

Rayleigh Area Action Plan (RayAAP)

**Habitat Regulations Assessment (HRA)
Screening**

December 2013

1.0 INTRODUCTION

- 1.1 Rochford District Council is currently preparing the Rayleigh Area Action Plan (RayAAP) – an Area Action Plan that will create the framework for development sites and planning policies for the centre of Rayleigh. A Submission Draft of the plan has been drafted.
- 1.2 Production of the RayAAP is an iterative process. The document has undergone a number of different stages of community involvement and assessment: The Initial Options Document was published in 2009; an interim exhibition was held in Jan 2013; An informal consultation was held from June to August 2013; The Submission Document will be submitted to the Planning Inspector in summer 2014.
- 1.3 The RayAAP follows on from, and is required to confirm to, the Rochford Core Strategy (2011). The Rochford Core Strategy was subject to Habitats Regulations Assessment, including assessment of the policy that guides the RayAAP.
- 1.4 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.
- 1.5 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 ascertain whether it would adversely affect the integrity¹ of that site. Where significant negative effects are identified, avoidance, mitigation and where necessary alternative options should be examined to avoid any potential damaging effects. The scope of the HRA is dependent on the location, size and significance of the proposed plan or project and the sensitivities and nature of the interest features of the European Sites under consideration. If it is not possible to avoid or remove the identified effects assessed as arising from the plan implementation, then (if the plan makers wish to proceed with the policies/ proposals as set) it must be demonstrated that there are Imperative Reasons of Overriding Public Interest (IROPI) to continue with the plan [(Article 6(4) of the Habitats Directive).

Requirement for Habitats Regulations Assessment

- 1.6 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 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).

- 1.7 Articles 6 (3) and 6 (4) of the Habitats Directive require AA to be undertaken on proposed plans or projects which are not necessary for the management of the site but 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.² In 2007, this requirement was transposed into UK law in Part IVA of the Habitats Regulations (The Conservation (Natural Habitats, & c.)(England and Wales) Regulations 1994 (as amended). The Conservation (Natural Habitats &c) Regulations 1994 (as amended) were replaced in England and Wales on 1 April 2010 by the Conservation of Habitats and Species Regulations 2010. 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)) are included within HRA/AA.
- 1.8 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 ascertain whether it would adversely affect the integrity³ of that site. Where significant negative effects are identified, avoidance, mitigation and where necessary alternative options should be examined to avoid any potential damaging effects. The scope of the HRA/AA is dependent on the location, size and significance of the proposed plan or project and the sensitivities and nature of the interest features of the European Sites under consideration. If it is not possible to avoid or remove the identified effects assessed as arising from the plan implementation, then [if the plan makers wish to proceed with the policies/proposals as set] it must be demonstrated that there are Imperative Reasons of Overriding Public Interest (IROPI) to continue with the plan ((Article 6(4) of the Habitats Directive).

Guidance for Habitats Regulations Assessment

- 1.9 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 consultants⁴ 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

² 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 and where information is limited the precautionary principle applies.

³ 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).

⁴ Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants.

produced guidance on HRA to support the planning community.⁵ 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.

- 1.10 The HRA approach applied for the HAAP is based on the best current government guidance and emergent practice. The method applied considers HRA in three main stages - outlined in **Table 1**. This report addresses Stages 1 and 2.

⁵ 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.

Table 1 Habitats Regulations Assessment: Key Stages	
Stage 1	
Screening	<ul style="list-style-type: none"> Identify international sites in and around the plan/ strategy area Examine conservation objectives (if available) Analyse the policy/plan and its key components Identify potential effects on Natura 2000 sites Examine other plans and programmes that could contribute to 'in combination' effects
	<ul style="list-style-type: none"> <i>If no effects likely – report that no significant effect.</i> <i>If effects are judged likely or uncertainty exists – the precautionary principle applies proceed to stage 2</i>
Stage 2	
Appropriate Assessment	<ul style="list-style-type: none"> Collate information on sites and evaluate impact in light of conservation objectives Consider how plan 'in combination' with other plans and programmes will interact when implemented (the Appropriate Assessment) Consider how effect on integrity of site could be avoided by changes to plan and the consideration of alternatives Develop mitigation measures (including timescale and mechanisms)
	<ul style="list-style-type: none"> <i>Report outcomes of AA and develop monitoring strategies</i> <i>If effects remain following the consideration of alternatives and development of mitigations proceed to stage 3</i>
Stage 3	
Assessment where no alternatives and adverse impacts remain	<ul style="list-style-type: none"> Identify 'imperative reasons of overriding public interest' (IROPI) Identify/ develop potential compensatory measures
	<i>Difficult test to pass, requirements are onerous and untested to date</i>

Consultation

- 1.11 The Habitats Regulations require the plan making/ competent authority (Rochford District Council) to consult the appropriate nature conservation statutory body (Natural England (NE)). A copy of this report was sent to NE for comment.
- 1.12 NE stated that the screening report is comprehensive and has fully considered the potential impacts on the identified European sites.

- 1.13 NE noted that The Conservation (Natural Habitats &c) Regulations 1994 (as amended) were replaced in England and Wales on 1 April 2010 by the Conservation of Habitats and Species Regulations 2010; and that whilst the new regulations did not make any substantive changes to existing policies and procedures (other than the establishment of the Marine Management Organisation (MMO)), the consolidation of the regulations allowed restructuring with the intention of making the legislation easier to understand. In response to these comments, additional text was added to paragraph 1.7 of this report in respect of these regulations.
- 1.14 NE confirmed that they agree with the conclusions of the screening report that that none of the policies in the Hockley Area Action Plan are likely to have significant impacts, either alone or in combination, on any of the identified European Sites
- 1.15 It should also be noted that the HRA of the Rochford Core Strategy, the Plan which sets the overarching policies that drive those in the Hockley Area Action Plan, was produced in consultation with NE.

2.0 METHOD

Screening Stage

- 2.1 In accordance with guidance and current practice, conducting the screening stage of the HRA for the RayAAP used the method outlined below.
- 2.2 Other avoidance or mitigation measures developed during the HRA process may include policy caveats at a strategic level. In some instances where decisions on avoidance and mitigation can only be made when site level detail becomes available, then the HRA process should be undertaken in relation to lower level planning documents (Tyldesley, D. 2009).
- 2.3 The key tasks employed for the HRA Screening are set out in **Table 2**.

Table 2

HRA Screening Stage: Key Tasks

Task 1 Identification of Natura 2000 sites & characterisation	<ul style="list-style-type: none"> • Identification of European Site within Rochford District Council boundary and/or within the potential influence of the plan. • Information was obtained for each European Site, based on publicly available information and consultation with Natural England where appropriate.⁶ • This included information relating to the sites' qualifying features; conservation objectives (where available); vulnerabilities/sensitivities and geographical boundaries.
Task 2 Strategy review, policy screening and identification of likely impacts	<ul style="list-style-type: none"> • Screening of the HAAP and the identification of likely impacts (including a review of the strategy to determine likely impacts).
Task 3 Consideration of other plans and programmes	<ul style="list-style-type: none"> • Consideration, where appropriate, of other plans and programmes that may have in-combination effects with the HAAP
Task 4 Screening Assessment	<ul style="list-style-type: none"> • Summary of screening outcomes and recommendations.

3.0 SCREENING STAGE

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 impacts the screening has identified sixteen European Sites potentially within the influence of the plan (**Table 3**). Hydrological connectivity, air quality and the potential for disturbance as a result of increased air traffic was a major consideration during the identification of European Sites, given the number of water dependent sites and designated bird species in South Essex.

Table 3	
European Sites	Designation
Benfleet and Southend Marshes	SPA & Ramsar
Blackwater Estuary	SPA & Ramsar
Crouch and Roach Estuaries	SPA & Ramsar
Dengie	SPA & Ramsar

⁶ www.jncc.gov.uk, www.natural-england.org.uk.

Essex Estuaries	SAC
Foulness	SPA & Ramsar
Medway Estuary and Marshes	SPA & Ramsar
Thames Estuary and Marshes	SPA & Ramsar
Outer Thames Estuary	Marine SPA

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

3.2 Screening of the RayAAP 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;
- **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.

3.3 Categories A, C and D are subdivided so that the specific reason why a policy has been allocated to a particular category is clear. The detail of the screening assessment which considers each of the HAAP policies against the categories is provided in **Appendix 3**. This identifies that no HAAP policies are likely to have potential significant effects on European Sites.

Identification of Likely Impacts

Task 3: Consideration of other plans and programmes

3.4 It is a requirement of Article 6(3) of the Habitats Directive that HRA examines the potential for plans and programmes to have a significant effect either individually or 'in-combination' with other plans and programmes (PPs). Undertaking an assessment of other PPs requires a pragmatic approach (given the extensive range of PPs underway in the region). For this screening, consideration of other PPs has focused on those likely to lead to significant infrastructure/ development changes with related impacts. It has also focused on plans which provide information that help to determine

environmental condition of and pressures on European Sites. These included:

- Draft East of England Plan East of England Regional Assembly 2004
- Essex Transport Strategy: the Local Transport Plan for Essex (June 2011)
- Essex County Council Minerals Development Document: Preferred Approach Paper 2010
- Essex County Council Waste Development Document: Preferred Approach Paper 2011
- South Essex Outline Water Cycle Study Technical Report (September 2011)
- Anglian River Basin Management Plan, September 2009
- Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009
- The Combined Essex Catchment Abstraction Management Study (CAMS) Feb 2007
- The Combined Essex Catchment Abstraction Management Study (CAMS) update March 2008
- Exceeding Expectations Tourism Growth Strategy for Essex March 2007
- Basildon District Council Core Strategy Preferred Options 2012
- Castle Point Borough Council Core Strategy, 2009⁷
- Chelmsford Borough Council Core Strategy, 2008
- Maldon District Council Core Strategy, 2009
- Rochford Core Strategy, Adopted December 2011
- Southend-on-Sea Borough Council Core Strategy, Adopted September 2009
- Southend-on-Sea Local Transport Plan 2006-2011
- London Southend Airport Runway Extension and Associated Development, October 2009

3.5 The potential effects of these plans are reviewed in detail at **Appendix 2** and the findings of this review considered in the light of impacts arising from the screening process are used to inform the screening assessment (**Appendix 3**).

3.6 The PPs considered at this stage are reviewed in **Appendix 2** and this analysis was used to inform the screening assessment (**Appendix 3**).

Task 4: Screening Assessment of the HAAP

3.7 In line with the screening requirements of the Habitats Regulations, an assessment was undertaken to determine the potential likely significant effects of the JAAP Preferred Options on the integrity of European Sites that lie within the potential influence of the plan. This assessment was based on:

⁷ On 27 September 2011, Castle Point Borough Council formally resolved to withdraw the Core Strategy. Issues and Options consultation on a new Local Plan is being scheduled in 2013.

- The information gathered on European Sites (**Appendix 1**)
- The evaluation of impacts arising from the plan
- The review of other relevant plans and programmes (**Appendix 2**)

Screening Assessment Summary

- 3.8 The screening assessment detailing the analysis in accordance with NE guidance is set out in the screening matrix (**Appendix 3**) and the results of the assessment are summarised in **Table 4** below.
- 3.9 The screening assessment identified that none of the policies in the HAAP are likely to have a significant effect alone or in combination, given the type, scale, location and quantum of development proposed, as well as European Site sensitivities.

Table 4 HRA Screening Table Summary			
European Sites	Designation	AA required alone? × No ✓ Yes ? Uncertain	AA required in combination? × No ✓ Yes ? Uncertain
Benfleet and Southend Marshes	SPA & Ramsar	×	×
Blackwater Estuary	SPA & Ramsar	×	×
Crouch and Roach Estuaries	SPA & Ramsar	×	×
Dengie	SPA & Ramsar	×	×
Essex Estuaries	SAC	×	×
Foulness	SPA & Ramsar	×	×
Medway Estuary and Marshes	SPA & Ramsar	×	×
Thames Estuary and Marshes	SPA & Ramsar	×	×
Outer Thames Estuary	Marine SPA	×	×

4.0 CONCLUSIONS

- 4.1 This HRA screening process has considered the potential for likely significant effects arising from the policies within the HAAP.
- 4.2 The HRA considered the European Sites within Rochford District Council's boundaries and those 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 (including Hockley). The Hockley Area Action Plan includes policies for development in a concentrated area within the centre of Hockley and follows from Policy RTC5 of the Rochford Core Strategy.
- 4.3 The assessment found that none of the policies in the HAAP are likely to have significant impacts, either alone or in combination, on European Sites.

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	<p>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 <i>Sabellaria spinulosa</i>, the brittlestar <i>Ophiothrix fragilis</i>, crustaceans and ascidians. The site also has large areas of saltmarsh and other important coastal habitats.</p>
Qualifying Features	<p>Annex I habitats that are a primary reason for selection of this site:</p> <ul style="list-style-type: none"> ■ Estuaries ■ Mudflats and sandflats not covered by seawater at low tide ■ Salicornia and other annuals colonising mud and sand ■ Spartina swards (<i>Spartinion maritimae</i>) ■ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) ■ Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) <p>Annex I habitats present as a qualifying feature:</p> <ul style="list-style-type: none"> ■ Sandbanks which are slightly covered by sea water all the time
Conservation Objectives	<p>With regard to the natural habitats and/or species for which the site has been designated (the Qualifying Features);</p> <p>Avoid the deterioration of the qualifying natural habitats and the habitats of qualifying species, and the significant disturbance of those qualifying species, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving Favourable Conservation Status of each of the qualifying features.</p>

Site Name: Essex Estuaries Location Grid Ref: TM103048 JNCC Site Code: UK0013690 Size (ha): 46140.82 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	<p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> ■ The extent and distribution of qualifying natural habitats and habitats of qualifying species; ■ The structure and function (including typical species) of qualifying natural habitats and habitats of qualifying species; ■ The supporting processes on which qualifying natural habitats and habitats of qualifying species rely; ■ The populations of qualifying species; ■ The distribution of qualifying species within the site.
Component SSSIs	<ul style="list-style-type: none"> ■ Blackwater Estuary ■ Crouch and Roach Estuaries ■ Colne Estuary ■ Foulness ■ Dengie
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> ■ 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. <p>Increased Water Pollution</p> <ul style="list-style-type: none"> ■ 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. <p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ Siltation exacerbated by disruption to equilibrium between deposition and erosion by coastal defences (sea wall)

Site Name: Essex Estuaries Location Grid Ref: TM103048 JNCC Site Code: UK0013690 Size (ha): 46140.82 Designation: SAC	Habitats Regulations Assessment: Data Proforma
	<p>management/ mowing and channel dredging.</p> <ul style="list-style-type: none"> ■ 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. <p>Non-physical Disturbance</p> <ul style="list-style-type: none"> ■ Noise (e.g. boat and plane activity). ■ Visual presence (e.g. recreational activity). <p>Biological Disturbance</p> <ul style="list-style-type: none"> ■ Introduction of microbial pathogens. ■ Introduction of non-native species and translocation. ■ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

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	<p>Article 4.2 Qualification (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Dark-bellied Brent Goose (<i>Branta bernicla bernicla</i>) 1.3% of the population ■ Dunlin (<i>Calidris alpina alpina</i>) 2.1% of the population in Great Britain ■ Knot (<i>Calidris canutus</i>) 2.6% of the population ■ Ringed Plover (<i>Charadrius hiaticula</i>) 1.3% of the population in Great Britain ■ Grey Plover (<i>Pluvialis squatarola</i>) 2.3% of the population <p>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage Of Birds</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ 34789 waterfowl (5 year peak mean 30/06/1999) Including: <i>Branta bernicla bernicla</i>, <i>Charadrius hiaticula</i>, <i>Pluvialis squatarola</i>, <i>Calidris canutus</i>, <i>Calidris alpina alpina</i>.
Conservation Objectives	With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);

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
	<p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p> <p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> ■ The extent and distribution of the habitats of the qualifying features; ■ The structure and function of the habitats of the qualifying features; ■ The supporting processes on which the habitats of the qualifying features rely; ■ The populations of the qualifying features; ■ The distribution of the qualifying features within the site.
Component SSSIs	<ul style="list-style-type: none"> ■ Benfleet and Southend Marshes
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> ■ 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. <p>Increased Water Pollution</p> <ul style="list-style-type: none"> ■ 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.

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Non-physical Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Biological Disturbance</p> <ul style="list-style-type: none"> ■ Introduction of microbial pathogens. ■ Introduction of non-native species and translocation. ■ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

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	<p>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.</p>
Qualifying Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> ■ Little Tern (<i>Sterna albifrons</i>) (Eastern Atlantic - breeding) at least 0.9% of the GB breeding population 5 year mean, 1992-1996 <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Hen Harrier (<i>Circus cyaneus</i>) up to 2.5% of the GB population 5 year mean, 1987/8-1991/2 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> ■ Common Pochard (<i>Aythya ferina</i>) (North-western/North-eastern Europe) up to 6% of the population in Great Britain 5 year mean, 1987-1991 ■ Ringed Plover (<i>Charadrius hiaticula</i>) (Europe/Northern Africa - wintering) up to 1.6% of the population in Great Britain 5 year mean, 1987-1991

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Brant Goose (<i>Branta bernicla bernicla</i>) (Western Siberia/Western Europe) 5.1% of the population 5 year peak mean 1991/92-1995/96 ■ Dunlin (<i>Calidris alpina alpina</i>) (Northern Siberia/Europe/Western Africa) 2.4% of the population 5 year peak mean 1991/92-1995/96 ■ Ringed Plover (<i>Charadrius hiaticula</i>) 0.7% of the population 5 year peak mean 1991/92-1995/96 ■ Black-tailed Godwit (<i>Limosa limosa islandica</i>) (Iceland - breeding) 2% of the population 5 year peak mean 1991/92-1995/96 ■ Grey Plover <i>Pluvialis squatarola</i> (Eastern Atlantic - wintering) 3% of the population 5 year peak mean 1991/92-1995/96 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ 109964 waterfowl (5 year peak mean 01/04/1998) ■ Including: <i>Branta bernicla bernicla</i> , <i>Charadrius hiaticula</i> , <i>Pluvialis squatarola</i> , <i>Calidris alpina alpina</i> , <i>Limosa limosa islandica</i> .
<p>Conservation Objectives</p>	<p>With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);</p> <p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p>

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
	<p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> ■ The extent and distribution of the habitats of the qualifying features; ■ The structure and function of the habitats of the qualifying features; ■ The supporting processes on which the habitats of the qualifying features rely; ■ The populations of the qualifying features; ■ The distribution of the qualifying features within the site.
Component SSSIs	<ul style="list-style-type: none"> ■ Blackwater Estuary SSSI
Vulnerabilities (includes existing pressures and trends)	<p>Coastal erosion</p> <ul style="list-style-type: none"> ■ 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. <p>Nutrient enrichment</p> <ul style="list-style-type: none"> ■ 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. <p>Water-based recreation</p> <ul style="list-style-type: none"> ■ 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.

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
	Drought <ul style="list-style-type: none"> 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.

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:

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<ul style="list-style-type: none"> ■ Hen Harrier (<i>Circus cyaneus</i>) up to 2.5% of the GB population 5 year mean, 1987-1991 <p>Article 4.2 Qualification (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 1% of the population 5 year peak mean 1991/92-1995/96 (Western Siberia/Western Europe) <p>Article 4.2 Qualification (79/409/EEC): An Internationally Important Assemblage Of Birds</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ 18607 waterfowl (5 year peak mean 30/06/1999) Including: Brent Goose (<i>Branta bernicla bernicla</i>)
<p>Conservation Objectives</p>	<p>With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);</p> <p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p> <p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> ■ The extent and distribution of the habitats of the qualifying features; ■ The structure and function of the habitats of the qualifying features; ■ The supporting processes on which the habitats of the qualifying features rely;

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	
	<ul style="list-style-type: none"> ■ The populations of the qualifying features; ■ The distribution of the qualifying features within the site. 	
Component SSSIs	<ul style="list-style-type: none"> ■ Crouch and Roach Estuaries 	
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> ■ 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. <p>Increased Water Pollution</p> <ul style="list-style-type: none"> ■ 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. <p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Non-physical Disturbance</p>	

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
	<ul style="list-style-type: none"> ■ 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. <p>Biological Disturbance</p> <ul style="list-style-type: none"> ■ Introduction of microbial pathogens. ■ Introduction of non-native species and translocation. ■ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).
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 outstanding assemblage of rare coastal flora. It is of importance for wintering populations of Hen Harrier <i>Circus cyaneus</i> , wildfowl and waders.

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
Qualifying Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Hen Harrier (<i>Circus cyaneus</i>) up to 2.5% of the GB population 5 year mean, 1987-1991 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Brant Goose (<i>Branta bernicla bernicla</i>) (Western Siberia/Western Europe) 0.8% of the population 5 year peak mean 1991/92-1995/96 ■ Red Knot (<i>Calidris canutus</i>) (North-eastern Canada/Greenland/Iceland/Northwestern Europe) ■ Grey Plover <i>Pluvialis squatarola</i> (Eastern Atlantic - wintering) 1.4% of the population 5 year peak mean 1991/92-1995/96 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ 31454 waterfowl (5 year peak mean 01/04/1998) ■ Including: <i>Branta bernicla bernicla</i>, <i>Pluvialis squatarola</i>, <i>Calidris canutus</i>.
Conservation Objectives	<p>With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);</p> <p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the</p>

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
	<p>qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p> <p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> ■ The extent and distribution of the habitats of the qualifying features; ■ The structure and function of the habitats of the qualifying features; ■ The supporting processes on which the habitats of the qualifying features rely; ■ The populations of the qualifying features; ■ The distribution of the qualifying features within the site.
Component SSSIs	<ul style="list-style-type: none"> ■ Dengie SSSI
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss</p> <ul style="list-style-type: none"> ■ 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. <p>Disturbance</p> <ul style="list-style-type: none"> ■ 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 scheme.

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	<p>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 <i>Branta bernicla bernicla</i>.</p>
Qualifying Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> ■ Avocet (<i>Recurvirostra avosetta</i>) up to 5.8% of the GB breeding population 5 year mean, 1987-1991 ■ Little Tern (<i>Sterna albifrons</i>) at least 1% of the GB breeding population 5 year mean, 1992-1996 ■ Common Tern (<i>Sterna hirundo</i>) up to 1.8% of the GB breeding population Count, as at 1996 ■ Sandwich Tern (<i>Sandwich Tern</i>) up to 2.3% of the GB breeding population 5 year mean, 1992-1996 <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Hen Harrier (<i>Circus cyaneus</i>) up to 2.5% of the GB population 5 year mean, 1987/8-1991/2 ■ Bar-tailed Godwit (<i>Limosa lapponica</i>) 14.6% of the GB population 5 year peak mean 1991/92-1995/96 ■ Avocet (<i>Recurvirostra avosetta</i>) 7.9% of the GB population 5 year peak mean 1991/92-1995/96 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> ■ Ringed Plover (<i>Charadrius hiaticula</i>) up to 1.6% of the population in Great Britain 5 year mean, 1987/8-1991/2 <p>Over winter the area regularly supports:</p>

<p>Site Name: Foulness Location (Lat & Long): 51 34 26 N 00 55 17 E JNCC Site Code: UK9009246 Size (ha) : 10968.9 Designation: SPA</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<ul style="list-style-type: none"> ■ Brant Goose (<i>Branta bernicla bernicla</i>) 4.4% of the population 5 year peak mean 1991/92-1995/96 ■ Red Knot (<i>Calidris canutus</i>) 11.7% of the population 5 year peak mean 1991/92-1995/96 ■ Eurasian Oystercatcher (<i>Haematopus ostralegus</i>) 1.3% of the population 5 year peak mean 1991/92-1995/96 ■ Grey Plover (<i>Pluvialis squatarola</i>) 2.5% of the population 5 year peak mean 1991/92-1995/96 ■ Common Redshank (<i>Tringa totanus</i>) 0.8% of the population 5 year peak mean 1991/92-1995/96 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ 107999 waterfowl (5 year peak mean 01/04/1998) ■ Including: Brant Goose (<i>Branta bernicla bernicla</i>) , Eurasian Oystercatcher (<i>Haematopus ostralegus</i>), Avocet (<i>Recurvirostra avosetta</i>) , Grey Plover (<i>Pluvialis squatarola</i>) , Red Knot (<i>Calidris Canutus</i>) , Bar-tailed Godwit (<i>Limosa lapponica</i>) , Common Redshank (<i>Tringa totanus</i>).
<p>Conservation Objectives</p>	<p>With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);</p> <p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p> <p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> ■ The extent and distribution of the habitats of the qualifying features; ■ The structure and function of the habitats of the qualifying features; ■ The supporting processes on which the habitats of the qualifying features rely;

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
	<ul style="list-style-type: none"> ■ The populations of the qualifying features; ■ The distribution of the qualifying features within the site.
Component SSSIs	<ul style="list-style-type: none"> ■ Foulness SSSI
Vulnerabilities (includes existing pressures and trends)	<p>Much of the area is owned by the Ministry of Defence and is not, therefore, subject to development pressures or public disturbance.</p> <p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> ■ 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. <p>Disturbance</p> <ul style="list-style-type: none"> ■ The cockle 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. <p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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.

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 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	<p>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 <i>Enteromorpha</i> and some Eelgrass <i>Zostera</i> 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.</p>
Qualifying Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> ■ Avocet (<i>Recurvirostra avosetta</i>) (Western Europe/Western Mediterranean - breeding) 6.2% of the GB breeding population 5 year mean, 1988-1992 ■ Little Tern (<i>Sterna albifrons</i>) (Eastern Atlantic - breeding) 1.2% of the GB breeding population 5 year mean, 1991-1995 ■ <i>Sterna hirundo</i> (Northern/Eastern Europe - breeding) 0.6% of the GB breeding population Count, as at 1994

<p>Site Name: Foulness Location (Lat & Long): 51 34 26 N 00 55 17 E JNCC Site Code: UK9009246 Size (ha) : 10968.9 Designation: SPA</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Bewick's swan (<i>Cygnus columbianus bewickii</i>) (Western Siberia/North-eastern & North-western Europe) 0.2% of the GB population 5 year peak mean 1991/92-1995/96 ■ Avocet (<i>Recurvirostra avosetta</i>) (Western Europe/Western Mediterranean - breeding) 24.7% of the GB population 5 year peak mean 1991/92-1995/96 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Northern Pintail (<i>Anas acuta</i>) (North-western Europe) 1.2% of the population 5 year peak mean 1991/92-1995/96 ■ Northern Shoveler (<i>Anas clypeata</i>) (North-western/Central Europe) 0.8% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ■ Common Teal (<i>Anas crecca</i>) (North-western Europe) 1.3% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ■ Eurasian Wigeon (<i>Anas Penelope</i>) (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 (<i>Arenaria interpres</i>) (Western Palearctic - wintering) 0.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ■ Brant Goose (<i>Branta bernicla bernicla</i>) (Western Siberia/Western Europe) 1.1% of the population 5 year peak mean 1991/92-1995/96 ■ Dunlin (<i>Calidris alpina alpina</i>) (Northern Siberia/Europe/Western Africa) 1.9% of the population 5 year peak mean 1991/92-1995/96 ■ Red Knot (<i>Calidris canutus</i>) (North-eastern Canada/Greenland/Iceland/Northwestern Europe) 0.2% of the population

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
	<p>5 year peak mean 1991/92-1995/96</p> <ul style="list-style-type: none"> ■ Ringed Plover (<i>Charadrius hiaticula</i>) (Europe/Northern Africa - wintering) 1.6% of the population 5 year peak mean 1991/92-1995/96 ■ Eurasian Oystercatcher (<i>Haematopus ostralegus</i>) (Europe & Northern/Western Africa) 1% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ■ Black-tailed Godwit (<i>Limosa limosa islandica</i>) (Iceland – breeding) 12.9% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ■ Eurasian Curlew (<i>Numenius arquata</i>) (Europe - breeding) 1.7% of the population in Great Britain 5 year peak mean 1991/92-1995/96 ■ Grey Plover (<i>Pluvialis squatarola</i>) (Eastern Atlantic - wintering) 2% of the population 5 year peak mean 1991/92-1995/96 ■ Common Shelduck (<i>Tadorna tadorna</i>) (North-western Europe) 1.5% of the population 5 year peak mean 1991/92-1995/96 ■ Greenshank (<i>Tringa nebularia</i>) (Europe/Western Africa) 2.6% of the population in Great Britain No count period specified. ■ Common Redshank (<i>Tringa totanus</i>) (Eastern Atlantic - wintering) 2.1% of the population 5 year peak mean 1991/92-1995/96 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS</p> <p>During the breeding season the area regularly supports:</p> <ul style="list-style-type: none"> ■ <i>Alcedo atthis</i>, <i>Anas platyrhynchos</i>, <i>Asio flammeus</i>, <i>Aythya ferina</i>, <i>Circus cyaneus</i>, <i>Falco columbarius</i>, <i>Gavia stellata</i>, <i>Phalacrocorax carbo</i>, <i>Vanellus vanellus</i>.

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
	<p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> 65496 waterfowl (5 year peak mean 01/04/1998) Including: <i>Gavia stellata</i> , <i>Podiceps cristatus</i> , <i>Phalacrocorax carbo</i> , <i>Cygnus columbianus bewickii</i> , <i>Branta bernicla bernicla</i> , <i>Tadorna tadorna</i> , <i>Anas penelope</i> , <i>Anas crecca</i> , <i>Anas platyrhynchos</i> , <i>Anas acuta</i> , <i>Anas clypeata</i> , <i>Aythya ferina</i> , <i>Haematopus ostralegus</i> , <i>Recurvirostra avosetta</i> , <i>Charadrius hiaticula</i> , <i>Pluvialis squatarola</i> , <i>Vanellus vanellus</i> , <i>Calidris canutus</i> , <i>Calidris alpina alpina</i> , <i>Limosa limosa islandica</i> , <i>Numenius arquata</i> , <i>Tringa totanus</i> , <i>Tringa nebularia</i> , <i>Arenaria interpres</i>.
Conservation Objectives	<p>With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);</p> <p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p> <p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.
Component SSSIs	<ul style="list-style-type: none"> Medway and Estuary Marshes SSSI

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
Vulnerabilities (includes existing pressures and trends)	<p>Habitat fragmentation/Loss</p> <ul style="list-style-type: none"> ■ 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 <p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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.

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	<p>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.</p>
Qualifying Features	<p>ARTICLE 4.1 QUALIFICATION (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Hen Harrier (<i>Circus cyaneus</i>) 1% of the population in Great Britain Five year peak mean for 1993/94 to 1997/98 ■ Avocet (<i>Recurvirostra avosetta</i>) (Western Europe/Western Mediterranean - breeding) <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC)</p> <p>Over winter the area regularly supports:</p> <ul style="list-style-type: none"> ■ Dunlin (<i>Calidris alpina alpina</i>)(Northern Siberia/Europe/Western Africa) 2.1% of the population Five year peak mean for 1993/94 to 1997/98 ■ Red Knot (<i>Calidris canutus</i>) (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 (<i>Limosa limosa islandica</i>) (Iceland - breeding) 2.4% of the population Five year peak mean for 1993/94 to 1997/98 ■ Grey Plover (<i>Pluvialis squatarola</i>) (Eastern Atlantic - wintering) 1.7% of the population Five year peak mean for

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>1993/94 to 1997/98</p> <ul style="list-style-type: none"> Common Redshank (<i>Tringa totanus</i>) (Eastern Atlantic - wintering) 2.2% of the population Five year peak mean for 1993/94 to 1997/98 <p>On passage the area regularly supports:</p> <ul style="list-style-type: none"> Ringed Plover (<i>Charadrius hiaticula</i>) (Europe/Northern Africa - wintering) 2.6% of the population Five year peak mean for 1993/94 to 1997/98 <p>ARTICLE 4.2 QUALIFICATION (79/409/EEC): AN INTERNATIONALLY IMPORTANT ASSEMBLAGE OF BIRDS Over winter the area regularly supports:</p> <ul style="list-style-type: none"> 75019 waterfowl (5 year peak mean 21/03/2000) Including: <i>Recurvirostra avosetta</i> , <i>Pluvialis squatarola</i> , <i>Calidris canutus</i> , <i>Calidris alpina alpina</i> , <i>Limosa limosa islandica</i> , <i>Tringa totanus</i> .
<p>Conservation Objectives</p>	<p>With regard to the individual species and/or assemblage of species for which the site has been classified (the Qualifying Features);</p> <p>Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive.</p> <p>Subject to natural change, to maintain or restore:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features;

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
	<ul style="list-style-type: none"> ■ The structure and function of the habitats of the qualifying features; ■ The supporting processes on which the habitats of the qualifying features rely; ■ The populations of the qualifying features; ■ The distribution of the qualifying features within the site.
Component SSSIs	<ul style="list-style-type: none"> ■ South Thames Estuary And Marshes SSSI ■ Medway Estuary & Marshes SSSI ■ Foulness SSSI ■ Benfleet & Southend Marshes SSSI ■ Mucking Flats and Marshes SSSI
Vulnerabilities (includes existing pressures and trends)	<p>Habitat fragmentation/ loss</p> <ul style="list-style-type: none"> ■ 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. <p>Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Water Pollution</p>

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
	<ul style="list-style-type: none"> Studies by the Environment Agency indicate that the waters in the Thames estuary are hyper-nutriented for nitrogen and phosphorus.

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	<p>Ramsar criterion 5</p> <p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> 32867 waterfowl (5 year peak mean 1998/99-2002/2003) <p>Ramsar criterion 6 - species/populations occurring at levels of international importance.</p> <p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 4532 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3) <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Grey plover (<i>Pluvialis squatarola</i>) E Atlantic/W Africa - wintering 1710 individuals, representing an average of 3.2% of

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
	<p>the GB population (5 year peak mean 1998/9-2002/3)</p> <ul style="list-style-type: none"> Red knot (<i>Calidris canutus islandica</i>) W & Southern Africa (wintering) 6307 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3) <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Dunlin (<i>Calidris alpina alpina</i>) W Siberia/W Europe 17591 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	<ul style="list-style-type: none"> None available, however, please refer to the conservation objectives for the Benfleet and Southend Marshes SPA.
Component SSSIs	<ul style="list-style-type: none"> Benfleet and Southend Marshes
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> 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. <p>Increased Water Pollution</p> <ul style="list-style-type: none"> 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.

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Non-physical Disturbance</p> <ul style="list-style-type: none"> ■ 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 provisions of the Habitat Regulations. ■ The information sheet for the Ramsar identifies <p>Biological Disturbance</p> <ul style="list-style-type: none"> ■ Introduction of microbial pathogens. ■ Introduction of non-native species and translocation. ■ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

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	<p>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 scarce plants and a nationally important assemblage of rare invertebrates. There are 16 British Red Data Book species and 94 notable and local species.</p>	
Qualifying Features	<p>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.</p> <p>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 <i>Paracymus aeneus</i>; Vulnerable: a damselfly <i>Lestes dryas</i>, the flies <i>Aedes flavescens</i>, <i>Erioptera bivittata</i>, <i>Hybomitra expollicata</i> and the spiders <i>Heliophanus auratus</i> and <i>Trichopterna cito</i>; Rare: the beetles <i>Baris scolopacea</i>, <i>Philonthus punctus</i>, <i>Graptodytes bilineatus</i> and <i>Malachius vulneratus</i>, the flies <i>Campsicemus magius</i> and <i>Myopites eximia</i>, the moths <i>Idaea ochrata</i> and <i>Malacosoma castrensis</i> and the spider <i>Euophrys</i>.</p> <p>Ramsar criterion 3 This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.</p> <p>Ramsar criterion 5</p>	

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> 105061 waterfowl (5 year peak mean 1998/99-2002/2003) <p>Ramsar criterion 6 – species/populations occurring at levels of international importance.</p> <p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 8689 individuals, representing an average of 4% of the population (5 year peak mean 1998/9- 2002/3) Grey plover (<i>Pluvialis squatarola</i>) 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 (<i>Calidris alpina alpina</i>) 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 (<i>Limosa limosa islandica</i>) Iceland/W Europe 2174 individuals, representing an average of 6.2% of the population (5 year peak mean 1998/9-2002/3) <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Common shelduck (<i>Tadorna tadorna</i>) NW 3141 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)Europe European golden plover (<i>Pluvialis apricaria apricaria</i>) 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

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
	<ul style="list-style-type: none"> Common redshank (<i>Tringa totanus totanus</i>) 4169 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	<ul style="list-style-type: none"> None available, however, please refer to the conservation objectives for the Blackwater Estuary SPA and SAC.
Component SSSIs	<ul style="list-style-type: none"> Blackwater Estuary SSSI
	Blackwater Estuary SSSI
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss</p> <ul style="list-style-type: none"> 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. <p>Nutrient enrichment</p> <ul style="list-style-type: none"> 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. <p>Disturbance</p> <ul style="list-style-type: none"> Disturbance through recreational activities is being minimised through restrictions on jet ski use. <p>Drought</p> <ul style="list-style-type: none"> 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.

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	<p>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.</p>
Qualifying Features	<p>Ramsar criterion 2</p> <p>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 <i>Bupleurum tenuissimum</i>, divided sedge <i>Carex divisa</i>, sea barley <i>Hordeum marinum</i>, golden-samphire <i>Inula crithmoides</i>, laxflowered sea-lavender <i>Limonium humile</i>, curved hard-grass <i>Parapholis incurva</i>, Borrer's saltmarsh grass <i>Puccinellia fasciculata</i>, stiff saltmarsh grass <i>Puccinellia rupestris</i>, spiral tasselweed <i>Ruppia cirrhosa</i>, one-flowered glasswort <i>Salicornia pusilla</i>, small cord-grass <i>Spartina maritima</i>, shrubby seablite <i>Suaeda vera</i> and sea clover <i>Trifolium squamosum</i>. Several important invertebrate species are also present on the site, including scarce emerald damselfly <i>Lestes dryas</i>, the shorefly <i>Parydroptera discomyzina</i>, the rare soldier fly <i>Stratiomys singularior</i>, the large horsefly <i>Hybomitra expollicata</i>, the beetles <i>Graptodytes bilineatus</i> and <i>Malachius vulneratus</i>, the ground lackey moth <i>Malacosoma castrensis</i> and <i>Eucosoma catoprana</i>.</p> <p>Ramsar criterion 5</p> <p>Assemblages of international importance: Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ 16970 waterfowl (5 year peak mean 1998/99-2002/2003)

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
	<p>Ramsar criterion 6 - species/populations occurring at levels of international importance.</p> <p>Qualifying Species/populations (as identified at designation): Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 2103 individuals, representing an average of 2.1% of the GB population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	<ul style="list-style-type: none"> ■ None available, however, please refer to the conservation objectives for the Crouch and Roach Estuaries SPA.
Component SSSIs	<ul style="list-style-type: none"> ■ Crouch and Roach Estuaries
SAC Condition Assessment	<p>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.</p>
Vulnerabilities (includes existing pressures and trends)	<p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> ■ 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. <p>Increased Water Pollution</p> <ul style="list-style-type: none"> ■ 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.

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Non-physical Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Biological Disturbance</p> <ul style="list-style-type: none"> ■ Introduction of microbial pathogens. ■ Introduction of non-native species and translocation. ■ Selective extraction of species (e.g. bait digging, wildfowl, commercial and recreational fishing).

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	<p>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.</p>
Qualifying Features	<p>Ramsar criterion 1</p> <ul style="list-style-type: none"> 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. <p>Ramsar criterion 2</p> <ul style="list-style-type: none"> Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants: sea kale <i>Crambe maritima</i>, sea barley <i>Hordeum marinum</i>, golden samphire <i>Inula crithmoides</i>, lax flowered sea lavender <i>Limonium humile</i>, the glassworts <i>Sarcocornia perennis</i> and <i>Salicornia pusilla</i>, small cord-grass <i>Spartina maritima</i>, shrubby sea-blite <i>Suaeda vera</i>, and the eelgrasses <i>Zostera angustifolia</i>, <i>Z. marina</i> and <i>Z. noltei</i>. The invertebrate fauna includes the following Red Data Book species: a weevil <i>Baris scolopacea</i>, a horsefly <i>Atylotus latistriatus</i> and a jumping spider <i>Euophrys browni</i>. <p>Ramsar criterion 3</p> <ul style="list-style-type: none"> This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. <p>Ramsar criterion 5</p> <p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p>

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
	<ul style="list-style-type: none"> 43828 waterfowl (5 year peak mean 1998/99-2002/2003) <p>Ramsar criterion 6 – species/populations occurring at levels of international importance.</p> <p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 2000 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3) Grey plover (<i>Pluvialis squatarola</i>) 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 (<i>Calidris canutus islandica</i>) W & Southern Africa 1998/9-2002/3) 14528 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/9-2002/3) <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Bar-tailed godwit (<i>Limosa lapponica lapponica</i>) W Palearctic 2593 individuals, representing an average of 2.1% of the population (5 year peak mean 1998/9-2002/3)
Conservation Objectives	None available, however, please refer to the conservation objectives for the Dengie SPA
Component SSSIs	<ul style="list-style-type: none"> Dengie SSSI
Vulnerabilities (includes	Habitat Fragmentation/Loss

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
existing pressures and trends)	<ul style="list-style-type: none"> ■ 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 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. <p>Disturbance</p> <ul style="list-style-type: none"> ■ 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.

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	<p>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.</p>
Qualifying Features	<p>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.</p> <p>Ramsar criterion 2 The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates.</p> <p>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.</p> <p>Ramsar criterion 5</p> <p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ 82148 waterfowl (5 year peak mean 1998/99-2002/2003) <p>Ramsar criterion 6 – species/populations occurring at levels of international importance.</p>

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
	<p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> Common redshank (<i>Tringa totanus totanus</i>) 2586 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3) <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 6475 individuals, representing an average of 3% of the population (5 year peak mean 1998/9- 2002/3) Eurasian oystercatcher (<i>Haematopus ostralegus ostralegus</i>) 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 (<i>Pluvialis squatarola</i>) 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 (<i>Calidris canutus islandica</i>) 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 (<i>Limosa lapponica lapponica</i>) 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	<ul style="list-style-type: none"> Foulness
Vulnerabilities (includes existing pressures and trends)	Much of the area is owned by the Ministry of Defence and is not, therefore, subject to development pressures or public disturbance.

<p>Site Name: Foulness Location Grid Ref: 51 34 25 N 00 55 17 E JNCC Site Code: UK11026 Size (ha): 10932.95 Designation: Ramsar</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Habitat Loss and Fragmentation</p> <ul style="list-style-type: none"> ■ 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. <p>Disturbance</p> <ul style="list-style-type: none"> ■ The cockle 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. <p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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.

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	<p>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.</p>
Qualifying Features	<p>Ramsar criterion 2</p> <ul style="list-style-type: none"> ■ The site supports a number of species of rare plants and animals. The site holds several nationally scarce plants, including sea barley <i>Hordeum marinum</i>, curved hard-grass <i>Parapholis incurva</i>, annual beard-grass <i>Polypogon monspeliensis</i>, Borrer's saltmarsh-grass <i>Puccinellia fasciculata</i>, slender hare's-ear <i>Bupleurum tenuissimum</i>, sea clover <i>Trifolium squamosum</i>, saltmarsh goose-foot <i>Chenopodium chenopodioides</i>, golden samphire <i>Inula crithmoides</i>, perennial glasswort <i>Sarcocornia perennis</i> and one-flowered glasswort <i>Salicornia pusilla</i>. ■ 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 <i>Polistichus connexus</i>, a fly <i>Cephalops perspicuus</i>, a dancefly <i>Poecilobothrus ducalis</i>, a fly <i>Anagnota collini</i>, a weevil <i>Baris scolopacea</i>, a water beetle <i>Berosus spinosus</i>, a beetle <i>Malachius vulneratus</i>, a rove beetle <i>Philonthus punctus</i>, the ground lackey moth <i>Malacosoma castrensis</i>, a horsefly <i>Atylotus latistriatus</i>, a fly <i>Campsicnemus magius</i>, a soldier beetle, <i>Cantharis fusca</i>, and a crane fly <i>Limonia danica</i>. A significant number of non-wetland British Red Data Book species also occur. <p>Ramsar criterion 5</p> <p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ 47637 waterfowl (5 year peak mean 1998/99-2002/2003)

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<p>Ramsar criterion 6 – species/populations occurring at levels of international importance:</p> <p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> ■ Grey plover , <i>Pluvialis squatarola</i>, 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 (<i>Tringa totanus totanus</i>) 3709 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3) <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ Dark-bellied brent goose (<i>Branta bernicla bernicla</i>) 2575 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3) ■ Common shelduck (<i>Tadorna tadorna</i>) NW Europe 2627 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3) ■ Northern pintail (<i>Anas acuta</i>) NW Europe 1118 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3) ■ Ringed plover (<i>Charadrius hiaticula</i>) 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 (<i>Calidris canutus islandica</i>) W & Southern Africa (wintering) 3021 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3) ■ Dunlin , <i>Calidris alpina alpina</i>, W Siberia/W Europe 8263 individuals, representing an average of 1.4% of the GB

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
	<p>population (5 year peak mean 1998/9-2002/3)</p> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in spring/autumn:</p> <p>Black-tailed godwit (<i>Limosa limosa islandica</i>) Iceland/W Europe 721 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)</p>
Conservation Objectives	<p>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).</p> <p>Habitat Types represented (Biodiversity Action Plan categories)</p> <ul style="list-style-type: none"> ■ Improved Grassland ■ Fen, Marsh and Swamp ■ Littoral Sediment ■ Coastal Lagoon <p>Geological features (Geological SiteTypes) N/A</p> <p>(*) or restored to favourable condition if features are judged to be unfavourable.</p>
Component SSSIs	<ul style="list-style-type: none"> ■ Medway and Estuary Marshes SSSI

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
<p>Vulnerabilities (includes existing pressures and trends)</p>	<p>Habitat fragmentation/Loss</p> <ul style="list-style-type: none"> ■ 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 <p>Physical Disturbance</p> <ul style="list-style-type: none"> ■ 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.

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	<p>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.</p>
Qualifying Features	<p>Ramsar criterion 2</p> <ul style="list-style-type: none"> ■ 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. <p>Ramsar criterion 5</p> <p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ 45118 waterfowl (5 year peak mean 1998/99-2002/2003) <p>Ramsar criterion 6 - species/populations occurring at levels of international importance.</p> <p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> ■ Ringed plover (<i>Charadrius hiaticula</i>) Europe/Northwest Africa 595 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)

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
	<ul style="list-style-type: none"> ■ Black-tailed godwit (<i>Limosa limosa islandica</i>) Iceland/W Europe 1640 individuals, representing an average of 4.6% of the population (5 year peak mean 1998/9-2002/3) <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> ■ Grey plover (<i>Pluvialis squatarola</i>) 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 (<i>Calidris canutus islandica</i>) W & Southern Africa (wintering) 7279 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3) ■ Dunlin (<i>Calidris alpina alpina</i>) 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 (<i>Tringa totanus totanus</i>) 1178 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9- 2002/3)
Conservation Objectives	None available, however, please refer to the conservation objectives for the Thames Estuary & Marshes SPA
Component SSSIs	<ul style="list-style-type: none"> ■ South Thames Estuary And Marshes SSSI ■ Medway Estuary & Marshes SSSI ■ Foulness SSSI ■ Benfleet & Southend Marshes SSSI ■ Mucking Flats and Marshes SSSI
Vulnerabilities (includes existing pressures and trends)	<p>Habitat fragmentation/ loss</p> <ul style="list-style-type: none"> ■ 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.

<p>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</p>	<p>Habitats Regulations Assessment: Data Proforma</p>
	<ul style="list-style-type: none"> ■ 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. <p>Disturbance</p> <ul style="list-style-type: none"> ■ 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. <p>Water Pollution</p> <ul style="list-style-type: none"> ■ Studies by the Environment Agency indicate that the waters in the Thames estuary are hyper-nutriented for nitrogen and phosphorus.

Appendix 2 – Plans and Programmes Review

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Regional

1 East of England Plan – The Revision to the Regional Spatial Strategy for the East of England 2008¹

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
<p>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.</p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution 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. <ul style="list-style-type: none"> Coastal Squeeze Modified Drainage – as a result of proposed development altering surface and groundwater flow.

¹ The East of England Plan was revoked on 3 January 2013.

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Document Details	Potential impacts that could cause 'in-combination' effects
<ul style="list-style-type: none"> • 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. • 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. 	<p>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.</p>

Sub-Regional/County

2 Essex Transport Strategy: the Local Transport Plan for Essex (June 2011)

Plan Type	Local Transport Plan
Plan Owner/Competent Authority	Essex County Council
Currency	2011 – 2026
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
<p>The Strategy sets out the Council's vision for transport the outcomes they aim to achieve over a fifteen year period, policies for transport and the broad approach to implementing these.</p> <p>Transport priorities:</p> <p>Strategic transport priorities</p> <ul style="list-style-type: none"> Identifying an agreed and deliverable solution to address congestion at the Thames Crossing and adjacent M25 junction 30/31; Lobbying Government for enhancements to the A12; Lobbying Government for enhancements to the A120 to access Harwich port and between the A12 and Braintree; Lobbying Government for additional capacity on the Great Eastern Main Line and West Anglia mainline to accommodate growing commuter demand, the provision of competitive journey times for Essex Thameside services, and an enhanced local role in the rail franchise process. 	<ul style="list-style-type: none"> Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution 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. <ul style="list-style-type: none"> Coastal Squeeze Modified Drainage – as a result of proposed development altering surface and groundwater flow.

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Document Details	Potential impacts that could cause 'in-combination' effects
<p>Countywide priorities</p> <ul style="list-style-type: none"> • Reducing the number of people killed or seriously injured on Essex roads; • Continuing to work with the Essex Casualty and Congestion Board; • Working with partners to promote a safe and secure travelling environment; • Maintaining the Essex highway network and other transport assets; • Keeping the transport network safe and operational; • Managing the impact of planned works on the highway network. <p>Priorities for Thames Gateway</p> <ul style="list-style-type: none"> • Providing for and promoting access by sustainable modes of travel to new development areas; • Improving public transport links within and between the Thames Gateway towns (including the A13 Passenger Transport Corridor and set schemes); • Improving the availability of sustainable travel choices and raising public awareness of these through travel planning; • Addressing maintenance, signing and broken links in the cycle network to improve conditions for cyclists and create a safer atmosphere for cycling. • Improving the attractiveness and ease of use of public spaces to support regeneration; • Improving journey time reliability on strategic inter-urban routes including the A127, A129, A130 and the A13. <p>Improving access to London Gateway port and Southend Airport.</p>	

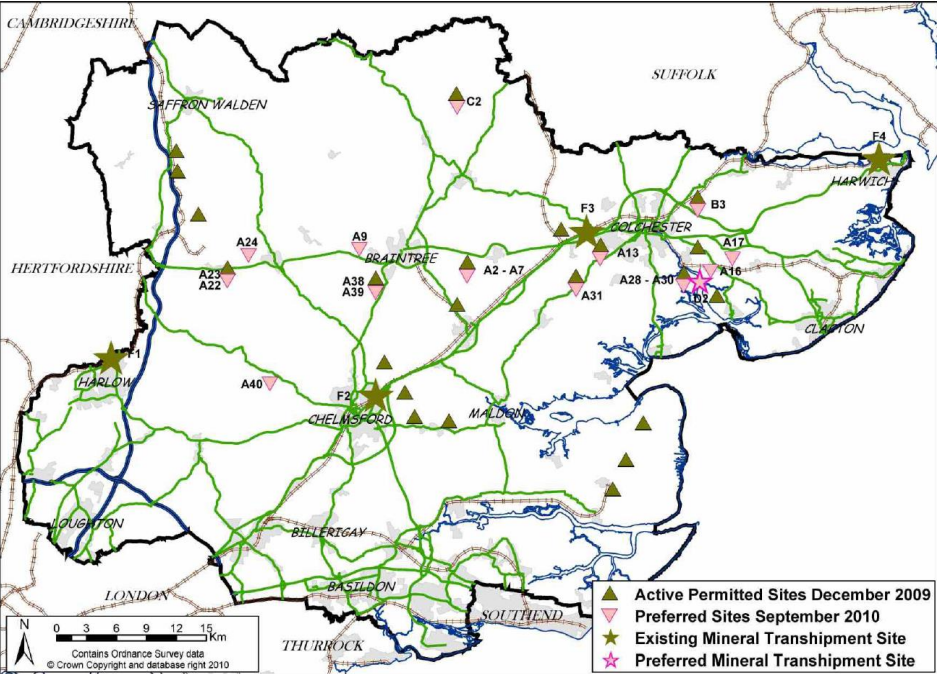
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3 Essex County Council Minerals Development Document: Preferred Approach Paper 2010

Plan Type	Minerals Development Document
Plan Owner/Competent Authority	Essex County Council
Currency	2028
Region/Geographic Coverage	Essex County Council administrative boundaries
Sector	Minerals
Related work HRA/AA	HRA Appropriate Assessment Report Oct 2010
Document Details	Potential impacts that could cause 'in-combination' effects
<p>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 2028.</p> <p>Strategic Objectives</p> <ol style="list-style-type: none"> 1. That reliance on primary mineral resources in Essex will be reduced, firstly through the more efficient use of the primary resource and reducing the amount of mineral waste; then the use of recycled aggregates. 2. To identify and safeguard the following resources in Essex: <ul style="list-style-type: none"> • Sand and gravel, chalk, silica sand, brickearth and brick clay which have potential future economic and/or conservation value i.e., unnecessary sterilisation should be avoided; • Existing and potential secondary processing and aggregate recycling facilities that are of strategic importance for future mineral supply, to ensure these are not compromised by new development. 3. To identify sites and policy criteria for a steady and adequate supply of minerals to assist in the economic growth of Essex and to meet the agreed sub-regional aggregate apportionment. 4. To afford protection to designated sites of landscape, wildlife, geodiversity, cultural and heritage importance, commensurate with their importance, from mineral operators. 	<p>The AA concluded that the MDD Preferred Approach has established a sufficient policy framework to enable the delivery of measures to either avoid or adequately mitigate adverse effects on the integrity of European sites.</p>

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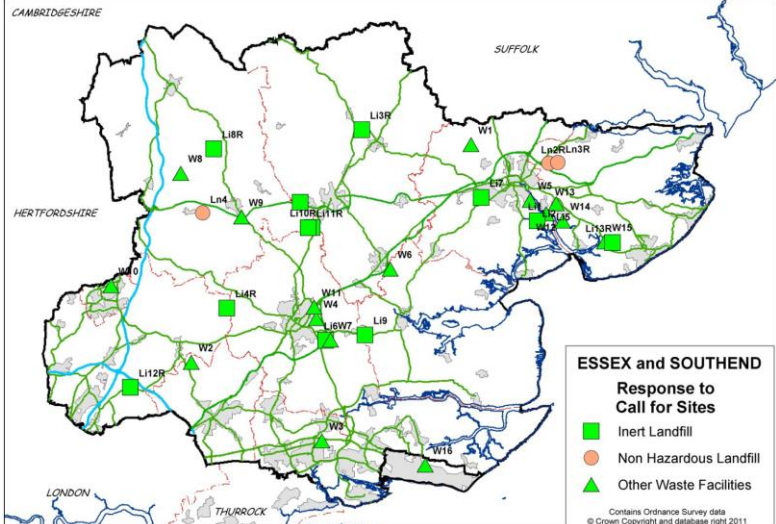
Rayleigh Area Action Plan Submission Document

Document Details	Potential impacts that could cause 'in-combination' effects
<p>5. To achieve more sustainable minerals transportation by giving preference to local sources of aggregate, optimise how sites access the strategic highway network and enable the long haul movement of minerals by rail and water.</p> <p>6. To secure high quality restoration of extraction sites with appropriate aftercare to achieve appropriate and beneficial after-uses.</p> <p>7. To maintain and/or enhance landscape, biodiversity and residential amenity for people living in proximity to minerals development. Restoration of mineral workings will deliver tangible benefits to affected local communities.</p> 	

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4 Essex County Council Waste Development Document: Preferred Approach Paper 2011

Plan Type	Waste Local Plan
Plan Owner/Competent Authority	Essex County Council and Southend-on-Sea Borough Council
Currency	2031
Region/Geographic Coverage	Essex County Council and Southend-on-Sea Borough Council boundaries
Sector	Waste
Related work HRA/AA	HRA Screening Report September 2011
Document Details	Potential impacts that could cause 'in-combination' effects
<p>The purpose of this WDD: Preferred Approach is to outline the Authorities' preferred policy approach for managing waste within the Plan area.</p> 	<p>The HRA concluded that no Preferred Policy Approaches are likely to have significant effects on any European sites.</p>

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5 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
Related work HRA/AA	None
Document Details	Potential impacts that could cause 'in-combination' effects
<p>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.</p> <ul style="list-style-type: none"> • 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; 	<p>The Water Cycle Study identifies that there is <i>“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.”</i> However, there is still the <i>potential for discharges of wastewater to have an impact</i> on European sites.</p>

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Document Details	Potential impacts that could cause 'in-combination' effects
<ul style="list-style-type: none">• 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.	

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6 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 2009²
Document Details	Potential impacts that could cause 'in-combination' effects
<p>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.</p> <p>Some key actions for the Combined Essex Catchment:</p> <ul style="list-style-type: none"> • Installation of elver passes to provide habitat improvement in river channel and eel migration. Schemes located at :Kings Mill, Stonham Back Cut, Cuton Back Cut, Barnes Mill, Broomfield Mill, Langleys Weir, Howe ST. Mill, Wickham Place, Blue Mills, Greys Mill, Easterford Mill, Blackwater Mill, Bradwell, Stisted Mill, Convent Lane Wiers, Cooks Mill, Ford ST. Mill, Chappel Mill, Chalkney Mill, Earls Colne Mill, Townsford Mill, Hulls Mill, Alderford Mill. • In response to increasing pesticide concentrations in the Rivers Stour, Chelmer and Blackwater Essex & Suffolk Water has appointed two catchment Officers to work with farmers, growers, landowners and agronomists and other pesticide users in the catchments with the aim of reducing pesticides entering watercourses. • Floating pennywort removal projects. 	<p>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 have a significant effect.</p>

² EA Website: Anglian River Basin Management Plan documents submitted to Ministers for approval:
<http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/anglian/Intro.aspx>

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7 Essex and Suffolk Water Final Water Resources Management Plan 2010 – 2035

Plan Type	Water Resource Management Plan
Plan Owner/Competent Authority	Essex and Suffolk Water
Currency	2010 – 2035
Region/Geographic Coverage	Essex and Suffolk Resource Zones
Sector	Water
Related work HRA/AA	Available as part of the Final WRMP
Document Details	Potential impacts that could cause ‘in-combination’ effects
<p>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.</p> <p>Essex Resource Zone Strategy</p> <p>Abberton Scheme</p> <p>The Company will continue its strategy for implementing the Abberton Scheme. Currently all the necessary planning consents have been obtained and a number of the environmental enhancements around the western section have been completed. ESW will continue to work closely with the Environment Agency and other groups to deliver the scheme.</p> <p>Baseline Metering</p> <p>ESW is committed to achieving universal metering in Essex by 2020. To do this it intends to apply for powers to compulsory meter from 2015 onwards.</p>	<p>In terms of Essex & Suffolk Water's WRMP Final Planning Solution, only the Abberton Scheme was identified as having the potential to have effects on European sites, namely the Ouse Washes, The Wash, the Stour Estuary and Abberton Reservoir. The HRA concluded that the scheme would not significantly adversely effect the Ouse Washes, The Wash and the Stour Estuary. However, further studies were undertaken to inform an Appropriate Assessment for Abberton Reservoir. Following liaison with Natural England, these studies were also able 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."</p>

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8 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
<p>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.</p> <p>The South Essex Catchment has been split into 5 Water Resource Management Units (WRMU). The CAMS update assesses:</p> <ul style="list-style-type: none"> • WRMU 1 as 'water available' • WRMU 2 as 'water available' • WRMU 3 as 'water available' • WRMU 4 as 'no water available' • WRMU 5 as 'no water available' 	<p>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.</p>

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9 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
<p>Vision</p> <p>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.</p> <p>Essex will become:</p> <ul style="list-style-type: none"> • An area where people visit rather than 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. <p>The Strategic Aims</p> <ol style="list-style-type: none"> 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. 	<p>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 affect 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.</p>

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Local

10 Rochford District Council Core Strategy (adopted) Dec 2011

Plan Type	Core Strategy, Development Plan Document																												
Plan Owner/Competent Authority	Rochford District Council																												
Currency	N/A																												
Region/Geographic Coverage	Rochford District Council administrative boundaries																												
Sector	Planning																												
Related work HRA/AA	Available																												
Document Details																													
The residential envelope of existing settlements will be extended in the areas set out below, to contribute to a five year supply of housing land in the period to 2015, and between 2015 and 2021.																													
<table><tr><td>Area</td><td>Dwellings by 2015</td><td>Dwellings 2015-2021</td></tr><tr><td>North of London Road, Rayleigh</td><td></td><td>550</td></tr><tr><td>West Rochford</td><td>450</td><td>150</td></tr><tr><td>West Hockley</td><td>50</td><td></td></tr><tr><td>South Hawkwell</td><td>175</td><td></td></tr><tr><td>East Ashingdon</td><td>100</td><td></td></tr><tr><td>South West Hullbridge</td><td></td><td>250</td></tr><tr><td>South Canewdon</td><td></td><td>60</td></tr><tr><td>Total</td><td>775</td><td>1,010</td></tr></table>			Area	Dwellings by 2015	Dwellings 2015-2021	North of London Road, Rayleigh		550	West Rochford	450	150	West Hockley	50		South Hawkwell	175		East Ashingdon	100		South West Hullbridge		250	South Canewdon		60	Total	775	1,010
Area	Dwellings by 2015	Dwellings 2015-2021																											
North of London Road, Rayleigh		550																											
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South West Hullbridge		250																											
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Total	775	1,010																											
Potential impacts that could cause ‘in-combination’ effects																													
<p>The HRA Screening report found that 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.</p> <p>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.</p> <p>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.</p>																													

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Document Details	Potential impacts that could cause 'in-combination' effects										
<p>Post-2021, the residential envelope of existing settlements will be extended in the following areas (as indicated on the Key Diagram) to deliver the following approximate number of units post-2021.</p> <table border="1"> <thead> <tr> <th>Area</th><th>Dwellings post-2021</th></tr> </thead> <tbody> <tr> <td>South East Ashingdon</td><td>500</td></tr> <tr> <td>South West Hullbridge</td><td>250</td></tr> <tr> <td>West Great Wakering</td><td>250</td></tr> <tr> <td>Total</td><td>1,000</td></tr> </tbody> </table> <p>The Council will support:</p> <ul style="list-style-type: none"> the development of Cherry Orchard Jubilee County Park; the development of Wallasea Island Wild Coast Project; the enhancement of the District's commercial centres; the development of an Eco-Enterprise Centre; the development of a skills training academy; the enhancement of London Southend Airport; the development and growth of the voluntary sector; the development and growth of home-working; and the protection and enhancement of the role of small and medium sized businesses. 	Area	Dwellings post-2021	South East Ashingdon	500	South West Hullbridge	250	West Great Wakering	250	Total	1,000	<p>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.</p> <p>This is due to a number of uncertainties, including data limitations and the implementation uncertainty of the proposed development.</p> <p>The assessment makes a number of recommendations to address these uncertainties and mitigate the potential likely significant effects outlined above. The RHA Screening 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.</p>
Area	Dwellings post-2021										
South East Ashingdon	500										
South West Hullbridge	250										
West Great Wakering	250										
Total	1,000										

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11 Rochford District Council Allocations Submission Document 2013

Plan Type	Allocations, Development Plan Document
Plan Owner/Competent Authority	Rochford District Council
Currency	N/A
Region/Geographic Coverage	Rochford District Council administrative boundaries
Sector	Planning
Related work HRA/AA	Available
Document Details	Potential impacts that could cause 'in-combination' effects
<p>The Allocations document provides a structure for clear, visible, consistent decision making by ensuring that land allocations for different uses are clearly set out. The document does not just identify land for residential, educational, and employment development, sites across the District are also set out in this document for protection, including the Green Belt, Local Wildlife Sites, open spaces and the Upper Roach Valley.</p> <p>The Allocations Document will contribute to the vision and objectives in conjunction with the Core Strategy. Together, these all contribute to the overall vision for the District. The vision and objectives for the plan period have been adapted from those in the Core Strategy to reflect changing circumstances, emerging initiatives and suggestions from community involvement.</p> <p>The Allocations Submission Document, having regard to proposals and areas identified in the Core Strategy, sets out proposed policies for:</p> <ul style="list-style-type: none"> • Brownfield Residential Land Allocations • Settlement Extension Residential Land Allocations • Existing Employment Land Allocations • New Employment Land Allocations • Ecological and Landscape Allocations • Educational Land Allocations 	<p>The HRA (Screening) Report for the adopted Core Strategy considered the potential for development proposed in Rochford District, which includes development proposed in the Allocations DPD, and the surrounding areas to have likely significant in-combination effects on European sites through increased disturbance, reduced water quality and reduced water levels.</p> <p>The Allocations DPD sits below the Core Strategy in the Local Development Plan and provides further detail on how land will be allocated for development across the District.</p> <p>The screening assessed that the further detail on the location, type and capacity of development does not indicate that there are likely to be any significant in-combination effects outwith those already addressed through the HRA of the Core Strategy.</p> <p>The mitigation provided by policies in the Core Strategy and Allocations DPD as well as current regulatory processes (EA Review of Consents) will ensure that the potential impacts of proposed development on the environment are minimised. It was concluded that none of the policies/allocations in the Pre-Submission Allocations DPD are likely to have significant effects on identified European sites either alone or in-combination.</p>

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Document Details	Potential impacts that could cause 'in-combination' effects
<ul style="list-style-type: none">• Open Space and Leisure Facilities Allocations• Town Centre and Primary Shopping Area Boundary Allocations <p>National planning policy in the form of the National Planning Policy Framework or NPPF has also shaped the production of the Allocations Document.</p>	

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12 Basildon District Council Core Strategy Preferred Options Feb 2012

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
At least 6,500 new homes would be provided between 2011 and 2031, split between the Major Urban Area of Basildon (80%) and the Towns of Billericay (1.5%) and Wickford (15.5%) in accordance with the Borough's Settlement Hierarchy.	<ul style="list-style-type: none"> • Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> – Recreation – Light Pollution – 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. <ul style="list-style-type: none"> – Coastal Squeeze <p>The HRA Screening report (Jan 2012) for the Core Strategy Preferred Options found that the Plan contains suitable mitigation and concluded that there are no likely significant effects.</p>

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13 Castle Point Core Strategy Final Publication Document, 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 <ul style="list-style-type: none"> • 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 • 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 	<ul style="list-style-type: none"> • Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> – Recreation – Light Pollution – 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. <ul style="list-style-type: none"> – Coastal Squeeze

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Document Details	Potential impacts that could cause 'in-combination' effects
<p>Employment</p> <ul style="list-style-type: none"> • 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 <p>Transport</p> <p>Improvements to public transport provision in Castle Point including:</p> <ul style="list-style-type: none"> • 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. <p>Improvements to opportunities for walking and cycling in Castle Point including:</p> <ul style="list-style-type: none"> • 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. 	

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14 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
<p>Housing</p> <ul style="list-style-type: none"> 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 <p>Economic</p> <ul style="list-style-type: none"> 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. <p>Transport</p> <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution 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. <ul style="list-style-type: none"> Coastal Squeeze

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15 Maldon District Council Local Development Plan Preferred Option, 2012

Plan Type	Local Development Plan
Plan Owner/Competent Authority	Maldon District Council
Currency	N/A
Region/Geographic Coverage	Maldon District Council administrative boundaries
Sector	Planning
Related work HRA/AA	
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Housing</p> <ul style="list-style-type: none"> The Council will promote sustainable development to deliver economic growth and a minimum of 3,000 dwellings between 2014-2029 The residential supply to meet the minimum requirements is as follow: Land south of Maldon – 1,250 Land north of Heybridge – 900 Land west of Burnham-on-Crouch – 450 North Fambridge – 300 Existing commitments across the District - 300 <p>Economic</p> <p>The identified existing employment areas will be retained and protected for Class B uses and sui generis uses of an employment nature.</p> <ul style="list-style-type: none"> The Causeway, Maldon Wycke Hill, Maldon West station Industrial Park, Maldon Burnham Business Park, Burnham-on-Crouch Springfield Industrial Estate, Burnham-on-Crouch 	<p>The Maldon District Local Plan, 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:</p> <ul style="list-style-type: none"> Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution 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. <ul style="list-style-type: none"> Coastal Squeeze

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Document Details	Potential impacts that could cause 'in-combination' effects
<ul style="list-style-type: none"> • 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 <p>Transport</p> <p>The Council will work with the public and a range of partners to deliver a more sustainable transport network for the District.</p>	<p>Any development in Maldon town in particular has the potential for a negative effect due to its proximity to Blackwater estuary SPA/Ramsar. With increase housing development, economic expansion and tourism promotion there is a great potential for disturbance, pollution and land take on the SPA/Ramsar site.</p>

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16 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
<p>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.</p> <p>Housing and Employment Growth</p> <p>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.</p> <p>In addition, appropriate regeneration and growth will be focussed in the following locations:</p> <ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Disturbance – as a result of development near/adjacent to European sites, including: <ul style="list-style-type: none"> Recreation Light Pollution 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. <ul style="list-style-type: none"> Coastal Squeeze Modified Drainage – as a result of proposed development altering surface and groundwater flow.

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Document Details	Potential impacts that could cause ‘in-combination’ effects												
<ul style="list-style-type: none"> Shoeburyness – to provide an additional 1,500 jobs and 1,400 additional dwellings. Priority Urban Areas – these comprise: <ul style="list-style-type: none"> (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. <p>Provision is made for 3,350 net additional dwellings between 2001 and 2011 and for 3,150 net additional dwellings between 2011 and 2021.</p> <p>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:</p> <table style="margin-left: 40px;"> <tr> <td>Town Centre and Central Area</td><td style="text-align: right;">6,500</td></tr> <tr> <td>Shoeburyness</td><td style="text-align: right;">1,500</td></tr> <tr> <td>Seafront</td><td style="text-align: right;">750</td></tr> <tr> <td>Priority Urban Areas</td><td style="text-align: right;">2,750</td></tr> <tr> <td>Intensification</td><td style="text-align: right;">1,500</td></tr> <tr> <td style="text-align: right;">Total</td><td style="text-align: right;">13,000</td></tr> </table> <p>Transport</p> <ul style="list-style-type: none"> 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; 	Town Centre and Central Area	6,500	Shoeburyness	1,500	Seafront	750	Priority Urban Areas	2,750	Intensification	1,500	Total	13,000	<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> Benfleet and Southend Marshes SPA Foulness SPA and Essex Estuaries SAC Crouch and Roach Estuaries SPA Thames Estuary & Marshes SPA
Town Centre and Central Area	6,500												
Shoeburyness	1,500												
Seafront	750												
Priority Urban Areas	2,750												
Intensification	1,500												
Total	13,000												

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Document Details	Potential impacts that could cause 'in-combination' effects
<ul style="list-style-type: none">• 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;	

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17 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
<p>Shared Objectives</p> <ul style="list-style-type: none"> • 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 	

Rochford District Council – Habitats Regulations Assessment Report
Rayleigh Area Action Plan Submission Document

Document Details	Potential impacts that could cause 'in-combination' effects
<p>Local Objectives</p> <ul style="list-style-type: none">• 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.	

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18 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
<p>The planning application seeks permission for the following:</p> <ul style="list-style-type: none"> • 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 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. 	<p>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.</p>

Rochford District Council – Habitats Regulations Assessment Report
Rayleigh Area Action Plan Submission Document

19 London Southend Airport and Environs Joint Area Action Plan Submission Document 2013

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
<p>The shared Vision for the future development of London Southend Airport and its environs (i.e. the JAAP) is:</p> <p><i>'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'</i></p> <p>The objectives are:</p> <ul style="list-style-type: none"> • Maximising the economic benefits of a thriving airport and related activity; • Ensuring good connectivity to the development area by all modes of transport, with appropriate improvements to sustainable transport and the highway network; • Ensuring a high quality public realm and environment for residents and workers; • Maximum return on public investment through attracting inward investment; and • Efficient use and upgrading of existing employment land resources. 	<p>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.</p>

Appendix 3 – Screening Matrix

Policy Screening: Categorising the Potential Effects of the Plan (Tyldesley, 2009)	
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 assess 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.

Policy Screening: Categorising the Potential Effects of the Plan (Tyldesley, 2009)

Criteria Category	Rationale
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 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.

Rochford District Council – Local Development Framework Rayleigh Area Action Plan Submission Document

Development Management Preferred Options	Assessment Category	Potential Effect	Can the element be changed at screening stage to avoid likely significant effect (LSE)	Is an Appropriate Assessment Required?
Policy 1 – Rayleigh Area Action Plan Framework	B	No – there may be increase in traffic in the surrounding area, but the effect (i.e. disturbance) on the European site would be minimal.	N/A	No
Policy 2 – Retail Development in Rayleigh	B	No – there may be increase in traffic in the surrounding area, but the effect (i.e. disturbance) on the European site would be minimal.	N/A	No
Policy 3 – Rayleigh's Shopping Frontages	B	No – there may be increase in traffic in the surrounding area, but the effect (i.e. disturbance) on the European site would be minimal.	N/A	No
Policy 4 – Rayleigh's Character Areas	B	No – there may be increase in traffic in the surrounding area, but the effect (i.e. disturbance) on the European site would be minimal.	N/A	No
Policy 5 – Character Area A: Central High Street	A3/B	No – but any predictions made in the Sustainability Appraisal should be monitored.	N/A	No
Policy 6 – Character Area B: High Street North and Bellingham Lane	A3/B	No – but any predictions made in the Sustainability Appraisal should be monitored.	N/A	No
Policy 7 – Character Area C: High Street South and Eastwood Road	A3/ B	No – but any predictions made in the Sustainability Appraisal should be monitored.	N/A	No
Policy 8 – Character Area D: Websters Way	A3/ B	No – but any predictions made in the Sustainability Appraisal should be monitored.	N/A	No

