage of the WCS will consider all of the ways in which new development will impact on the water environment or water infrastructure specifically in relation to where growth is most likely to be targeted. This will be undertaken during consideration of site allocations so that it can inform the decision process in terms of where development will be located. This evidence will help to address uncertainty surrounding the proposed level of growth in the area and its impacts on water resources.

The Core Strategy currently contains a number of policies that will help to mitigate the contribution of proposed development to the adverse in-combination effects on water resources. These include:

- Policy ENV9 ensures that there will be improvements in water efficiency within the District. As a minimum, Code 3 of the Code for Sustainable Homes will be required for all new residential development. From 2013, Code level 4 will be required as a minimum. The policy also expects developers to go beyond Code level 3 for sustainable development between 2010 and 2013, particularly in terms of water conservation measures.

- Policy ENV10 requires all non-residential buildings, as a minimum, to meet the BREEAM rating of 'Very Good'.

This HRA recognises that the mitigation currently provided by the Core Strategy Policies (above) cannot be relied upon as a measure to counteract the effects of a plan or project, because its implementation cannot be guaranteed. It is therefore recommended that the following text be included within the supporting text to Policy H1:

'In *line with the Habitats Regulations and in consultation with NE, EA and Essex and Suffolk Water, development proposals must ensure that the water supply necessary for the development can be supplied sustainably (and without adverse effects on European Sites). Any development project that could have an adverse effect on integrity of a European site will not be in accordance with the development plan, within the meaning of S.38(6) of the Planning and Compulsory Purchase Act 2004'.*

It is also recommended that the findings of this HRA Screening are reviewed once the final stages of the Essex Thames Gateway WCS are complete. The findings of this study will contribute to the evidence base and help to address some of the uncertainties identified within the screening assessment in relation to water resources. Any changes made to the HRA should be done in consultation with NE.

If the policy recommendation made above is incorporated into the Core Strategy and a review of HRA findings is carried out upon completion of the Essex Thames Gateway WCS, this HRA Screening would be able to conclude that the policy will not have likely significant in-combination effects on the identified European sites.

Reduced Water Quality

The level of development proposed in the policy has the potential to act in-combination with development proposed in surrounding areas through increased pressure on sewerage capacity. This has the potential to lead to reduced water quality and therefore likely significant in-combination effects on the identified European sites. The following plans and programmes have the potential to act in-combination with the policy:

- Essex County Council Local Transport 2006 - 2011
- Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009
- The Essex and Southend Waste Local Plan Adopted September 2001
- Exceeding Expectations Tourism Growth Strategy for Essex March 2007
- Anglian River Basin Management Plan
- Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009
- Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009
- The Combined Essex Catchment Abstraction Management Study (CAMS) Environment Agency 2004

- The Crouch and Roach Estuary Management Plan
- Southend Borough Council Core Strategy
- Basildon District Council Core Strategy
- Castle Point Borough Council Core Strategy, Local Transport and Waste and Minerals plans
- Chelmsford Borough Council Core Strategy
- Maldon District Council Core Strategy
- London Southend Airport and Environs Joint Area Action Plan
- Rochford Area Action Plan
- Hockley Area Action Plan
- Rayleigh Area Action Plan
- London Southend Airport Runway Extension and Associated Development Planning Application

There are currently capacity issues with both the Rochford Waste Water Treatment Works (WWTW) and Southend WWTW, which will need resolving post 2015. Rochford WWTW currently receives sludge treatment from Southend WWTW. The Essex Thames Gateway Water Cycle Study (WCS) is required to address these capacity issues to ensure that the phasing of development up to 2015 does not exacerbate sewer flooding issues. The WCS also identified that there is sufficient capacity at both Rayleigh East and Rayleigh West WWTW.

At a strategic level it is difficult for the HRA to conclude with certainty that the level of development proposed in the policy and surrounding areas will not have adverse in-combination effects on the integrity of the identified European sites through reduced water quality.

The Annual Monitoring Report for the LDF currently records the proportion of applications in which sustainable drainage systems are incorporated. It is recommended that the following indicators are incorporated into the Monitoring Framework:

Indicator	Frequency	Who is responsible?
Chemical water quality of the Crouch and Roach Estuaries	Annually	EA
Biological water quality of the Crouch and Roach Estuaries	Annually	EA

Incorporating these indicators will allow the Council to determine if developments being implemented through the plan are having adverse effects on the water quality of the Crouch and Roach Estuaries. If the Annual Monitoring Report (AMR) identifies that development being implemented as a result of the plan is having adverse

effects on the water quality of either the Crouch or Roach Estuaries, then the Council should consult with EA and NE to determine the most appropriate course of action. If the recommendations above are incorporated into the Core Strategy, this HRA Screening would be able to conclude that the policy will not have likely significant in-combination effects on the identified European sites through reduced water quality.

Increased Atmospheric Pollution

The level of development proposed by the policy has the potential to act in-combination with development proposed in surrounding areas through reduced air quality. The construction of the proposed development and associated infrastructure, as well as the increase in surface and waterborne transport has the potential to increase atmospheric pollution. The following plans and programmes have the potential to act in-combination with the policy:

- Essex County Council Local Transport 2006 - 2011
- Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009
- The Essex and Southend Waste Local Plan Adopted September 2001
- Exceeding Expectations Tourism Growth Strategy for Essex March 2007
- Southend Borough Council Core Strategy
- Basildon District Council Core Strategy
- Castle Point Borough Council Core Strategy
- Chelmsford Borough Council Core Strategy
- Maldon District Council Core Strategy
- London Southend Airport and Environs Joint Area Action Plan
- Rochford Area Action Plan
- Hockley Area Action Plan
- Rayleigh Area Action Plan
- London Southend Airport Runway Extension and Associated Development Planning Application

The main source of air pollution in Rochford District is road traffic, on roads including the A127 and A130[2]. The development proposed within this policy and the surrounding areas have the potential to increase the level of traffic on roads within the District. The information available on the European sites does not identify them as being vulnerable to increased atmospheric pollution; however, a reduction in air quality does have the potential to affect water quality at the sites (i.e through deposition of particulates in water bodies).

[2] Essex Air Quality Consortium (last accessed 17/12/09) Air Quality in Rochford. Available [online]: http://www.essexair.org/

In response (August 2009) to the London Southend Airport and Environs Joint Area Action Plan DPD (JAAP) Preferred Options consultation, NE identified that the coastal sites (Benfleet & Southend Marshes SPA/ Ramsar, Crouch & Roach Estuaries SPA/ Ramsar and Essex Estuaries SAC) in South Essex are not particularly sensitive to increased nitrogen and acid deposition.

The Core Strategy currently contains a number of policies that will help to mitigate the contribution of proposed development to the adverse in-combination effects on air quality; these include:

- Policy ENV5 requires proposed development to include measures that ensure it does not have an adverse impact on air quality.
- Policy T1 requires development to be located and designed in such as way as to reduce reliance on the private car.
- Policy T3 seeks to ensure that development is well related to public transport, or accessible by means other than the private car. In particular, large-scale residential developments will be required to be integrated with public transport and designed in a way that encourages use of alternative forms of transport to the private car.
- Policy T5 requires developments that involve both destination and trip origins and residential developments over 50 units to prepare travel plans.

Other plans acting in-combination with the Core Strategy also seek to mitigate potential adverse effects on air quality. For example, as part of the latest Local Transport Plan, Essex County Council Highways plan to use the county-wide Traffic Management Strategy to tackle congested junctions in Rochford District.

Air quality is monitored by the Council on a periodic basis (as required by the 1995 Environment Act) and includes an indicator to monitor the % reduction in NOx and primary PM10 emissions through local authority's estate and operations. Given that air quality is already monitored in the District, the European sites are not considered vulnerable to the effects of increased atmospheric pollution and that there are appropriate mitigations proposed within the Core Strategy Policies, it is assessed that the policy will not have likely significant in-combination effects on the identified European sites through increased atmospheric pollution.

Increased Disturbance

The level of development proposed by the policy has the potential to act in-combination with development proposed in surrounding areas through increased recreational activity. The following plans and programmes have the potential to act in-combination with the LDP:

- Essex County Council Local Transport 2006 - 2011
- Exceeding Expectations Tourism Growth Strategy for Essex March 2007
- The Crouch and Roach Estuary Management Plan
- Rochford Core Strategy

- Southend Core Strategy
- Basildon Core Strategy
- Castle Point Core Strategy
- Chelmsford Core Strategy
- London Southend Airport Runway Extension and Associated Development
- London Southend Airport & Environs Joint Area Action Plan Preferred Options
- Southend Local Transport Plan 2006-2011

The level of development proposed in the Core Strategy and surrounding areas has the potential for likely significant in-combination effects on the identified European sites through increased levels of disturbance as a result of new development and therefore increased recreational activity. According to the information available on the identified European sites, they are vulnerable to disturbance from water-based and terrestrial recreational activities.

The character of the District is split, with a clear east-west divide. European sites are predominantly situated in the sparsely populated, relatively inaccessible east. The west of the District contains the majority of the District's population, has better access to services and fewer physical constraints. The development proposed within the policy and surrounding areas is generally focussed away from the identified European sites as a result of the issues outlined above.

Given the unique recreational opportunities that the European sites provide and the level of development proposed in the County as a whole, it is not likely that an individual authority alone could avoid, mitigate or compensate for likely significant in-combination effects of increased disturbance on the identified European sites. However, the authority should seek to ensure that its policies address identified issues and put robust measures in place to provide mitigation.

The Core Strategy currently contains a number of policies that will help to mitigate the contribution of proposed development to the in-combination effects of increased disturbance; these include:

- Policy GB1 seeks to protect and direct development away from the Green Belt, which provides leisure opportunities for the District's residents and visitors.
- Policy URV1 seeks to protect the Upper Roach Valley from development so that it can become a 'vast' area for informal recreational opportunities.
- Policy URV2 seeks to support the RSPB in delivering the Wallasea Island Wild Coast Island project, which aims to enhance the biodiversity value of the area.
- Policy CLT5 requires that any new residential development is accompanied by new public open space. This includes the incorporation of a significant amount of public open space to accompany new residential development in the west of Rayleigh. The policy also protects existing areas of open space and recreation such as; parks; allotments and playing pitches.
- Policy CLT7 requires new residential developments to incorporate appropriate communal play space.
- Policy CLT9 seeks to ensure that leisure facilities across the District are maintained and enhanced. In particular, the policy seeks to enhance recreational

opportunities at Rayleigh Leisure Centre and further develop leisure uses at Great Wakering Leisure Centre.

- Appendix H1 (Policy reference H1) outlines infrastructure requirements for each of the key housing locations, and includes links to a green grid and public open space.

The policies outlined above ensure that new public open space and recreational areas are required to accompany any new residential developments. As the majority of proposed development is focussed in existing settlements in the west of the District, the policies therefore assist to 'direct' recreational activity away from the European sites. The Core Strategy also seeks to utilise the potential of the Upper Roach Valley and Hockley Woods as a large informal recreational areas, which will also assist in providing alternative areas for recreation.

Information provided by the JNCC indicates that disturbance to feeding and roosting waterfowl by terrestrial recreational activities will be tackled through management schemes for the European sites. Water based recreation such as, water-skiing and sailing, should be largely controlled by the relevant Harbour Authority. Foulness Island is owned by the Ministry of Defence and is used as a proving ground over marsh sands for munitions, with access to it restricted, therefore it is not subject to the same development pressures or public disturbance as the other European sites.

Given that: terrestrial recreational activity will be controlled and managed through European site management plans; water based recreation is controlled by the relevant Harbour Authority; and the open space provision and alternative recreational opportunities proposed in the Core Strategy, it is assessed that the policy will not have likely significant in-combination effects on the identified European sites through increased disturbance.

Appendix 4: Consultation Commentary

HRA Screening Report (January 2010)

Consultee	Section of Report	Consultee Comments	Response (record of amendment to HRA)
Natural England 14/01/10	General	Thank you for contacting Natural England, on behalf of Rochford District Council, regarding the Council's Habitats Regulations Assessment (HRA) of their Core Strategy (which we understand is imminently to be submitted for examination). The draft HRA was received by Natural England on Friday 8 January, and at short notice we are able to provide the comments below. Please note however that our comments are not comprehensive due to the limited time made available to us, however we have sought to identify the major points from the HRA, and trust that these will be helpful to you under the circumstances. Please note that we reserve the right to make additional comments should further opportunity be afforded for consultation on the HRA.	Comments received with thanks. It is acknowledged that NE had limited time to provide detailed comment, however we also note that Council had contact with NE prior to this and had sought comments on the HRA Screening Report from NE in December 2009- but NE was unable to provide assistance or offer comment at that time.
	General	The Habitats Regulations Assessment appears to have been done relatively late in the process of Core Strategy production and seems to have had little or no influence over the content of the Core Strategy. Indeed, we understand that there is now no opportunity for changes to be made to the Core Strategy prior to submission for examination, and that the any changes are at the discretion of the Planning Inspector. Consequently it is not evident that the Council have adopted the measures proposed in the HRA.	The Council's Core Strategy evidence base and specifically work on SA/SEA and HRA has identified European Sites relevant to the District. The known sensitivities of these sites has informed the development of policy, and specifically the spatial location of key development sites throughout the preparation of the document, focusing on the avoidance of adverse effect. The HRA Screening report is the culmination of work that has been ongoing since Feb 2009 that included HRA workshops (Council officers supported by specialist consultants Enfusion Ltd, 12th Feb & 8th July 2009), as well

			as discussions with NE with regard to the scope, approach, findings and recommendations of the HRA[1].
	General	HRA Conclusions There is some confusion (e.g. 1.11) as to whether, and if so on what basis, the HRA concludes no likely significant effect, as the wording is not clear and not expressed in the terms found in the Regulations or the Natural England guidance which the HRA cites.	The terms and language used in the Report conform with the Regulatory requirements and are in line with NE guidance. This approach has recently been discussed and supported by Simon Stonehouse (NE National Policy lead) and Kyle Lischak (NE legal) in consultations with the Statutory Body on strategic HRAs supporting site and plan level assessment for National Policy Statements. If NE's regional interpretation of guidance differs from that advised at national level, we would welcome clarification.
	Paragraph 3.12 to 3.18	Water Supply The 15km distance limit was considered appropriate at one stage but is not now, and is not offered as advice in the Natural England guidance referred to. Recreational pressures to major attractors have been shown by subsequent research to be potentially significant to 20km, and water supply has even greater distances. Indeed, it is the limitation of the 15km, and the Essex Thames Gateway Water Cycle Study (WCS) only considering the European sites in the study area, whilst acknowledging there are 16 European sites potentially affected beyond it (3.12), that in our view flaws the HRA conclusion on water supply (referred to as reduced water levels). In light of: a. the effects of increased water supply on 16 European sites outside the WCS area not having been considered (3.12); and	The scope of the HRA was agreed with NE[2] and the report recognises and supports NE's comment (Paragraph 3.1, footnote 5) that distance is not a definitive guide to the likelihood or severity of an impact as factors such as the prevailing wind direction, river flow direction, and groundwater flow direction will all have a bearing on the relative distance at which an impact can occur. Therefore the 15km search area was used as a guide in determining the scope of the assessment and did not preclude the consideration of more distant sites. a. Advice on the scope of the HRA was sought from NE and agreed. It was also agreed in principal with NE[3] that the mitigation measures proposed in paragraphs

[1] Ref: telephone conversations with NE (Jonathon Bustard) held on 02/11/09, 15/12/09 and 07/01/10
[2] ref: email 13/08/09 Andrew Robinson (NE) to Velda Wong (Rochford District Council)
[3] Ref: telephone conversations with NE (Jonathon Bustard) held on 07/01/10

			3.16 to 3.18 address the potential in-combination effects of increased water abstraction on the European sites scoped into the assessment.
		b. the acknowledged uncertainty surrounding the proposed level of growth in the area and its impacts on water resources (last sentence 3.14), and the unfinished WCS; and	b. This uncertainty is addressed in the HRA through the recommendations proposed in paragraphs 3.16 to 3.18.
		c. whilst they are commendable in themselves, Natural England does not accept that the mitigation measures in 3.15 are appropriate or sufficient to conclude there would not be a potential effect on European sites, and indeed the projections all indicate that there would be an increase in water supply requirements over and above the capacity of existing infrastructure; and	c. The mitigation identified in paragraph 3.15 is part of a suite of mitigation measures proposed by the HRA and should not be considered in isolation. The HRA proposes further mitigation measures in paragraphs 3.16 to 3.18.
		d. Natural England does not generally accept that a clear tension between a plan's potential effects on European sites and the need to protect the sites can be resolved by additions to text, rather than a policy, so the suggested text in 3.16 is not considered sufficient to remove the likelihood of significant effects, a clear policy statement is preferred to give the level of certainty required in this context; and	d. PPS 12 clearly states that policy should not repeat or reformulate national & regional policy and regulatory requirements. The inclusion of recommended wording on water issues in the supporting text within the Core Strategy highlights the strategic sensitivities of water issues in relation to local circumstances. This approach has been supported and endorsed by NE in relation to Core Strategy development in other regions, for example in relation to the HRAs of Core Strategies in the PUSH (partnership for Urban South Hampshire) area.
		e. the fact that even if the proposed text that is recommended was a satisfactory measure to conclude no likely significant effect, it is not, as far as we can see, included in the plan anyway. The Council does not appear to have adopted the measure.	e. The Core Strategy is to be subject to examination and there is opportunity to adopt and incorporate recommended measures in line with the consultation and inspection advice received during the examination process.

		Consequently, Natural England must assume that, on the evidence, conclusions and recommendations of the Habitats Regulations Assessment itself (3.15 – 3.18), the Core Strategy is likely to have a significant effect on one or more European sites as a result of increased water demand for the additional housing growth. However, there is no Appropriate Assessment of this issue.	Disagree, see comments above. The HRA screening concluded that there will be no likely significant effect on water resources in relation to the European Sites scoped into the assessment. The screening identifies and takes account of uncertainty and the mitigations proposed in paragraphs 3.16 to 3.18 seek to address this uncertainty in a precautionary and pragmatic way. It is also noted that HRA is an iterative process and that where further information becomes available to support the assessment (i.e. from the conclusions the Essex Thames Gateway Water Cycle Study) that the assessment findings should be revisited in light of any new evidence.
	Paragraph 3.19 to 3.23	Water Quality In respect of water quality, relying on monitoring that would only show that an adverse effect on the water quality of the European sites is occurring, as a result of increased discharges from waste water treatment works, is not an appropriate measure to conclude no likelihood of a significant effect. It does not align with the precautionary approach of the Directive, or prevent harm to the sites from occurring. In any event, again, the recommended monitoring does not seem to have been incorporated into the Core Strategy at any point, in order to address the acknowledged uncertainty of effects (3.21). The Council does not appear to have adopted the measure. Consequently, Natural England must assume that, on the evidence, conclusions and recommendations of the Habitats Regulations Assessment itself (3.19 – 3.23), the Core Strategy is likely to have a significant effect on one or more European sites as a result of increased discharges from the additional housing growth potentially leading to reductions in water quality. However, there is no Appropriate Assessment of this issue.	Noted. Wording will be amended to make it clear that the recommended indicators will help to monitor any changes in the water quality of the Crouch and Roach Estuaries in order to avoid adverse effects on the Crouch and Roach Estuaries SPA/ Ramsar and other European sites with hydrological connectivity. See previous comments with regard to the plan making process and further opportunities for the Council to incorporate recommendations arising. The HRA Screening has taken into account all relevant information available to inform the HRA process at this point in plan making. The uncertainties identified in relation to proposed growth would not be removed by further Appropriate Assessment. The additional monitoring indicators proposed in paragraph 3.22 seek to address this uncertainty in a precautionary and pragmatic

			way. We would be grateful for clarification from NE regarding any further measures that it considers may be appropriately applied to resolve this issue at the local government level.
	Paragraph 3.26	Natural England does not accept that the measures relied upon as mitigation measures in paragraph 3.26 are appropriate or effective in concluding that there would not be an increase in air pollution that could affect sensitive European sites. It is also unclear the extent to which the measures have been relied upon to reach the conclusions in the assessment. However, as none of the European sites, in or near the plan area, are vulnerable and sensitive to air quality changes in this context, we can accept the conclusion that there would not be likely to be a significant effect on a European site as a result of increased emissions to air as a result of the Core Strategy.	Noted.
	Paragraph 3.32	Recreational Disturbance Natural England does not accept that the mitigation measures relied upon in paragraph 3.32, for reducing recreational disturbance pressures on European sites, are appropriate. They are either irrelevant to, or have only a very tenuous link with, the reduction of the kind of recreational pressure experienced and likely to increase, especially at the coastal sites. The proposals in URV1 for the Upper Roach Valley may be relevant and a useful measure, but in light of the weight that appears to have been given to measures that would have no relevant, or only a marginal relevant, effect in reducing disturbance, Natural England does not consider that the HRA can conclude that there would be no likely significant effect on the European sites on the evidence in the HRA. A fresh look at this issue ignoring the measures listed in 3.32 (except for the Upper Roach Valley) should be carried out. It is entirely conceivable that a re-worked	The mitigation measures identified in paragraph 3.32 are included to show the full range of mitigation offered by individual policies in relation to predicted recreational pressures and, therefore, the mitigation provided by the Core Strategy on this issue as a whole. Paragraph 3.33 discusses the majority of mitigation measures proposed by the Core Strategy policies in general and then goes on to identify the specific mitigation provided by Policy URV1 (Upper Roach Valley). Recent work with NE in other districts, e.g. Winchester, has highlighted the role and importance that NE places on a strategic/ holistic approach to Green Infrastructure (i.e. a package of mitigation measures across the plan area) in managing recreational impacts on European sites.

		assessment may reach the same conclusion – i.e. no likely significant effect, but it should do so on a more robust basis.	The HRA therefore considers the Council's policy requirement for the provision of open space and recreational areas to accompany new residential development as being highly relevant in mitigating increased levels of recreation on European sites. It is noted that NE's own Green Infrastructure Guidance (2009) supports the fact that Green Infrastructure' can have positive effects on European sites through providing alternative areas for recreation and therefore mitigating potential increased levels of disturbance. The assessment acknowledges (paragraph 3.31) that the Estuarine European sites provide a unique recreational opportunity, however, NE commented[4] that other Local Authorities in the area have addressed this issue by proposing a large area of open space to provide an alternative area for recreation. Policy URV1 proposes such an open space to provide informal recreational opportunities for local residents. This advice was taken forward in the HRA and therefore we would be grateful for clarification from NE as to why their advice differs in this instance.
	General	Conclusions In light of the above shortcomings in the HRA, and in the context of our letter of 9 November 2009, it is appropriate for us to advise that we do not consider that the Core Strategy, in its present form, is sound or legally compliant. Therefore, whilst we appreciate that little if any opportunity is now available prior to submission, if the inspector also finds this to be the case, Natural England is willing to have further discussions with the	The HRA Screening Report has been prepared in accordance with regulatory and NE guidance and advice and in line with current practice. The conclusions of the HRA are robust and provide a compliant evidence base in support of the Core Strategy.

[4] Ref: telephone conversations with NE (Jonathon Bustard) held on 07/01/10

		Council, post examination.	HRA is an iterative process and where issues of clarification are outstanding, the Council welcomes further consultation advice from NE to ensure that any future changes to the plan are supported by a robust evidence base.