

Basildon Borough Council

**Core Strategy
Preferred Options Report**

Habitat Regulations Assessment

Screening Report

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Contents

1	Introduction.....	3
1.1	Background	3
1.2	The need for Habitat Regulations Assessment	3
2	Methodology	5
2.3	Methodology	5
3	HRA Screening.....	6
3.3.1	The sites to be assessed.....	6
3.3.2	Relevant characteristics of the sites likely to be affected	6
3.3.3	Potential hazards	9
3.3.4	Other plans that may give rise to combined effects.....	10
3.3.5	Potential Significant Effects.....	14
	Policies Screened out of the Assessment	14
	Policies Requiring further Evaluation.....	15
3.3.6	The Need for Additional Appropriate Assessment Stages.....	20
3.3.7	Consultation	20
4	Conclusions	21
4.1	In-Combination Effects	21
4.2	Potential Significant Effects	21
4.3	The Need for Appropriate Assessment	21
	Appendix 1 Site Characteristics.....	23
	Appendix 2 Other Plans and Programmes considered.....	42
	Appendix 3 Review of policies.....	59

1 Introduction

1.1 Background

This Habitat Regulations Assessment (HRA) Screening Report has been produced by Essex County Council on behalf of Basildon Borough Council for the Core Strategy Preferred Options Report. The Core Strategy is a strategic level document setting out the planning framework for Basildon Borough Council to 2031. The purpose of this Screening Report is to consider whether any policies contained within the Core Strategy are likely to have significant or combined effects on a site designated as part of the Natura 2000 network¹, and therefore whether a full Appropriate Assessment (AA) is required.

1.2 The need for Habitat Regulations Assessment

The European Habitats Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna provides legal protection for habitats and species of European importance (Natura 2000 sites). The Conservation of Habitats and Species Regulations 2010 (usually referred to as the 2010 Habitats Regulations) implement the Directive into national legislation.

The Directive requires a Habitat Regulations Assessment (HRA) to be carried out in relation to 'any plan or project not directly connected with or necessary to the management of the site but likely to have significant effects thereon, either individually or in combination with other plans or projects.'

HRA is designed to assess the impacts of a plan (or project) against the conservation objectives of a Natura 2000 site for any likely significant effects and to ascertain whether the proposed plan would adversely affect the integrity of the site. The general stages of HRA are set out below:

Stage 1 – Screening	To test whether a plan or project either alone or in combination with other plans and projects is likely to have a significant effect on an international site.
Stage 2 – Appropriate Assessment	If the screening stage determines that the plan or project is likely to have a significant effect then the next step is to determine whether, in view of an international sites conservation objectives, the plan or project (either alone or in combination with other projects and plans) would have an adverse effect (or risk of this) on the integrity of the site with respect to the site structure, function and conservation objectives. If adverse impacts are anticipated, potential mitigation measures to alleviate impacts should be proposed and assessed.
Stage 3 – Assessment of alternative solutions	Where a plan or project is assessed as having an adverse impact (or risk of this) on the integrity of a International site at Stage 2, there should be an examination of alternatives at Stage 3 (e.g. alternative locations and designs of development).
Stage 4 – Assessment where no alternative solutions and adverse impacts remain	In exceptional circumstance (e.g. where there are imperative reasons of overriding public interest), compensatory measures may be put in place to offset negative impacts.

This document sets out Stage 1 of the HRA on the Core Strategy. The methodology follows the guidance in The Habitats Regulations Assessment of Regional Spatial Strategies and sub-Regional Strategies (Draft Guidance) produced by Natural England in March 2007 and updated

¹ Natura 2000 sites include Special Areas of Conservation (SAC) and candidate Special Areas of Conservation (cSAC), which are designated under the Habitats Directive (92/43/EEC), and Special Protection Areas (SPA), classified under the Birds Directive (79/409/EEC).

guidance The Habitats Regulations Assessment of Local Development Documents (Revised Draft Guidance) produced by Natural England in February 2009.

2 Methodology

2.3 Methodology

In accordance with the official guidance and current practice, the screening stage of the HRA for the Basildon Core Strategy followed the method outlined below.

Task 1: Identify the Natura 2000 sites to be assessed;	In line with the Directive, the HRA should assess all Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) likely to be affected by proposals in the LDF DPD. In line with Government guidance, any Ramsar sites likely to be affected will also be assessed. The Council's proposed methodology is to assess the likely effects on those sites within 15km of the Borough's boundary. An exception would be where sites further than 15km, might be affected by the LDF DPD because of their role in water supply.
Task 2: Identify relevant characteristics of the sites likely to be affected;	According to the European Directive, the significance of effects should be "determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site's conservation objectives". For each site therefore the following pieces of information for will be set out: <ul style="list-style-type: none"> • Reasons for the designation of the site (i.e. the qualifying Habitats & Species); • The conservation objectives for each site; • Identification of any vulnerabilities / areas of concern.
Task 3: Identify potential hazards;	A broad range of potential hazards will be identified, for how proposed policies in the DPD could affect the designated sites. This will be assessed against the reasons for designation and conservation objectives of the sites listed.
Task 4: Identify other plans and strategies that may give rise to combined effects	Identification and analysis of other plans and strategies that may give rise to in-combination effects with the Core Strategy .
Task 5: Determine potential significant effects;	Each Policy and Strategic Option within the DPD will be appraised to determine whether it is likely to give rise to potential significant effects.
Task 6: Assess need for additional Appropriate Assessment stages;	This section will summarise the results of Task 5, and assess whether there is a need to undertake Appropriate Assessment. This will be based on whether likely significant effects have been identified in Task 5.
Task 7: Consultation.	Natural England will be consulted throughout this HRA process.

3 HRA Screening

3.3.1 The sites to be assessed

There are no Natura 2000 sites within Basildon Borough Council's administrative boundaries. However, taking into account the potential for transboundary impacts the screening has identified sites within a 15km buffer of the Borough's boundary.

These sites were agreed with Natural England in April 2011.

Table 1: Natura 2000 sites

Site	Designation
Essex Estuaries	SAC
Abberton Reservoir	Ramsar and SPA (is more than 15km but is used for water supply)
Benfleet and Southend Marshes	Ramsar and SPA
Blackwater Estuary (Mid-Essex Coast phase 4)	Ramsar and SPA
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3)	Ramsar and SPA
Medway Estuary & Marshes	Ramsar and SPA
Thames Estuary & Marshes	Ramsar and SPA

Please refer to Figure 1 on page 65 to view a map showing international wildlife sites within 15 kilometres of Basildon Borough.

3.3.2 Relevant characteristics of the sites likely to be affected

According to the European Directive, the significance of effects should be "determined in relation to the specific features and environmental conditions of the protected site concerned by the plan or project, taking particular account of the site's conservation objectives".

The following pieces of information for each site are set out in **Appendix 1**:

- The reasons for the designation of the site (i.e. the qualifying Habitats & Species);
- The conservation objectives for each site;
- Identification of any vulnerabilities / areas of concern.

Essex Estuaries SAC

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. These habitats are also vulnerable to plans or projects (onshore and offshore) which have impacts on sediment transport.

Abberton Reservoir SPA

Abberton Reservoir SPA is a public water supply reservoir. Reduced water availability, and increased demand, in recent years has led to generally low water levels; greater numbers of waders therefore use the site, and as a result no decrease in wildfowl has been attributed to low water levels.

The possibility of raising the reservoir level to secure water supply is under consideration, and the requirement of waterfowl are a primary consideration of the Environmental Impact Assessment. Water entering the site has elevated nitrate levels, leading in most summers to algal blooms, but there is no evidence of impacts on wildlife.

The Water Company has a consultative committee which addresses conservation issues at all of its sites, and the Abberton Reservoir Committee (involving Essex Wildlife Trust and Natural England) addresses local issues.

Benfleet and Southend Marshes SPA

Benfleet and Southend Marshes SPA comprises extensive areas of foreshore with a tidal creek system and an area of grazing marsh. The vulnerability of the intertidal habitats is linked to changes in the physical environment, especially to 'coastal squeeze'. Recreational activities are not deemed to be 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.

Both wildfowling and cockle fishing are potential threats which currently are well regulated. The sea fisheries are regulated by Kent and Essex Inshore Fisheries Conservation Authority using bye-laws. There are, however, loopholes in the system which are currently trying to be resolved.

Dredging of the Thames and inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitat and viability of the eelgrass *Zostera* beds. Research is underway to determine the effect of herbicides on the eelgrass.

The marsh is suffering from the lack of freshwater inputs due to low rainfall.

The Environment Agency has instituted a Water Management Plan on the grazing marshes of part of the site to address the raising of water levels. Sewage outfalls have recently been upgraded to comply with the EC Directives. To secure protection of the site, most of the foreshore is a Local Nature Reserve.

The Environment Agency's programme *Thames Estuary 2100* flood risk management plan is currently waiting for approval from Defra. This looks at the potential for habitat creation to help to alleviate potential flood risk.

Blackwater Estuary SPA

The main threat to the site is erosion of intertidal habitats due to natural processes and the effects of sea defences. 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. The Essex and Suffolk Shoreline Management Plan has been prepared for the Essex coast which seeks to provide a blueprint for managing the coastline sustainably.

Nutrient enrichment occurs from agricultural run-off and treated sewage effluent.

The control of motorised craft (with particular reference to jet-ski) is being addressed through the Maldon District Council. Enforcement of speed limits seeks to ensure that roosting birds are not subjected to disturbance and saltmarsh habitats are protected from damage by jet-skis.

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.

The Crouch and Roach Estuaries SPA

The Crouch and Roach Estuaries SPA is vulnerable to coastal squeeze and changes to the sediment budget. A hydraulic numerical model study of the Crouch and Roach Estuaries is being initiated to explore the various options, including managed realignment.

Furthermore, it is understood that sediment within the intertidal area contains elevated levels of metals and Tributyl Tin (TBT). Consequently, development within the intertidal areas and activities such as dredging have the capacity to disturb and mobilise these pollutants, thus posing a threat to the interest features of this site.

Some disturbance of feeding and roosting waterfowl is likely through recreational use of sea wall footpaths by dog walkers, bird watchers etc but this and other recreational issues will be tackled through the management scheme for this European Marine Site.

Water-skiing and jet skiing is largely controlled by the Crouch Harbour Authority.

Most grazing marshes are managed under Environmental Stewardship agreements and/or management agreements with Natural England.

Low water levels caused by abstraction will be tackled through the provisions for reviews of licenses under the Habitats Regulations.

Many borrow dykes and drainage ditches remain vulnerable to run off and seepage of chemicals from adjacent farm land. Wherever possible arable farmers are being encouraged into Environmental Stewardship agreements to control the application of these chemicals. Most of the adjacent grassland also has Environmental Stewardship agreements.

Sea wall management by mowing may be potentially damaging and this is being addressed through consultation with the Environment Agency and individual owners.

To secure protection of the site, the European Marine Site Scheme of Management is in preparation, which will work alongside the Essex and South Suffolk Shoreline Management Plan (which is currently in the process of being adopted) and various management plans and Site Management Statements for parts of the site.

Medway Estuary & Marshes SPA

There is evidence of rapid erosion of intertidal habitat within the site due to natural processes and the effects of sea defences and clay extraction. Research on mudflat recharge using dredging spoil is being investigated as a means of countering the erosion.

The terrestrial part of the site depends on appropriate grazing and management of water. The availability of livestock may be affected by policy on BSE and there will be a need to investigate how this may be addressed through management agreements. 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. Pressures from proposed transport and industrial developments are being addressed through the planning system and under the provisions of the Habitat Regulations.

Thames Estuary & Marshes SPA

There is evidence of coastal squeeze and erosion of intertidal habitat within the site.

Thames Estuary Partnership produced a Tidal Thames Action Plan which highlighted the issue of the loss of salt marsh. It has since set up a Dredging Liaison Group with Natural England and

the Port of London Authority to encourage more responsible dredging to help prevent intertidal habitat loss.

Thames21 and the Thames Estuary Partnership are developing a Catchment Management Plan to help achieve Water Framework Directive objectives for the Tidal River Thames by engaging the wide range of communities, residents, river users and interest groups.

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.

There has been great development pressure in recent years. Current implications of development include both direct land take from the site and indirect disturbance and hydrological effects. These effects will be addressed through the Habitats Regulations. One example is DP World who is providing a vast amount of compensatory habitat including salt marsh for the building of its port.

Marine Conservation Zones are a new form of national nature conservation designation which is in the process of being developed. The Balanced Seas Final Recommendations Report (July 2011) lists the Thames Estuary as a recommended Marine Conservation Zone and Holehaven Creek as a recommended Reference Area

An application is currently being made for the Greater Thames Marshes Nature Improvement Area to create, restore and manage the habitats of the Estuary.

Mechanisms are in place to mitigate the adverse impact upon the integrity of European Sites, and to alleviate potential flood risk, by providing habitat creation for all the above sites through the Thames Estuary 2100, the Essex and Suffolk Shoreline Management Plan, Medway Estuary and Swale Shoreline Management Plan and the Environment Agency's Regional Habitat Creation Programme.

3.3.3 Potential hazards

Task 3 involved the identification of potential hazards to the sites identified above and detailed in Annex 1.

Factors that could lead to possible impacts on the identified sites (potential impact pathways) include:

Physical Damage

- Siltation (e.g. outfalls, works leading to changes in natural coastal deposition);
- Changes in surface and groundwater flows (e.g. changes to flow, water table, water temperature and quality);
- Abrasion (e.g. recreational activity, vehicles), and
- Removal/ smothering of habitats (e.g. through development, illegal samphire harvesting);
- Coastal erosion (e.g. from sea level rise and isostatic forces);
- Coastal squeeze (e.g. through coastal defences preventing inland migration of saltmarsh and mudflats);
- Drought (e.g abstraction effecting water levels and freshwater flows)

Non-physical disturbance

- Noise and vibration (e.g. land/water-based recreation, sea wall maintenance);
- Lighting (e.g. development activity, end use, or traffic generated); and
- Visual presence (e.g. land/water based recreation, sea wall maintenance).

Toxic contamination

- Introduction of synthetic compounds (e.g. TBT, PCBs); and
- Introduction of non-synthetic compounds (e.g. effluent outfalls);

Non-toxic contamination

- Changes in nutrient loading (e.g. agricultural run-off, effluent outfalls);
- Changes in organic loading (e.g. effluent outfalls); and
- Changes in turbidity (e.g. effluent outfalls, dredging, depositing dredged spoil).

Biological disturbance

- Introduction of microbial pathogens (e.g. effluent outfalls); and
- Introduction of non-native species

3.3.4 Other plans that may give rise to combined effects

In order to comply with the Regulations, an assessment of the Core Strategy must consider whether the plan in question would be likely to have significant effects in-combination with other plans and projects. In order to make this assessment manageable and effective, the “in-combination” assessment has focused on those Plans and Programmes likely to lead to significant infrastructure/ development changes.

Appendix 2 provides a summary of each Plan and Programme and describes potential impacts that could cause in-combination effects for each document. The findings of this review were used to inform the Strategy Review, Policy Screening and Identification of Likely Impacts and screening assessment. The following Plans and Programmes were considered:

Table 2: Other Plans and Programs considered

Regional	
1.	Draft East of England Plan East of England Regional Assembly 2004 (Nb due to be revoked)
Sub-Regional/ County	
2.	Essex County Council Local Transport 2011

3.	Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009
4.	The Essex and Southend Waste Development Document: Issues and Options Paper October 2010 and Preferred Approach November 2011
5.	Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009
6.	Anglian River Basin Management Plan, September 2009
7.	Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009
8.	The Combined Essex Catchment Abstraction Management Study (CAMS), Feb 2007
9.	The Combined Essex Catchment Abstraction Management Study (CAMS) update, March 2008
10.	Exceeding Expectations Tourism Growth Strategy for Essex March 2007
Local	
11.	Rochford District Council Adopted Core Strategy 2011
12.	Castle Point Borough Council Core Strategy, 2009
13.	Chelmsford Borough Council Core Strategy, 2008
14.	Maldon District Council Core Strategy, 2009
15.	Brentwood Replacement Local Plan 2005 (Saved Policies)
16.	Southend-on-Sea Borough Council Core Strategy, Adopted September 2009
17.	Southend-on-Sea Local Transport Plan 2006-2011
18.	London Southend Airport Runway Extension and Associated Development, October 2009
19.	London Southend Airport & Environs Joint Area Action Plan Preferred Options, 2009

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

This informed the assessment of the in-combination effects, which is provided in detail in **Appendix 2**, and summarised in Table 3.

Table 3: In-combination effects

Plan or Programme	In-combination Effects
Draft East of England Plan East of England Regional Assembly 2004 (Nb due to be revoked)	Disturbance Air Pollution Water Quality Water Resource Land Take Coastal Squeeze Modified Drainage

Plan or Programme	In-combination Effects
Essex County Council Local Transport 2011	Disturbance Air Pollution Water Quality Land Take Modified Drainage
Essex County Council Minerals Development Document: Site Allocations Issues and Options Paper 2009	Habitat Loss Emissions Disturbance Flooding and Water Use
The Essex and Southend Waste Local Plan Adopted September 2001	Air Pollution Disturbance Water Quality Introduced / Invasive Species Land take
Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009	Water Quality
Anglian River Basin Management Plan, September 2009	None
Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009	None
The Combined Essex Catchment Abstraction Management Study (CAMS), Feb 2007	None
The Combined Essex Catchment Abstraction Management Study (CAMS) update, March 2008	None
Exceeding Expectations Tourism Growth Strategy for Essex March 2007	Air pollution Disturbance Land take Habitat Loss
Rochford District Council Adopted Core Strategy 2011	Disturbance Air Pollution Water Quality Water Resource
Castle Point Borough Council Core Strategy, 2009	Disturbance Air Pollution Water Quality Water Resource Modified Drainage Land take

Plan or Programme	In-combination Effects
Chelmsford Borough Council Core Strategy, 2008	Disturbance Air Pollution Water Quality Water Resource Modified Drainage Land take
Maldon District Council Core Strategy, 2009	Disturbance Air Pollution Water Quality Water Resource Modified Drainage Land take
Brentwood Replacement Local Plan 2005 (Saved Policies)	
Southend-on-Sea Borough Council Core Strategy, Adopted September 2009	Disturbance Air Pollution Water Quality Water Resource Modified Drainage Land take
Southend-on-Sea Local Transport Plan 2006-2011	
London Southend Airport Runway Extension and Associated Development, October 2009	Disturbance
London Southend Airport & Environs Joint Area Action Plan Preferred Options, 2009	Disturbance

Potential in-combination effects therefore include: Air Pollution; Coastal Squeeze; Disturbance; Emissions; Flooding and Water Use; Habitat Loss; Introduced / Invasive Species; Land Take; Modified Drainage; Water Resource and Water Quality

A number of these can be automatically discounted due to the proximity of the administrative boundary of Basildon Borough. Coastal squeeze, habitat loss, introduced / invasive species, land take and modified drainage are not deemed as likely to produce in-combination effects as a result of the implementation of Policies contained within the Core Strategy Preferred Options Report.

There is however potential for in-combination effects relating to visitor related disturbance and associated emissions, and the potential for water quality and resource issues. These are discussed in more detail in the following section.

3.3.5 Potential Significant Effects

An initial review of the policies contained within the Core Strategy Preferred Options Report has been undertaken using a “traffic light system” (see **Appendix 3**):

A ‘green’ policy means that there is thought to be enough information available at present to conclude that there is no likely significant effect from the policy on the international sites or their favourable conservation objectives;

An ‘amber’ policy is one where the Core Strategy could be amended so that the competent authority must consider the identified international sites through the planning control process;

A ‘red’ policy is one that can be identified as having a likely significant effect on the international sites based on current information. None of the policies contained within the Strategy were assessed as falling within this category.

Policies Screened out of the Assessment

An evaluation has been carried out of all preferred policies in the Core Strategy as to their likelihood of having a significant negative effect on the conservation objectives of the European sites being considered. Policies have either been screened out because they are not likely to have a significant effect; or they have been identified as having the potential to have a significant effect, at least in some circumstances, and therefore require further assessment.

Table 4: Appraisal of Core Strategy preferred option policies.

NB: All policies have been screened out of the assessment with the exception of the Spatial Growth Option and some of the Primary Areas for Development and Change, which are assessed further within this report.

Policy	Policy Name	Why policy will have no adverse impact on the international sites
PADC5	Five Links, Laindon	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC6	Craylands, Basildon	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC7	A127 Enterprise Parks Corridor	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC11	Radford Way Employment Area	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC12	Barleylands Outdoor Sports Area	No direct impact on European Sites. Provision of leisure facilities within Basildon, may reduce the impact of recreation on international sites.
Policy CS1	Conservation and the Natural Environment	Policy is intended to protect the natural environment, including biodiversity
Policy CS2	Design and the Built Environment	Policy is intended to conserve and enhance the built environment where enhancement measures are not likely to have any negative effect on a Natura 2000 site.
Policy CS3	A more valued Green Belt	Policy is intended to protect the natural environment, including biodiversity
Policy	Flood and Water	Policy steers development away from sensitive sites

Policy	Policy Name	Why policy will have no adverse impact on the international sites
CS4	Management	
Policy CS5	Adapting to a Changing Climate	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
Policy CS6	Valued and vibrant Town Centres	No direct impact. Support for commercial leisure opportunities, may reduce the impact of recreation on international sites.
Policy CS7	Sustaining Economic Growth	Policy will not in itself lead to new development but relates to the design of development permitted elsewhere within the plan
Policy CS8	Affordable Housing	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
Policy CS9	Provision for Gypsies and Travellers	Policy relates to existing authorised pitches, detail relating to any increase will be provided within the Planning Policy for all Gypsy and Traveller related development which will be subject to HRA.
Policy CS10	Provision for Travelling Showpeople	Detail will be determined as a collaborative policy direction with Essex County Council, Thurrock and Southend-on-Sea which would be subject to HRA.
Policy CS11	Supporting Tourism Growth	Policy will not in itself lead to development but relates to the type of development permitted elsewhere within the plan
Policy CS12	Providing Leisure Facilities	No direct impact. Provision of leisure facilities within Basildon, may reduce the impact of recreation on international sites.
Policy CS13	Education, Health and Community Facilities	No direct impact. Provision of community facilities within Basildon, may reduce the impact of recreation on international sites.
Policy CS14	Integrated and Timely Infrastructure Provision	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan. Policy provides protection to international sites, through the delivery of development easing pressure on water resources, and enabling waste water infrastructure to be upgraded to prevent environmental harm.

Policies Requiring further Evaluation

The preferred Spatial Growth Option and the majority of the Primary Areas for Development and Change within the Core Strategy Preferred Options Report have been assessed as amber. However in order to avoid likely significant adverse effects on the integrity of the international sites from development arising as a result of the Core Strategy, the Submission Stage Core Strategy could be amended and text added to ensure that there is no likely significant effect on international sites or their favourable conservation objectives. This will be undertaken as part of the iterative HRA process.

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
The Spatial	Option A - Maximising Urban	Reduced Water	This policy identifies the number of new dwellings to be delivered within the Borough. At least 6,500 new homes

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
Growth Options	Potential and Protecting the Green Belt	<p>Resource</p> <p>Reduced Water Quality</p> <p>Increased Disturbance</p>	<p>would be provided between 2011 and 2031 split between Basildon, Billericay and Wickford.</p> <p>The strategic locations identified for housing are limited to within the existing urban areas.</p> <p>No housing development will take place within the international sites and as development will be directed to areas with low risk of flooding in accordance with Policy CS4 there will be no development on sensitive flood plains, which may have impacts on international sites located downstream.</p> <p>Additional housing will lead to increase treated sewage effluent, any resultant increase in discharge requirements will be strictly controlled through the discharge consents. Any application for changes to discharge consents made to the Environment Agency would be assessed in view of its impact to the designated site as required under the Water Framework Directive (WFD). Policy CS14 does provide mitigation against any issues arising, ensuring that the Spatial Strategy is delivered to ease pressure on water resources and enable infrastructure to be updated to prevent harm.</p> <p>Additional housing could also result in increased pressures through water based recreation. However this is controlled through the Essex Estuary Management Plan, which enforces a speed limited (8 knots) to ensure that roosting birds are not subject to disturbance and that saltmarsh habitats are protected from damage by jet skis. This management plan should help prevent any adverse impacts as a result of additional water based recreation. Given the low numbers of housing to be developed, it is also considered unlikely that the numbers of individuals undertaking such recreational activities is likely to be low.</p> <p>By ensuring new developments have provision for open spaces, this should minimise recreational impacts to the international sites, for example by ensuring that there are places suitable for dog walking within new development sites. In line with the precautionary principle the Council have also added text to the Core Strategy in relation to monitoring of the international sites. The Council will look to form a joint monitoring programme with the surrounding local authorities focussed on gathering data including visitor numbers at coastal hotspots.</p>
PADC1	Basildon Regional Town Centre	<p>Reduced Water Resource</p> <p>Reduced Water Quality</p> <p>Increased Disturbance</p>	<p>This policy provides for at least 1,700 new homes, up to 3,400m² of convenience floor space by 2031 and a new 2,000 student capacity college campus within Basildon Regional Town Centre amongst other provisions.</p> <p>There are therefore similar issues as identified in Option A above.</p>
PADC2	Laindon Town Centre	<p>Reduced Water Resource</p> <p>Reduced Water</p>	<p>This policy provides for a mixed-use town centre for Laindon with at least 50 residential units and 2,500m² of additional convenience retail floor space.</p>

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
		Quality Increased Disturbance	There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC3	Pitsea Town Centre	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 50 residential units and 10,000m ² of retail floor space for Pitsea Town Centre. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC4	Wickford Town Centre	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 50 residential units and up to 1,000m ² of new convenience floor space and a further 6,300m ² of comparison floor space for Wickford Town Centre. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC8	Dunton North West	Reduced Water Resource Reduced Water Quality	This policy provides for 4ha of new B-class employment land at Dunton North. There are therefore similar issues as identified in Option A above.
PADC9	Dunton East	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 350 residential units at Dunton East. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC10	Nethermayne Cluster	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 850 residential units and infrastructure at Nethermayne Cluster. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC13	South Essex Marshes	Increased Disturbance	This policy supports

Based on an analysis of the international sites potentially impacted upon by the Spatial Growth Option, and Policies PADC1 – 4, PADC8 – 10 and PADC13, the following potential issues have been identified as a result of increased housing and employment within Basildon:

- Increase Disturbance (from recreation)
- Water Resources

• Water Quality

These are the issues that need consideration in establishing both the likely significant effect of the Core Strategy documents and adverse effects on the integrity of international sites.

Increased Disturbance from Recreation

In the case of International sites on the adjacent Essex Coast, birds are the most prevalent qualifying animal species, and are also the group where concerns over disturbance are most commonly expressed. The mechanism by which disturbance operates is by causing birds to temporarily vacate the area concerned, which increases energy expenditure and reduces foraging opportunities. Chronic disturbance of this type may constitute effective habitat loss. Time of year is a key element in determining the sensitivity of qualifying bird features to recreational activity, and hence the extent with this might cause disturbance. Sensitivities of relevant international sites relate to wintering, breeding (spring and early summer) and passage (autumn and spring) populations, and key periods of sensitivity are outlined in Table 5.1.

Visual and noise disturbance may be greatly exacerbated where recreational participants are accompanied by dogs. Although this effect may be reduced by keeping dogs on leads, this is unlikely to completely avoid impacts, as disturbance effects have been demonstrated for dogs on leads. The whole recreational spectrum also needs consideration. As such, the extent to which new development in Basildon Borough would lead to relative increases in regard to recreational practice will need to be established. Local residents may visit international sites to walk their dog on weekends etc, however kite surfers or anglers for example, may drive many miles for these activities.

Table 5: Seasonality and vulnerability of qualifying species on international sites along the Essex coast potentially affected by Basildon Core strategy policies.

Qualifying feature	Presence / vulnerability	Site
Wintering birds	Dec - March	Blackwater Estuary SPA
		Crouch and Roach Estuary SPA
		Medway Estuary and Marshes
		Thames Estuary and Marshes
Breeding birds	May - July	Blackwater Estuary SPA
		Medway Estuary and Marshes
		Thames Estuary and Marshes
Migratory birds	April – May; Sept -Oct	Medway Estuary and Marshes
		Thames Estuary and Marshes

Physical disturbance is another potential effect of recreational activities and relates to impacts of repeated pedestrian passage which may cause localised vegetation and soil damage.

Physical disturbance can also clearly be an issue with modern recreational practice such as trail bikes and mountain bikes.

Water Resources

A South Essex Outline Water Cycle Study was produced in September 2011. This covers the administrative boundaries of Basildon Borough Council, Castle Point Borough Council and Rochford District Council. The potable water for the study area is currently transferred from central Essex and south Suffolk. This requires abstraction from some or all of the Rivers Crouch, Roach and Blackwater, or from tributaries of these watercourses. There are no Public Water Supply abstractions from the watercourses that feed the Benfleet & Southend Marshes SPA.

From 2014, any possible shortfall in the potable water supply needs of the study area will be met through the Abberton Reservoir enlargement scheme, which is currently under construction and was subject to its own Appropriate Assessment. The increased storage capacity will increase the habitat available for the internationally important bird populations, leading to a positive effect.

Until the Abberton scheme comes online however, Essex and Suffolk Water will continue to operate with a supply/demand shortfall and will seek to address this through demand management measures. It is expected that during this period there will be no need to increase the existing groundwater and/or surface water licenses which currently supply water to Basildon Borough, Rochford District and Castle Point Borough. Moreover, the existing spare capacity in these consents, which may be required to serve new development in the study area up to 2014/15, has already been evaluated for its potential to result in adverse effects on European sites through the Environment Agency's Review of Consents (RoC) process (which always assesses the full licensed volume irrespective of whether the current actual volume is lower).

Water Quality

None of Basildon Borough's waste water treatment works directly discharge into a European site. However, Pitsea waste water treatment works does discharge into a watercourse (Timberman's Creek) that is connected to Pitsea Marsh SSSI, down through the Holehaven Creek SSSI and into the River Thames approximately 5km upstream of Benfleet & Southend Marshes SPA/Ramsar site. In addition, the point of confluence with the River Thames is directly opposite the Kent parts of the Thames Estuary & Marshes SPA/Ramsar site.

Dry Weather Flow (DWF) is a unit of measure, used by the Environment Agency in a discharge consent to describe the volume that can be discharged from wastewater treatment works under normal operating conditions. Increases to DWF for Basildon and Wickford WwTW would be required for all growth, regardless of the level proposed, as the works were identified during the AWS flow audit as operating at DWF capacity, as demonstrated by the recent increase in consented DWF. The extent to which the consented DWF would need to be increased is dependent on the amount of growth proposed. The volume increase would in turn affect any tightening of discharge standards that may be required and therefore the viability of any proposed growth. However, modelling showed that considerable increases in population could be accommodated at both Basildon and Wickford WwTW, assuming process upgrades could be carried out to achieve tighter discharge standards. Again, if funding for such upgrades were to be sought through the AMP process, early consultation with AWS would be required to ensure that funding and upgrades can be carried out in advance of any proposed development, otherwise development will need to be phased accordingly.

Pitsea and Billericay waste water treatment works, currently have capacity within the consented DWF. Pitsea could accommodate an estimated 10,600 additional households and Billericay an

estimated 2,100 additional households from a wastewater transfer and treatment perspective. These figures are well within those proposed within the Core Strategy Preferred Options Report.

For Billericay, RQP modelling results indicate that it is not possible to meet downstream water quality targets for ammonia with the current discharge volume, even if the treatment standard were improved to the limit of conventional wastewater treatment technology (1 mg/l for ammonia). It would therefore not be possible to increase the discharge volume from Billericay within the limits of conventional treatment without breaching the WFD standards for ammonia. However, a possible solution to this has been identified, should growth in excess of the estimated 2,100 additional household capacity within the existing DWF consent be required.

3.3.6 The Need for Additional Appropriate Assessment Stages

Accepting that the overall allocation for Basildon must be implemented, and given the Borough's distance from international sites, the specific locations of housing is of little significance to those sites.

3.3.7 Consultation

Upon submission to Basildon Borough Council this report will be issued to Natural England for comment. Natural England's formal response is sought at its earliest convenience, and it is expected that comments will be passed to Basildon Borough Council. This will inform future reviews of policy and updates of this HRA Screening Report as policy development is finalised.

4 Conclusions

4.1 *In-Combination Effects*

The types of effects identified in this review include effects on water quality and flow due to abstraction and sewerage treatment; increased disturbance due to recreation arising from population increases and air pollution effects, particularly from increased road traffic. However the assessment considered that the mitigation provided by the Core Strategy through the provision for new open space and alternative recreational opportunities - 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 Air Pollution. The Water Cycle Study dated 2011 confirms that the level of development proposed in the Core Strategy will not have likely significant in-combination effects on European sites via reduced water quality and increased water resource demand.

4.2 *Potential Significant Effects*

Accepting that the overall allocation for Basildon must be implemented, and given the Borough's distance from international sites, the specific locations of housing is of little significance to those sites. The focus of this report must therefore be on mitigating any diffuse recreational impacts. This can be done in three principal ways:

- Ensuring that housing has an appropriate allocation of Suitable Accessible Natural Greenspace;
- Monitoring levels of recreational use of sites, and provenance of users;
- and
- Ensuring that appropriate site management measures are in place on the international sites.

Whereas the first of these points falls solely within the remit of Basildon Borough Council, the second and third, need to be implemented as a collective exercise.

This is because a) those international sites occur within other districts and boroughs and the necessary site management measures can only be implemented by other authorities and where necessary in conjunction with site managers; and b) these impacts are part of a collective impact resulting from increased housing in all local authority districts and boroughs in the area. Importantly, monitoring the provenance of recreational users will also further the understanding of the spatial distribution of visitors, thereby further assisting quantification in future assessment of this type and helping identify where SANG can be most effectively placed.

The water quality / resource issue was largely to be picked up by the water companies AMP6 work.

4.3 *The Need for Appropriate Assessment*

Accepting that the overall allocation for Basildon must be implemented, and given the Borough's distance from international sites, the specific locations of housing is of little significance to those sites.

Therefore an Appropriate Assessment is not required

Appendix 1 – Site Characteristics

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
Special Area for Conservation						
UK0013690	Essex Estuaries	<p>30% Marine areas. Sea inlets;</p> <p>56.5% Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins);</p> <p>11% Salt marshes. Salt pastures. Salt steppes;</p> <p>0.5% Shingles. Sea cliffs. Islets;</p> <p>2% Improved grassland</p>	<p>This site supports a significant presence of Sandbanks which are slightly covered by sea water all the time.</p> <p>Considered one of the best areas in the UK for Estuaries, Mudflats and Sandflats not covered by seawater at low tide, Salicornia and other annuals colonizing mud and sand.</p> <p>Site is one of only two known outstanding localities in the United Kingdom for Spartina swards.</p> <p>Site is one of only four known outstanding localities in the United Kingdom for Mediterranean and</p>	<p>Subject to natural change, maintain the following in favourable condition:</p> <p>Salicornia and other annuals colonising mud and sand, in particular:</p> <p>Glasswort / annual sea-blite community</p> <p>Sea aster community</p> <p>Spartina swards (Spartinion), in particular:</p> <p>Small cordgrass community</p> <p>Smooth cordgrass community</p> <p>Atlantic salt meadows (Glauco-Pucinellietalia), in particular:</p> <p>Low/mid-marsh communities</p> <p>Upper marsh communities</p> <p>Upper marsh transitional communities</p> <p>Drift-line community</p>		<p>Essex Estuaries SAC</p> <p>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. These habitats are also vulnerable to plans or projects (onshore and offshore) which have impacts in sediment transport.</p> <p>English Nature's Regulation 33 advice was issued June 2000. a scheme of management is being established with the aim of addressing such problems.</p>

Basildon Borough Council
HRA - Screening

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
			<p>thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi).</p> <p>One of the best areas in the UK for Atlantic salt meadows.</p>	<p>Mediterranean and thermo-Atlantic halophilous scrubs (Arthrocnemetalia fruticosae), in particular:</p> <p>Shrubby sea-blite community</p> <p>Rock sea lavender/sea heath community</p> <p>Estuaries, in particular:</p> <p>Saltmarsh communities</p> <p>Intertidal mudflat and sandflat communities</p> <p>Rock communities</p> <p>Subtidal mud communities</p> <p>Subtidal muddy sand communities</p> <p>Subtidal mixed sediment communities</p> <p>Mudflats and sandflats not covered by seawater at low tide, in particular:</p> <p>Mud communities</p> <p>Muddy sand communities</p> <p>Sand and gravel communities</p>		

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
Special Protection Area						
UK9009141	Abberton Reservoir	90% Inland water bodies (standing water, running water); 10% Improved Grassland	Important for breeding and overwintering species including: cormorant, shoveler, teal, wigeon, gadwall, pochard, tufted duck, goldeneye, mute swan, coot and great crested grebe. Assemblage of 39763 wintering waterfowl.	To maintain, in favourable condition, the habitats for the population of the Annex 1 species (golden plover), migratory bird species (cormorant, gadwall, shoveler and teal) and waterfowl assemblage of European importance with particular reference to open water and surrounding marginal habitats	Abberton Reservoir SSSI condition: 100% in favourable condition Compiled 01/12/11	Abberton Reservoir SPA is a public water supply reservoir. Reduced water availability, and increased demand, in recent years has led to generally low water levels; greater numbers of waders therefore use the site, and as a result no decrease in wildfowl has been attributed to low water levels. The possibility of raising the reservoir level to secure water supply is under consideration, and the requirement of waterfowl are primary consideration of the EIA. Water entering the site has elevated nitrate levels, leading in most summers to alga; blooms, but there is no evidence of impacts on wildlife. The Water Company has a consultative committee which addresses conservation issues at all its sites, and the Abberton Reserve Committee (involving Essex Wildlife Trust and Natural England) addresses local issues.
UK9009171	Benfleet and Southend Marshes	89% Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons	Important for overwintering species including: dark-bellied Brent Goose, dunlin, knot, ringed plover,	To maintain, in favourable condition subject to natural change, the habitats for the populations of the regularly occurring migratory bird	Benfleet and Southend Marshes SSSI condition:	Benfleet and Southend Marshes SPA comprises extensive areas of foreshore with a tidal creek system and an area of grazing marsh.

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
		<p>(including saltwork basins); 6% Salt marshes. Salt pastures. Salt steppes; 1% Inland water bodies (standing water, running water); 3% Bogs. Marshes. Water fringed vegetation. Fens; 1% Improved grassland.</p>	<p>grey plover Assemblage of 34789 wintering waterfowl.</p>	<p>species (Dark-bellied brent geese, grey plover, ringed plover, knot and dunlin), of European importance, with particular reference to: shell banks; saltmarsh; intertidal mudflat and sandflat communities; and Zostera (eelgrass) beds. To maintain, in favourable condition subject to natural change, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with Particular reference to: shell banks; saltmarsh; intertidal mudflat and sandflat communities; and eelgrass beds.</p>	<p>78.04% in a favourable condition. 14.22% in unfavourable recovering 0% in unfavourable no change 7.74% in unfavourable declining. Compiled 01/12/11</p>	<p>The vulnerability of the intertidal habitats is linked to changes in the physical environment, especially to 'coastal squeeze'. Recreational activities are 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. Both wildfowling and cockle fishing are potential threats which currently are well regulated agreement. The sea fisheries are regulated by Kent and Essex Sea Fisheries using bye-law power granted by a sea Fisheries regulatory order. Dredging of the Thames and inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitat and viability of the eelgrass Zostera beds. Research is underway to determine the effect of herbicides on the eelgrass. The marsh is suffering from the lack of freshwater inputs due to low rainfall. The Environment Agency has instituted a Water Management Plan on the grazing marshes of part of the site which will address the raising of water levels. Sewage outfalls have recently been upgraded to comply with the EC</p>

Basildon Borough Council
HRA - Screening

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
						Directives. To secure protection of the site, most of the foreshore is a Local Nature Reserve and covered by the Thames Estuary Management Plan.
UK9009244	Crouch & Roach Estuaries (Mid-Essex Coast Phase 3)	25% Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins); 35% Salt marshes. Salt pastures. Salt steppes; 10% Inland water bodies (standing water, running water); 5% Bogs. Marshes. Water fringed vegetation. Fens; 5% Humid grassland. Mesophile grassland; 20% Improved	Important habitat for overwintering Dark-bellied Brent goose. Assemblage of 18607 wintering waterfowl.	To maintain in favourable condition subject to natural change, the habitats for the populations of the Annex 1 bird species (hen harrier) of European importance, with particular reference to: semi/improved grassland; unimproved grazing marsh inc. ditches; semi-improved grazing marsh; sea wall with borrow dyke To maintain in favourable condition subject to natural change, the habitats for the populations of the migratory bird species (Bark-bellied Brent goose) of European importance, with particular reference to: grazing marsh; improved grassland with ditches;	Crouch and Roach Estuaries SSSI Condition: 22.87% in a favourable condition. 76.46% in unfavourable recovering 0.67% in unfavourable no change. Compiled 01/12/11	The Crouch and Roach Estuaries SPA is vulnerable to coastal squeeze and changes to the sediment budget. A hydraulic numerical model study of the Crouch and Roach Estuaries is being initiated to explore the various options, including managed retreat. Furthermore, it is understood that sediment within the intertidal contains elevated levels of metals and TBT. Consequently, development within the intertidal areas and activities such as dredging, have the capacity to disturb and mobilise these pollutants thus posing a threat to the interest features of this site. Some disturbance of feeding and roosting waterfowl is likely through recreational use of sea wall footpaths by dog walkers, bird watchers etc but this and other recreational issues will be tackled through the management scheme for this European Marine Site. Water-skiing is largely controlled by the Crouch Harbour Authority. Most grazing marshes are managed under Environmental Stewardship Agreements and/or management

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
		grassland.		<p>tidal inner estuary with sea wall;</p> <p>tidal inner estuary without sea wall or saltmarsh;</p> <p>tidal outer estuarine; and</p> <p>saltmarsh /grassland transition</p> <p>To maintain in favourable condition, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:</p> <p>grazing marsh;</p> <p>improved grassland with ditches;</p> <p>freshwater lagoon with brackish creek;</p> <p>open brackish water;</p> <p>tidal outer estuarine;</p> <p>tidal inner estuary with sea wall (including Sea wall and borrowdyke);</p> <p>tidal inner estuary without sea wall or saltmarsh;</p>		<p>agreements with Natural England.</p> <p>Low water levels caused by abstraction will be tackled through the provisions for reviews of licenses under the Habitats Regulations.</p> <p>Many borrow dykes and drainage ditches remain vulnerable to run off and seepage of chemicals from adjacent farm land. Wherever possible arable farmers are being encouraged into Environmental Stewardship schemes to control the application of these chemicals, whilst on most of the adjacent grassland it is controlled by ESA or Stewardship agreements.</p> <p>Sea wall management by mowing may be potentially damaging and this is being addressed through consultation with the Environment Agency and individual owners.</p> <p>To secure protection of the site, the Marine Scheme of Management is in preparation, which will work alongside the Essex Shoreline Management Plan and various management plans and Site Management Statements for parts of the site.</p>

Basildon Borough Council
HRA - Screening

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
				saltmarsh /grassland transition; and coastal lagoon with reeds.		
UK9009245	Blackwater Estuary (Mid-Essex Coast Phase 4)	50% Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins); 33% Salt marshes. Salt pastures. Salt steppes; 5% Bogs. Marshes. Water fringed vegetation. Fens; 12% Humid grassland. Mesophile grassland	Important for breeding and overwintering the following species: little tern, hen harrier, pochard, ringed plover, dark-bellied Brent goose, dunlin, black-tailed godwit and grey plover. Assemblage of 109964 wintering waterfowl.	To maintain in favourable condition, subject to natural change, the habitats for the populations of the regularly occurring migratory bird species (pochard, bearded tit, dark bellied brent goose, grey plover, dunlin and black-tailed godwit), of European importance with particular reference to: semi/improved grassland; unimproved grazing marsh inc. ditches; semi-improved grazing marsh; swamp with open water; intertidal mud; intertidal mud with shingle and sand; sand; shingle; saltmarsh;	Blackwater Estuary SSSI Condition: 23.05% in a favourable condition. 75.34% in unfavourable recovering 1.57% in unfavourable declining. 0.04% area destroyed / part destroyed Compiled 01/12/11	Blackwater Estuary SPA is vulnerable to: Coastal erosion The main threat to the site is erosion of intertidal habitats due to a combination of sea level rise and isostatic forces operating on the land mass of Great Britain. The situation is worsened with increasing winter storm events, whilst the hard sea walls along this coastline are preventing the saltmarsh and intertidal areas from migrating inland. This situation is starting to be addressed by alternative flood defence techniques. A shoreline management plan has been prepared for the Essex coast which seeks to provide a blueprint for managing the coastline sustainably. Nutrient enrichment Nutrient enrichment occurs from agricultural run-off and treated sewage effluent. This problem will be addressed through the Essex Estuaries candidate SAC scheme of management as well as review of discharge consents under the Habitats Regulations.

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
				<p>saltmarsh and shingle; and coastal lagoon and sea wall with borrow dyke.</p> <p>To maintain, in favourable condition subject to natural change, the habitats for the populations of waterfowl that contribute to the wintering waterfowl assemblage of European importance, with particular reference to:</p> <p>semi/improved grassland; unimproved grazing marsh inc. ditches; semi-improved grazing marsh;</p> <p>London clay with deep water fish fauna (inc. cliffs); swamp with open water; intertidal mud and saltmarsh; intertidal mud; intertidal mud with shingle and sand; sand; shingle; saltmarsh;</p>		<p>Water-based recreation</p> <p>The control of motorised craft (with particular reference to jet-ski) 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.</p> <p>Drought</p> <p>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.</p>

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
				saltmarsh and shingle; and coastal lagoon and sea wall with borrow dyke.		
UK9012021	Thames Estuary & Marshes	57.3% Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins); 1.5% Salt marshes. Salt pastures. Salt steppes; 0.9% Shingle. Sea cliffs. Islets; 5.6% Inland waterbodies (standing water, running water); 3.7% Bogs. Marshes. Water fringed vegetation. Fens;	This site supports internationally important assemblage of birds over winter including hen harrier, avocet, dunlin, knot, black-tailed godwit, grey plover, redshank, ringed plover. Assemblage of 75019 wintering waterfowl.	To maintain, in favourable condition subject to natural change, the habitats for the populations of Annex 1 bird species (avocet), migratory bird species (ringed plover, grey plover, dunlin, knot, black-tailed godwit, redshank) and the habitats for the wintering waterfowl assemblage of European importance, with particular reference to: Intertidal mudflats; Intertidal saltmarsh; and Intertidal shingle.	South Thames Estuary and Marshes SSSI Condition: 95.28% in a favourable condition. 2.35% in unfavourable recovering 0.59% in unfavourable no change 1.79% in unfavourable declining. Mucking Flats and Marshes SSSI Condition: 94.13% in a favourable	Thames Estuary & Marshes 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 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. 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. There has been great development pressure in recent years. Current implications of development include both direct landtake from the site and indirect disturbance and hydrological effects. These effects will be addressed through the Habitats Regulations 1994.

Basildon Borough Council
HRA - Screening

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
		1.9% Dry grassland. Steppes; 29.1% Humid grassland. Mesophile grassland.			condition. 5.87% in unfavourable no change Compiled 01/12/11	
UK9012031	Medway Estuary & Marshes	67% Tidal rivers. Estuaries. Mud flats. Sand flats. Lagoons (including saltwork basins); 15% Salt marshes. Salt pastures. Salt steppes; 1% Inland waterbodies (standing water, running water); 1% Bogs. Marshes. Water fringed vegetation. Fens; 1% Dry grassland.	Important for breeding and overwintering species including: avocet, little tern, common tern, Bewick's swan, pintail, shoveler, teal, wigeon, turnstone, dark-bellied Brent goose, dunlin, knot, ringed plover, oystercatcher, black-tailed godwit, curlew, grey plover, shelduck, greenshank, redshank. The site also supports a bird assemblage of international importance by regularly supporting 65496 waterfowl.		Medway Estuary & Marshes SSSI Condition: 99.28% in an unfavourable recovering condition. 0.24% in unfavourable no change 0.48 area destroyed / part destroyed Compiled 01/12/11	Medway Estuary & Marshes There is evidence of rapid erosion of intertidal habitat within the site due to natural processes and the effects of sea defences and clay extraction. Research on mudflat recharge using dredging spoil is being investigated as a means of countering the erosion. The intertidal area is also vulnerable to disturbance from water borne recreation. This is being addressed as part of an estuary management plan. The terrestrial part of the site depends on appropriate grazing and management of water. The availability of livestock may be affected by policy on BSE and there will be a need to investigate how this may be addressed through management agreements. 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. Pressures from proposed transport and

Basildon Borough Council
HRA - Screening

EU Code	Name	Site Cover (source: JNCC)	Qualifying Habitats and Species (source: JNCC)	Conservation Objectives (source: RSS)	SSSI Condition (source: Natural England)	Vulnerabilities / Areas of concern (source: JNCC)
		Steppes; 15% Humid grassland. Mesophile grassland.				industrial developments are being addressed through the planning system and under the provisions of the Habitat Regulations.

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
RAMSAR Sites		
UK11001	Abberton Reservoir	<p>Ramsar criterion 5 – Assemblages of international importance Species with peak counts in winter: 23787 waterfowl.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation) Species with peak counts in spring/autumn: gadwall, northern shoveler. Species with peak counts in winter: Eurasian wigeon.</p> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6 Species with peak counts in spring/autumn: mute swan, common pochard.</p> <p>Birds – Species currently occurring at levels of national importance Species regularly supported during the breeding season: cormorant. Species with peak counts in spring/autumn: Eurasian teal, tufted duck, common coot, pied avocet, ruff, blacktailed godwit, spotted redshank, common greenshank. Species with peak counts in winter: common goldeneye.</p>
UK11006	Benfleet and Southend Marshes	<p>Ramsar criterion 5 – Assemblages of international importance Species with peak counts in winter: 32867 waterfowl.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation)</p>

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>Species with peak counts in spring/autumn: dark-bellied Brent goose.</p> <p>Species with peak counts in winter: grey plover, red knot.</p> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6</p> <p>Species with peak counts in winter: dunlin.</p> <p>Nationally important species of plant occurring on the site</p> <p>Higher plants: <i>Hordeum marinum</i> (nationally scarce), <i>Bupleurum tenuissimum</i> (nationally scarce), <i>Trifolium squamosum</i> (nationally scarce), <i>Chenopodium chenopodioides</i> (RDB Lower risk – near threatened), <i>Limonium humile</i> (nationally scarce), <i>Inula crithmoides</i> (nationally scarce), <i>Spartina maritima</i> (nationally scarce), <i>Zostera marina</i> (nationally scarce), <i>Zostera noltei</i> (nationally scarce).</p> <p>Birds – Species currently occurring at levels of national importance</p> <p>Species with peak counts in spring /autumn: little egret, common greenshank.</p> <p>Species with peak counts in winter: ringed plover.</p> <p>Nationally important species occurring on the site</p> <p>Amphibians: <i>triturus cristatus</i> (great crested newt).</p> <p>Invertebrates: <i>Myopites bloti</i> and <i>Lestes dryas</i>.</p>
UK11007	Blackwater Estuary (Mid-Essex Coast Phase 4)	<p>Ramsar criterion 1</p> <p>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</p> <p>The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In descending order of rarity these</p>

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>are:</p> <p>Endangered: a water beetle <i>Paracymus aeneus</i>;</p> <p>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>;</p> <p>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</p> <p>The site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain.</p> <p>Ramsar criterion 5 – Assemblages of international importance</p> <p>Species with peak counts in winter: 105061 waterfowl.</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 winter: dark-bellied Brent goose, grey plover, dunlin, black-tailed godwit.</p> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6</p> <p>Species with peak counts in winter: common shelduck, European golden plover and common redshank.</p> <p>Nationally important species of plant occurring on the site</p> <p>Higher plants: <i>Bupleurum tenuissimum</i> (nationally scarce), <i>Carex divisa</i> (nationally scarce), <i>Chenopodium chenopodioides</i> (RDB Lower risk (not threatened)), <i>Limonium humile</i> (nationally scarce), <i>Hordeum marinum</i> (nationally scarce), <i>Zostera noltei</i> (nationally scarce), <i>Zostera marina</i> (nationally scarce), <i>Zostera angustifolia</i> (nationally scarce), <i>Sarcocornia perennis</i> (nationally scarce), <i>Salicornia pusilla</i> (nationally scarce), <i>Puccinellia rupestris</i> (nationally scarce), <i>Puccinellia fasciculata</i> (nationally scarce), <i>Inula crithmoides</i> (nationally scarce), <i>Trifolium squamosum</i> (nationally scarce), and <i>Ruppia cirrhosa</i> (nationally scarce).</p>

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>Birds – Species currently occurring at levels of national importance</p> <p>Species regularly supported during the breeding season: Mediterranean gull, common tern, little tern.</p> <p>Species with peak counts in spring/autumn: ringed plover, whimbrel, Eurasian curlew, spotted redshank, common greenshank, ruddy turnstone.</p> <p>Species with peak counts in winter: slavoian grebe, great cormorant, little egret, Eurasian wigeon, Eurasian teal, northern pintail, common goldeneye, red-breasted merganser, hen harrier, water rail, pied avocet, northern lapwing, red knot, sanderling, ruff.</p> <p>Nationally important species occurring on the site</p> <p>Invertebrate: <i>Paracymus aeneus</i>, <i>Lestes dryas</i>, <i>Aedes flavescens</i>, <i>Erioptera bivittata</i>, <i>Hybomitra expollicata</i>, <i>Heliophanus auratus</i>, <i>Trichopterna cito</i>, <i>Baris scolopacea</i>, <i>Philonthus punctus</i>, <i>Graptodytes bilineatus</i>, <i>Malachius vulneratus</i>, <i>Campsicemus magius</i>, <i>Myopites eximia</i>, <i>Idaea ochrata</i>, <i>Malacosoma castrensis</i>, and <i>Euophrys</i> sp. (<i>Euophrys browningi</i> is rare and endemic to Great Britain)</p>
<p>UK11016 UK11058???</p>	<p>Crouch & Roach Estuaries (Mid-Essex Coast Phase 3)</p>	<p>Ramsar criterion 2</p> <p>Supports an appreciate 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>, lax-flowered sea-lavender <i>Limonium humile</i>, curved hard-grass <i>Parapholis incurve</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 sea-blite <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 – Assemblages of international importance</p> <p>Species with peak counts in winter: 16970 waterfowl.</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 winter: dark-bellied Brent goose.</p>

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>Nationally important species of plant occurring on the site</p> <p>Higher plants: <i>Bupleurum tenuissimum</i> (nationally scarce), <i>Carex divisa</i> (nationally scarce), <i>Hordeum marinum</i> (nationally scarce), <i>Inula crithmoides</i> (nationally scarce), <i>Limonium humile</i> (nationally scarce), <i>Parapholis incurva</i> (nationally scarce), <i>Puccinellia fasciculata</i> (nationally scarce), <i>Puccinellia rupestris</i> (nationally scarce), <i>Ruppia cirrhosa</i> (nationally scarce), <i>Salicornia pusilla</i> (nationally scarce), <i>Spartina maritima</i> (nationally scarce), <i>Suaeda vera</i> (nationally scarce), <i>Trifolium squamosum</i> (nationally scarce)</p> <p>Birds – Species currently occurring at levels of national importance</p> <p>Species with peak counts in spring/autumn: little egret, ruff, whimbrel, spotted redshank, common greenshank.</p> <p>Species with peak counts in winter: hen harrier, black-tailed godwit.</p> <p>Nationally important species occurring on the site</p> <p>Invertebrates: <i>Graptodytes bilineatus</i>, <i>Hybomitra expollicata</i>, <i>Lestes dryas</i>, <i>Malachius vulneratus</i>, <i>Malacosoma castrensis</i>, <i>Parydroptera discomyzina</i>, <i>Stratiomys longicornis</i>, <i>Eucosma catoptrana</i>.</p>
UK11069	Thames Estuary & Marshes	<p>Ramsar criterion 2</p> <p>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> <p>Ramsar criterion 5 – Assemblages of international importance</p> <p>Species with peak counts in winter: 45118 waterfowl.</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: ringed plover, black-tailed godwit.</p> <p>Species with peak counts in winter: grey plover, red knot, dunlin, common redshank</p>

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>Nationally important species of plant occurring on the site</p> <p>Higher plants: the site supports a population of the endangered least lettuce <i>Lactuca saligna</i>, and also supports several nationally scarce plants, including bulbous foxtail <i>Alopecurus bulbosus</i>, slender hare's ear <i>Bupleurum tenuissimum</i>, divided sedge <i>Carex divisa</i>, saltmarsh goosefoot <i>Chenopodium chenopodioides</i>, sea barley <i>Hordeum marinum</i>, golden samphire <i>Inula crithmoides</i>, annual beard grass <i>Polypogon monspeliensis</i>, Borrer's saltmarsh-grass <i>Puccinellia fasciculata</i>, stiff saltmarsh-grass <i>P. rupestris</i>, one-flowered glasswort <i>Salicornia pusilla</i>, clustered clover <i>Trifolium glomeratum</i>, sea clover <i>T. squamosum</i>, narrow-leaved eelgrass <i>Zostera angustifolia</i>, and dwarf eelgrass <i>Z. noltei</i></p> <p>Birds – Species currently occurring at levels of national importance</p> <p>Species with peak counts in spring/autumn: little grebe, little egret, ruff, common greenshank.</p> <p>Species with peak counts in winter: common shelduck, gadwall, northern shoveler water rail, pied avocet, spotted redshank.</p> <p>Invertebrates – Nationally important species occurring on the site</p> <p>Endangered species of invertebrates occurring on the site: <i>Bagous longitarsis</i>.</p> <p>Vulnerable species of invertebrates occurring on the site: a groundbug <i>Henestaris halophilus</i>, a weevil <i>Bagous cylindrus</i>, a ground beetle <i>Polystichus connexus</i>, a crane fly <i>Erioptera bivittata</i>, a crane fly <i>Limnophila pictipennis</i>, a horse fly <i>Hybomitra expollicata</i>, a hoverfly <i>Lejops vittata</i>, a dancefly <i>Poecilobothrus ducalis</i>, a snail-killing <i>Pteromicra leucopeza</i>, a solitary wasp <i>Philanthus triangulum</i>, a damselfly <i>Lestes dryas</i>.</p> <p>Rare species of invertebrates occurring on the site: a ground beetle <i>Anisodactylus poeciloides</i>, the water beetles <i>Aulacochthebius exaratus</i>, <i>Berosus fulvus</i>, <i>Cercyon bifenestratus</i>, <i>Hydrocus elongatus</i>, <i>H. ignicolis</i>, <i>Ochthebius exaratus</i> and <i>Hydrophilus piceus</i>, a beetle <i>Malachius vulneratus</i>, a rove beetle <i>Philonthus punctus</i>, a fungus beetle <i>Telmatophilus brevicollis</i>, a fly <i>Campsicnemus magius</i>, a horsefly <i>Haematopota bitgoti</i>, a soldier fly <i>Stratiomys longicornis</i> and a spider <i>Baryphyma duffeyi</i>.</p>
UK11040	Medway Estuary & Marshes	<p>Ramsar criterion 2</p> <p>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</i></p>

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>punctus, 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> <p>Ramsar criterion 5 – Assemblages of international importance Species with peak counts in winter: 47637 waterfowl.</p> <p>Ramsar criterion 6 – species/populations occurring at levels of international importance Qualifying species/populations (as identified at designation) Species with peak counts in spring/autumn: grey plover, common redshank. Species with peak counts in winter: dark-bellied Brent goose, common shelduck, northern pintail, ringed plover, red knot, dunlin.</p> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6 Species with peak counts in spring/autumn: black-tailed godwit</p> <p>Nationally important species of plant occurring on the site Higher plants: the site holds several nationally scarce plants, including: <i>Hordeum marinum</i>, <i>Parapholis incurva</i>, <i>Polypogon monspeliensis</i>, <i>Puccinellia fasciculata</i>, <i>Bupleurum tenuissimum</i>, <i>Trifolium squamosum</i>, <i>Chenopodium chenopodioides</i>, <i>Inula crithmoides</i>, <i>Sarcocornia perennis</i>, <i>Salicornia pusilla</i>.</p> <p>Birds – Species currently occurring at levels of national importance Species regularly supported during the breeding season: Mediterranean gull, black-headed gull, sandwich tern, common tern, little tern. Species with peak counts in spring/autumn: great cormorant, little egret, pied avocet, whimbrel, Eurasian curlew, common greenshank, ruddy turnstone Species with peak counts in winter: northern shoveler, Eurasian oystercatcher, European golden plover.</p> <p>Invertebrates – Nationally important species occurring on the site</p>

Basildon Borough Council
HRA - Screening

EU Code	Name	Qualifying Habitats and Species (source: JNCC)
		<p>A total of more than twelve British Red Data book species of wetland invertebrates have been recorded on the site, including: <i>Polystichus connexus</i>, <i>Cephalops perspicuus</i>, <i>Peocilobothrus ducalis</i>, <i>Anagnota collini</i>, <i>Baris scolopacea</i>, <i>Berosus spinosus</i>, <i>Malachius vulneratus</i>, <i>Philonthus punctus</i>, <i>Malacostoma castrensis</i>, <i>Atylotus latistriatus</i>, <i>Campsicnemus magius</i>, <i>Cantharis fusca</i>, <i>Limonia danica</i>, <i>Lestes dryas</i>, <i>Hydrochus ignicollis</i>, <i>Hydrophilus piceus</i>, <i>Dicranomyia danica</i>, <i>Lejops vittata</i>.</p>

Appendix 2 – Other Plans and Programmes Considered

Regional

East of England Plan - The Revision to the Regional Spatial Strategy for the East of England 2008	East of England Regional Assembly
Plan Owner/ Competent Authority	East of England Regional Assembly
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. — 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. 	<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 — Air Pollution - generated as a result of housing, employment and transport growth. — Water Quality - increased pressure on sewerage capacity and an increase in non-permeable surfaces. — Water Resource - 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. <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

Essex County Council Local Transport Plan: The Essex Transport Strategy 2011 - 2026	
Plan Owner/ Competent Authority	Essex County Council
Related work HRA/AA	None
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Local Transport Plan comprises two distinct parts: 1) The Essex Transport Strategy sets out the vision for transport and the aims over a fifteen year period, policies for transport and the broad approach to implementing these; and 2) An Implementation Plan which sets out in greater detail how the outcomes of the strategy will be delivered and monitored and priorities for investment in the short-term.</p> <p>The Local Transport Plan will also be accompanied by a suite of more detailed plans, identifying specific investment priorities for particular areas and types of transport service.</p> <p>The Essex Transport Strategy will seek to achieve five broad outcomes that have been developed in parallel with those being sought from the Council's Highways Strategic Transformation (HST) programme:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration <input type="checkbox"/> Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology <input type="checkbox"/> Improve safety on the transport network and enhance and promote a safe travelling environment <input type="checkbox"/> Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use <input type="checkbox"/> Provide sustainable access and travel choice for Essex residents to help create sustainable communities. 	<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 — Air Pollution - generated as a result of increased traffic. — Water Quality - through increased Air Pollution. — Land Take - as a result of proposed development. — Coastal Squeeze — Modified Drainage - as a result of proposed development altering surface and groundwater flow.

Essex County Council Minerals Development Document: Further Issues and Option Paper January 2009; Site Allocations Issues and Options Paper 2009; Preferred Approach December 2010 and Final Sites Paper August 2011	
Plan Owner/ Competent Authority	Essex County Council
Related work HRA/AA	Minerals Development Document Preferred Approach- Habitats Regulations Assessment- Appropriate Assessment Report October 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 2026.</p> <p>The 'Minerals Development Document' (MDD) will set out the vision, objectives and strategy to meet the mineral supply hierarchy and thematic and development control policies as well as the preferred sites to meet the future requirements.</p>	<ul style="list-style-type: none"> — Air quality — Water quality and flows <p>Four sites have been identified as requiring an Appropriate Assessment and all are located in Fingringhoe or Alresford in north east Essex.</p> <p>The HRA has identified that potential housing and other developments within Essex could have an in combination effect on the international sites.</p>

Waste Development Document Essex County Council and Southend-on-Sea Issues and Options Octobers 2010 and Preferred Approach November 2011	
Plan Owner/ Competent Authority	Essex County Council and Southend Unitary Authority
Related work HRA/AA	Essex Waste Development Document- Habitat Regulations Assessment- Screening Report September 2011
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Weald Bassett</p> <p>Essex County Council and Southend-on-Sea Borough Council are required to produce Development Plan Documents for waste which plans for the future provision of waste. The 'Waste Development Document' (WDD) will set out the future spatial waste planning and direction for future waste management for all wastes.</p>	<ul style="list-style-type: none"> — Atmospheric pollution — Water quality — Disturbance and predation — Coastal squeeze <p>Five sites have been identified as requiring Appropriate Assessment.</p> <p>The HRA has identified that potential housing and other developments within Essex could have an in combination effect on the international sites.</p>

Essex Thames Gateway Water Cycle Study - Scoping Study Final Report March 2009	
Plan Owner/ Competent Authority	Basildon Borough Council; Castle Point Borough Council; Rochford District Council; Southend-on-Sea Borough Council; and Essex County Council.
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> <p>— The Essex Thames Gateway area does not have sufficient raw water resources to supply existing development;</p> <p>— 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;</p> <p>— 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> <p>— There are no immediate limitations on supply infrastructure pipelines, reservoirs, water treatment works or pumping stations.</p> <p>— 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.</p>	<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 potential for discharges of wastewater to have an impact on European sites.</p>

Anglian River Basin Management Plan September 2009	
Plan Owner/ Competent Authority	Environment Agency
Related work HRA/AA	Habitats Regulations Assessment will be available in December 2009¹
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. 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>

¹ EA Website: Anglian River Basin Management Plan documents submitted to Ministers for approval: <http://wfdconsultation.environmentagency.gov.uk/wfdcms/en/anglian/Intro.aspx>

Essex and Suffolk Water Updated Draft Water Resources Management Plan January 2009	
Plan Owner/ Competent Authority	Essex and Suffolk Water
Related work HRA/AA	Not available
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</p> <p>For the Essex resource the final planning solution to address the current and predicted future deficits in the balance of supply is summarised as follows:</p> <ul style="list-style-type: none"> — Universal Metering by 2020 — Dagenham Supply Pipe Replacement — Generic Mains Replacement <p>HRA work undertaken on the WRMP only identified the Abberton Scheme as having the potential to have likely significant effects on European sites, namely the Ouse Washes, The Wash, the Stour Estuary and Abberton Reservoir. The HRA concluded that the scheme would not have likely significant effects on the Ouse Washes, The Wash and the Stour Estuary.</p> <p>Further studies were undertaken and helped to conclude that the scheme would not have significant adverse effects on the integrity of the site and so an</p> <ul style="list-style-type: none"> — Abberton Scheme — Implementation of water efficiency measures employed to meet Ofwat water efficiency targets <p>The draft WRMP states that implementing the final planning solutions will substantially reduce the risk of needing to implement restrictions or of experiencing supply failures under a sustained period of dry weather that have the potential to be affected by sustainability changes as a result of the review of consents process. The EA have provided ESW with indicative and definite sustainability changes. The WRMP identifies that if changes were included as reductions then:</p> <ul style="list-style-type: none"> — In the Essex zone the deficit identified from 2010 onwards would be increased by 5 MI/d. This would mean that the case for implementation of water resource management options to address the total deficit would be even stronger. 	<p>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> <p>The Environment Agency has advised Essex and Suffolk Water of those licences</p>

Combined Essex Catchment Abstraction Management Strategy (CAMS) Feb 2007 Combined Essex Catchment Abstraction Management Strategy Update March 2008	
Plan Owner/ Competent Authority	Environment Agency
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 Resource from the Combined Essex Catchment until 2009. The strategy provides the framework for any decision on an abstraction license application. The South Essex Catchment has been split into 5 Water Resource Management Units (WRMU). The CAMS update assesses:</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>

Exceeding Expectations Tourism Growth Strategy for Essex, March 2007	
Plan Owner/ Competent Authority	The Tourism Network
Related work HRA/AA	
Document Details	Potential impacts that could cause 'in-combination' effects
<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. 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 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>

Local

Castle Point Borough Council Core Strategy, 2009	
Plan Owner/ Competent Authority	Castle Point Borough Council
Related work HRA/AA	
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Housing</p> <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 <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; 	<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 — Air Pollution - generated as a result of housing, employment and transport growth. — Water Quality - increased pressure on sewerage capacity and an increase in non-permeable surfaces. — Water Resource - as a result of proposed development, potential for reduced water levels. — Modified Drainage - as a result of proposed development altering surface and groundwater flow. — Land Take - as a result of proposed development. — Coastal Squeeze

<p>— The delivery of the South Essex Rapid Transit project with connections to the Borough by 2021.</p> <p>Improvements to opportunities for walking and cycling in Castle Point including:</p> <p>— Delivery National Cycle Network Routes, and Greenways identified in the Green Grid Strategy; and</p> <p>— Work with ECC to identify and deliver, or improve existing footpaths and cycle routes, and make roads safer for pedestrians and cyclists.</p>	
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Chelmsford Borough Council Core Strategy, 2008	
Plan Owner/ Competent Authority	Chelmsford Borough Council
Related work HRA/AA	
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Housing</p> <p>— 700 new homes per annum during the period 2001-2021</p> <p>— Provision is made for a minimum increase of 14,000 dwellings (net) in the Borough in the period 2001-2021</p> <p>— Borough Council's Housing Trajectory, indicates that a total of 16,170 new dwellings will be delivered in the Plan period</p> <p>Economic</p> <p>— 9,600 new jobs in the period 2001-2021</p> <p>— extend the primary shopping area to accommodate the identified need for retail growth of up to 100,000 sq. m.</p> <p>Transport</p> <p>— Chelmsford North-East By-pass and Cross Valley Link Road</p> <p>— New Railway Station north-east of Chelmsford</p> <p>— Capacity improvements at Chelmsford Railway Station</p> <p>— Transport links between new neighbourhoods and Chelmsford Town Centre</p> <p>— The encouragement of public transport use and sustainable</p> <p>— Additional Park and Ride sites to serve Chelmsford</p> <p>— Bus Priority and rapid transit measures</p>	<p>— Disturbance - as a result of development near/ adjacent to European sites, including:</p> <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution <p>— Air Pollution - generated as a result of housing, employment and transport growth.</p> <p>— Water Quality - increased pressure on sewerage capacity and an increase in non-permeable surfaces.</p> <p>— Water Resource - as a result of proposed development, potential for reduced water levels.</p> <p>— Modified Drainage - as a result of proposed development altering surface and groundwater flow.</p> <p>— Land Take - as a result of proposed development.</p> <p>— Coastal Squeeze</p>

District Council Core Strategy, 2009	
Plan Owner/ Competent Authority	Maldon District Council
Related work HRA/AA	
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Housing</p> <p>— The Council will allocate deliverable housing sites to supply 2,400 new dwellings between 2001 and 2021 as required by the East of England Plan (GO-East, 2008).</p> <p>— An additional 600 new units between 2021-2026 (a total of 3,000 units 2001 – 2026)</p> <p>— New housing development will be focused within the Strategic Housing Locations of Maldon, Heybridge, Burnham-on-Crouch and Southminster.</p> <p>— If located within villages, housing must be within the development boundary.</p> <p>Economic</p> <p>Employment Allocations will be maintained for the following sites up to 2026:</p> <p>— The Causeway, Maldon</p> <p>— Wycke Hill, Maldon</p> <p>— West station Industrial Park, Maldon</p> <p>— Burnham Business Park, Burnham-on-Crouch</p> <p>— Springfield Industrial Estate, Burnham-on-Crouch</p> <p>The Maldon District Core Strategy, at this stage of its development, is yet to allocate specific amounts of employment growth but has allocated the proposed housing development. The proposed housing development will have a number of different effects:</p> <p>— Station Approach Industrial Area, Burnham-on-Crouch</p> <p>— Oval Park, Langford</p> <p>— Water Works, Langford</p> <p>— Bard wells Yard, Cold Norton</p> <p>— Maple dean Industrial Estate, Latchingdon</p> <p>— Mayfair Industrial Estate, Latchingdon</p> <p>— Mayland Industrial Estate, Mayland</p> <p>— Hall Road Estate, Southminster</p> <p>— Scott's Hill, Southminster</p>	<p>— Disturbance - as a result of development near/ adjacent to European sites, including:</p> <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution <p>— Air Pollution - generated as a result of housing, employment and transport growth.</p> <p>— Water Quality - increased pressure on sewerage capacity and an increase in non-permeable surfaces.</p> <p>— Water Resource - as a result of proposed development, potential for reduced water levels.</p> <p>— Modified Drainage - as a result of proposed development altering surface and groundwater flow.</p> <p>— Land Take - as a result of proposed development.</p> <p>— Coastal Squeeze 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>

___ Beckingham Business Park, Tolleshunt Major
___ Wood rolfe Road, Tollesbury

Developments within Employment Allocations will be limited to office, industrial, warehousing and other B-class uses as stated in the Use Class Order. Any proposal for new office development exceeding 2,500 m² of net floorspace within employment allocations will be in or around Maldon and Heybridge employment areas.

Accessibility
All new development must:

___ be located close to and have ready access to areas with an established transport network and public transport services so as to reduce reliance to travel by private car;

___ not have a detrimental impact on the existing main road networks;

___ seek to assist and contribute to the provision and maintenance of infrastructures, transport facilities and resources to support public transport services;

___ Provide and/or enhance safe and convenient dedicated footpaths for pedestrians, including those with mobility difficulties and cyclists that enhance connectivity and can be used by all;

___ Improve accessibility to buildings, streets and public spaces for all users especially for those with mobility impairments;

___ Where appropriate, provide green travel plans together with implementation and monitoring strategies that aim to minimise the need to travel and show a preference for more environmental friendly choices;

___ Provide adequate parking facilities, especially for mobility equipment and bicycles, in accordance with Parking Standards to be agreed by the Council; and,

___ Take into account the cumulative impact they would have and where appropriate be accompanied by a Transport Statement.

___ Major developments should be supported by a Transport Assessment, which will take into account any potential impacts of transport and assess measures to improve access by public transport, walking and cycling.

Rochford District Council Core Strategy, 2011	
Plan Owner/ Competent Authority	Rochford District Council
Related work HRA/AA	HRA Screening Report Jan 2010
Document Details	Potential impacts that could cause 'in-combination' effects
<p>The Rochford Core Strategy proposes additional housing at an average rate of 250 dwellings a year, in accordance with the requirements set out in the East of England Plan. This equates to an overall housing requirement of 4750 dwellings between 2006 and 2025.</p> <p>North of London Rd, Rayleigh – 550 by 2015 West Rochford - 450 by 2015, 150 between 2015 and 2021 West Hockley - 50 by 2015 South Hawkwell – 175 by 2015 East Ashingdon – 100 by 2015 South West Hullbridge – 250 between 2015 and 2021 South Canewdon – 60 between 2015 and 2021 Total – 775 by 2015, and 1010 between 2015 and 2021 In addition to housing, the Core Strategy sets out the infrastructure and services required to accompany residential development in individual settlements. It also sets out an aspiration for the delivery of an additional net 3000 local jobs across the District by 2021.</p>	<p>Disturbance - as a result of development near/ adjacent to European sites, including:</p> <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution <p>Air Pollution - generated as a result of housing, employment and transport growth.</p> <p>Water Quality - increased pressure on sewerage capacity and an increase in non-permeable surfaces.</p> <p>Water Resource - as a result of proposed development, potential for reduced water levels.</p>

Southend-on-Sea Borough Council Core Strategy Adopted, December 2007	
Plan Owner/ Competent Authority	Southend-on-Sea Borough Council
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 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</p>	<p>Disturbance - as a result of development near/ adjacent to European sites, including:</p> <ul style="list-style-type: none"> ○ Recreation ○ Light Pollution ○ Noise Pollution <p>Air Pollution - generated as a result of housing, employment and transport growth.</p> <p>Water Quality - increased pressure on sewerage capacity and an increase in</p>

passenger transport accessibility, including development of Southend Central and Southend Victoria Stations as strategic transport interchanges and related travel centres.

In addition, appropriate regeneration and growth will be focussed in the following locations:

— Seafront - to enhance the Seafront's role as a successful leisure and tourist attraction and place to live, and make the best use of the River Thames, subject to the safeguarding of the biodiversity importance of the foreshore.

— Shoeburyness - to provide an additional 1,500 jobs and 1,400 additional dwellings.

— Priority Urban Areas – these comprise:

- a. The District Centres of Westcliff (Hamlet Court Road) and Leigh (Leigh Broadway, Elm Road and Rectory Grove), the Southchurch Road shopping area, and the West Road/Ness Road shopping area of Shoebury;
- b. The main Industrial/employment areas as identified on the Key Diagram, and
- c. The Cluny Square Renewal Area.

Provision is made for 3,350 net additional dwellings between 2001 and 2011 and for 3,150 net additional dwellings between 2011 and 2021.

Provision is made for not less than 6,500 net additional jobs by 2011, and not less than 13,000 net additional jobs by 2021, distributed as follows:

Town Centre and Central Area 6,500

Shoeburyness 1,500

Seafront 750

Priority Urban Areas 2,750

Intensification 1,500

TOTAL 13,000

Transport

— Improvements to the A127/A1159 east-west strategic transport and freight corridor including junction improvements at Progress Road, Kent Elms, The Bell, Cuckoo Corner, Sutton Road, Fairfax Drive, East/West Street and Victoria Circus;

— Improving accessibility to key development opportunity sites, including improved access to Shoeburyness and London Southend Airport to support the potential of the Airport to function as a catalyst for economic growth;

— Providing for the development of high quality transport interchanges at Southend and the key urban interchanges at Leigh Railway Station, Shoeburyness Railway Station, Southend Hospital and London Southend Airport;

non-permeable surfaces.

— **Water Resource** - as a result of proposed development, potential for reduced water levels.

— **Land Take** - as a result of proposed development.

— Coastal Squeeze

— **Modified Drainage** - as a result of proposed development altering surface and groundwater flow.

The HRA found that two Core Strategy Policies have the potential for likely significant effects and would benefit from strengthening. Amendments to policy wording were proposed and considered to be sufficient to address the identified likely significant effects. These revised policies have been reassessed and it is considered that if the recommended changes to the Core Strategy Policies are adopted within the Core Strategy DPD then no further Appropriate Assessment of this document is required.

The assessment concluded that if the recommendations were incorporated then the Core Strategy will not have adverse effects on the integrity of the following European sites either alone or in-combination:

— Benfleet and Southend Marshes SPA

— Foulness SPA and

— Essex Estuaries SAC

— Crouch and Roach Estuaries SPA

— Thames Estuary & Marshes SPA

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Southend Local Transport Plan 2006-2011	
Plan Owner/ Competent Authority	Southend Borough Council
Related work HRA/AA	
Document Details	Potential impacts that could cause 'in-combination' effects
<p>Shared Objectives</p> <p>___ 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.</p> <p>___ 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.</p> <p>___ 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.</p> <p>___ Achieving Better Air Quality by reducing congestion, driver distances travelled and number of vehicle trips made.</p> <p>___ 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</p> <p>___ Regeneration of Southend by Improving the Economy by promoting and supporting sustainable economic growth in appropriate locations</p> <p>___ Achieving an Efficient Transport System by ensuring that land use and transport (all modes) planning are integrated.</p> <p>___ Raising Community Awareness by publicising the effects of continuing traffic growth and the benefits and availability of alternative transport modes.</p> <p>___ 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.</p>	

London Southend Airport Runway Extension and Associated Development Oct 2009	
Plan Owner/ Competent Authority	London Southend Airport Company Ltd
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>

London Southend Airport & Environs Joint Area Action Plan Preferred Options, February 2009	
Plan Owner/ Competent Authority	Rochford District Council Southend-on-Sea Borough Council
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: <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"> — Creation of sustainable and high value employment and other land uses within the study area; — Maximising the economic benefits of a thriving airport and related activity; — Ensuring appropriate improvements in sustainable transport accessibility and facilities; — Ensuring a high quality environment for residents whether expressed through noise pollution management or protection of green space; — Maximum return on public investment through attracting inward investment; <p>and</p> <ul style="list-style-type: none"> — Efficient use 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 - Review of Policies

A 'green' shading indicates that there is thought to be enough information available at present to conclude that there is no likely significant effect from the policy on the international sites or their favourable conservation objectives and has therefore been screened out of further consideration';

An 'amber' policy is one where the Core Strategy could be amended so that the competent authority must consider the identified international sites through the planning control process;

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
The Spatial Growth Options	Option A - Maximising Urban Potential and Protecting the Green Belt	<p>Reduced Water Resource</p> <p>Reduced Water Quality</p> <p>Increased Disturbance</p>	<p>This policy identifies the number of new dwellings to be delivered within the Borough. At least 6,500 new homes would be provided between 2011 and 2031 split between Basildon, Billericay and Wickford.</p> <p>The strategic locations identified for housing are limited to within the existing urban areas.</p> <p>No housing development will take place within the international sites and as development will be directed to areas with low risk of flooding in accordance with Policy CS4 there will be no development on sensitive flood plains, which may have impacts on international sites located downstream. Housing developments have potential for recreational impacts to the international sites, along with possible impacts as a result of increased demand on the sewerage network (in the event that additional discharges into the international sites are required). These impacts may disturb the important assemblages of wildfowl through recreation and may affect the habitats of the SAC through nutrient enrichment as a result of sewerage effluent.</p> <p>Sewage and Water Resource: Additional housing will lead to increased treated sewage effluent, any resultant increase in discharge requirements will be strictly controlled through the discharge consents. Any application for changes to discharge consents made to the Environment Agency would be assessed in view of its impact to the designated site as required under the Water Framework Directive (WFD). Following a Scoping Water Cycle Study (2009) it is known that there are capacity issues for the sewerage and waste water network. In Basildon there is spare treatment capacity up to 2015 for WWTW. Beyond 2015 (into AMP6), Basildon WWTW's treatment capacity will be limited because the final effluent</p>

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
			<p>pipeline which discharges to the Thames Tideway and the storm tank discharge will be unable to receive further flows. A solution will be required to allow development post 2015 to take place. The Wickford WWTW is currently experiencing process capacity issues with the existing flow to the works. Growth in exceedance of 1,500 PE (Population Equivalent the measure of the organic load produced per person) will require major investment post 2015 and this investment will need to be identified in the further stages of the WCS. No capacity issues have been identified in Billericay. Policy CS14 does provide mitigation against any issues arising, ensuring that the Spatial Strategy is delivered to ease pressure on water resources and enable infrastructure to be updated to prevent harm.</p> <p>Recreational disturbance: Additional housing could also result in increased pressures through water based recreation. However this is controlled through the Essex Estuary Management Plan, which enforces a speed limited (8 knots) to ensure that roosting birds are not subject to disturbance and that saltmarsh habitats are protected from damage by jet skis. This management plan should help prevent any adverse impacts as a result of additional water based recreation. Given the low numbers of housing to be developed, it is also considered unlikely that the numbers of individuals undertaking such recreational activities is likely to be low. By ensuring new developments have provision for open spaces, this should minimise recreational impacts to the international sites, for example by ensuring that there are places suitable for dog walking with new development sites. In line with the precautionary principle the Council have also added text to the Core Strategy in relation to monitoring of the international sites. The Council will look to form a joint monitoring programme with the surrounding local authorities focussed on gathering data including visitor numbers at coastal hotspots.</p>
PADC1	Basildon Regional Town Centre	Reduced Water Resource Reduced Water Quality Increased Disturbance	<p>This policy provides for at least 1,700 new homes, up to 3,400m² of convenience floor space by 2031 and a new 2,000 student capacity college campus within Basildon Regional Town Centre amongst other provisions.</p> <p>There are therefore similar issues as identified in Option A above.</p>
PADC2	Laindon Town Centre	Reduced Water Resource Reduced Water	<p>This policy provides for a mixed-use town centre for Laindon with at least 50 residential units and 2,500m² of additional convenience retail floorspace.</p> <p>There are therefore similar issues as identified in Option A above, however at this scale and at</p>

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
		Quality Increased Disturbance	this location it is unlikely to impact upon any of the European Sites identified.
PADC3	Pitsea Town Centre	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 50 residential units and 10,000m2 of retail floorspace for Pitsea Town Centre. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC4	Wickford Town Centre	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 50 residential units and up to 1,000m2 of new convenience floorspace and a further 6,300m2 of comparison floor space for Wickford Town Centre. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC5	Five Links, Laindon	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC6	Craylands, Basildon	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC7	A127 Enterprise Parks Corridor	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC8	Dunton North West	Reduced Water Resource Reduced Water Quality	This policy provides for 4ha of new B-class employment land at Dunton North. There are therefore similar issues as identified in Option A above.
PADC9	Dunton East	Reduced Water Resource Reduced Water	This policy provides for at least 350 residential units at Dunton East. There are therefore similar issues as identified in Option A above, however at this scale and at

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
		Quality Increased Disturbance	this location it is unlikely to impact upon any of the European Sites identified.
PADC10	Nethermayne Cluster	Reduced Water Resource Reduced Water Quality Increased Disturbance	This policy provides for at least 850 residential units and infrastructure at Nethermayne Cluster. There are therefore similar issues as identified in Option A above, however at this scale and at this location it is unlikely to impact upon any of the European Sites identified.
PADC11	Radford Way Employment Area	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
PADC12	Barleylands Outdoor Sports Area	No	No direct impact on European Sites. Provision of leisure facilities within Basildon, may reduce the impact of recreation on international sites.
PADC13	South Essex Marshes	Increased Disturbance	This policy supports
Policy CS1	Conservation and the Natural Environment	No	Policy is intended to protect the natural environment, including biodiversity
Policy CS2	Design and the Built Environment	No	Policy is intended to conserve and enhance the built environment where enhancement measures are not likely to have any negative effect on a Natura 2000 site.
Policy CS3	A more valued Green Belt	No	Policy is intended to protect the natural environment, including biodiversity
Policy CS4	Flood and Water Management	No	Policy steers development away from sensitive sites
Policy CS5	Adapting to a Changing Climate	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
Policy CS6	Valued and vibrant Town Centres	No	No direct impact. Support for commercial leisure opportunities, may reduce the impact of recreation on international sites.

Policy	Policy Name	Likely Significant Effects on the International Sites	Justification of Finding
Policy CS7	Sustaining Economic Growth	No	Policy will not in itself lead to new development but relates to the design of development permitted elsewhere within the plan
Policy CS8	Affordable Housing	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan
Policy CS9	Provision for Gypsies and Travellers	No	Policy relates to existing authorised pitches, detail relating to any increase will be provided within the Planning Policy for all Gypsy and Traveller related development which will be subject to HRA.
Policy CS10	Provision for Travelling Showpeople	No	Detail will be determined as a collaborative policy direction with Essex County Council, Thurrock and Southend-on-Sea which would be subject to HRA.
Policy CS11	Supporting Tourism Growth	No	Policy will not in itself lead to development but relates to the type of development permitted elsewhere within the plan
Policy CS12	Providing Leisure Facilities	No	No direct impact. Provision of leisure facilities within Basildon, may reduce the impact of recreation on international sites.
Policy CS13	Education, Health and Community Facilities	No	No direct impact. Provision of community facilities within Basildon, may reduce the impact of recreation on international sites.
Policy CS14	Integrated and Timely Infrastructure Provision	No	Policy will not in itself lead to development but relates to the design of development permitted elsewhere within the plan. Policy provides protection to international sites, through the delivery of development easing pressure on water resources, and enabling waste water infrastructure to be upgraded to prevent environmental harm.

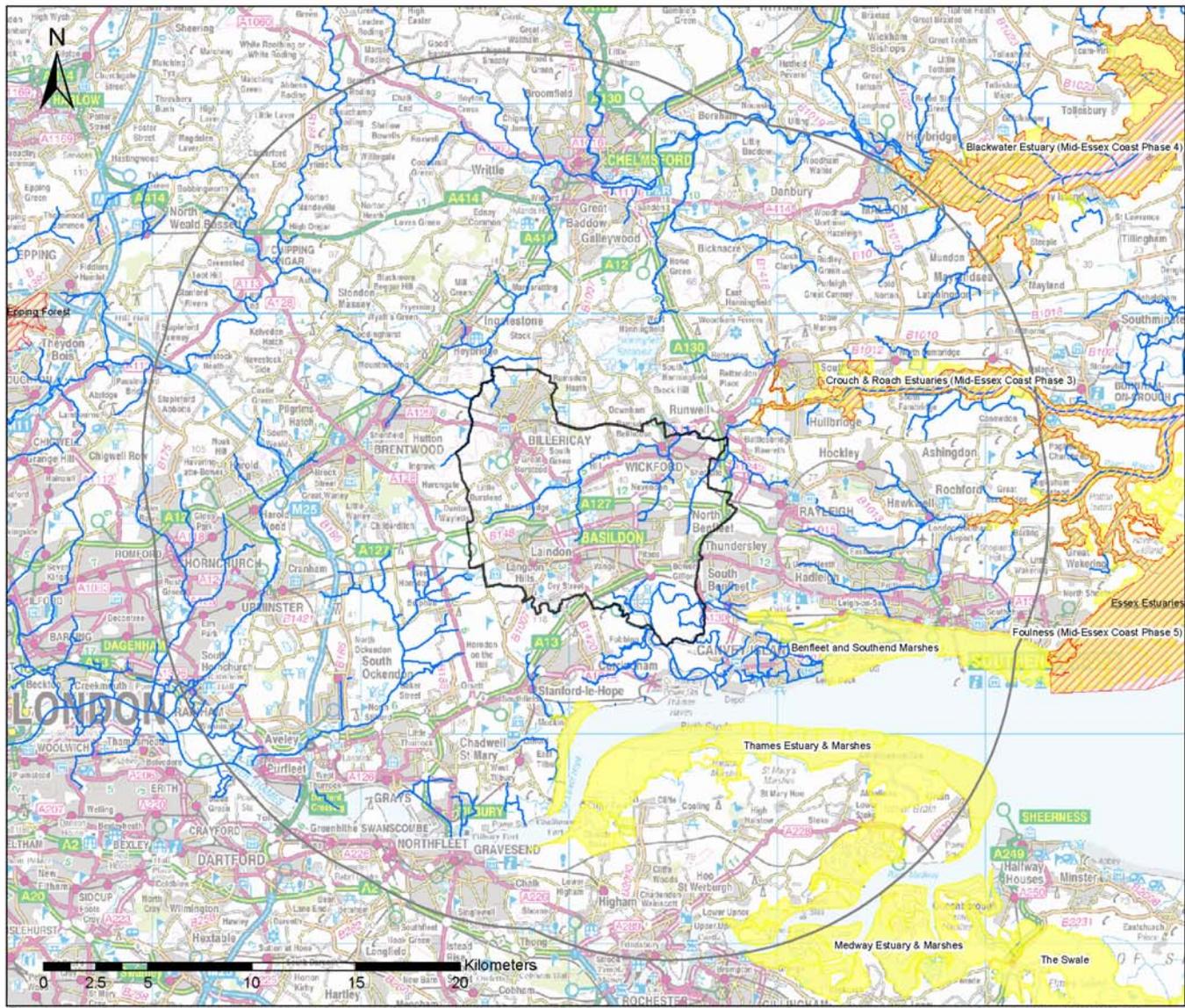


Figure 1
International wildlife sites
within 15km of Basildon
Borough

Key

- Basildon District
- 15km buffer
- SAC
- SPA
- Main rivers

Digitiser LJB
Map scale 1:175,000
Date 05 February 2012



