

habitat regulations assessment scoping report (draft) August 2011

development plan document southend central area action plan

southend on sea borough council local development framework

delivering regeneration and growth

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1. Introduction to the principles and process for HRA

- 1.1 We are undertaking this Screening Report (SR) to consider the need for an Appropriate Assessment (AA) known for this report as a HRA, in compliance with the EU Habitats Directive, as part of Southend's Local Development Framework. The HRA screening exercise considers whether the approach to a plan or project is likely to have a significant effect on the conservation objectives of a European site.
- 1.2 The first step in undertaking a screening exercise for a HRA is to identify any policies and proposals with the potential for significant impact on any European designated site within or adjacent to the plan area. These policies would then be taken through subsequent stages of the HRA process. This screening exercise is presented here.

What Development Plan is being assessed?

- 1.3 Southend Borough Council is producing an Area Action Plan (AAP) for the town centre and central seafront area, known as the Southend Central Area Action Plan (SCAAP). It will, when adopted, provide planning policy and site allocations which will help to deliver regeneration and growth within the designated boundary of the SCAAP. The SCAAP will form part of the Local Development Framework (LDF), along with a number of other documents including the Southend Core Strategy Development Plan Document (DPD) and Design and Townscape Guide Supplementary Planning Document (SPD).
- 1.4 The SCAAP is not directly connected to or necessary for the management of any Natura 2000 sites and has not been solely conceived for the conservation management of any site. The screening stage will examine the likely effect the SCAAP upon the Natura 2000 sites. The SCAAP will support the Core Strategy DPD by providing further policy detail for the Southend Central Area. This publication of submission version stage of the SCAAP is a statutory part of its preparation and has been prepared for consultation with stakeholders to seek their views on the soundness of the plan. It is a spatial plan that will eventually form part of the statutory Local Development Framework for the Borough.
- 1.5 At the pre-submission stage of the SCAAP contains detailed policies and site specific proposals aimed at strengthening and transforming Southend Town Centre's sub-regional role as a successful retail and commercial destination, cultural hub and education centre of excellence, leisure and tourist attraction, and place to live. The intention is to seek to safeguard, conserve and enhance the significant biodiversity, green space and other environmental resources in the area and on the foreshore.

Why is an HRA being carried out?

1.6 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in July

2007 and updated in 2010 by The Conservation of Habitats and Species Regulations 2010; these consolidate and update the Conservation (Natural Habitats, &c.) Regulations 1994. Therefore, when preparing SCAAP, Southend Borough Council is required by law to carry out a Habitats Regulations Assessment.

- 1.7 The Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora) and the Birds Directive (Council Directive 79/409/EEC) provide a high level of protection to the Natura 2000 network by taking a precautionary approach to controlling polluting activities. Plans and projects can only be permitted if they are shown to have no significant adverse effect on a Natura 2000 site, unless there is some form of overriding public interest why it should proceed.
- 1.8 **Paragraphs 6(3) and 6(4)** lay down the procedure to be followed when planning new developments that might affect a Natura 2000 site. Thus:
 - Any plan or project likely to have a significant effect on a Natura 2000, either individually or in combination with other plans or projects, shall undergo an Appropriate Assessment to determine its implications for the site. The competent authorities can only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned (Article 6.3)
 - In exceptional circumstances, a plan or project may still be allowed to go ahead, in spite of a negative assessment, provided there are no alternative solutions and the plan or project is considered to be of overriding public interest. In such cases the Member State must take appropriate compensatory measures to ensure that the overall coherence of the N2000 Network is protected. (Article 6.4)
- 1.9 What statement does Natura 2000 Networking Programme, on behalf of the European Commission, make about land uses in and around Natura 2000 sites?
 - Natura 2000 designation is proof of the special nature value of the area, which can generate ecotourism income (especially foreign tourists).
 - Many existing land use practices will continue as before because they are already compatible with the conservation of the habitats and species present.
 - Where the land uses negatively affect the species and habitats present, adjustments can often be made without jeopardising productivity.
 - Hunting, fishing, tourism and other recreational activities will continue provided that they are managed in a sustainable manner and do not adversely affect the rare species and habitats present or prevent their recovery.
 - It is not correct that all economic activities will be reduced and the construction of new infrastructure is forbidden.

What does the Directive protect?

- 1.10 The objective of the Habitats Directive is to protect biodiversity through the conservation of natural habitats and species of wild fauna and flora. The Directive lays down rules for the protection, management and exploitation of such habitats and species.
- 1.11 European sites are designated because they hold particular animals, plants or habitats ('Annex I' habitats, 'Annex II' animal and plant species in the Directive). Some of these are 'priority' habitats or species which are in danger of disappearing and are given still extra protection. Appropriate assessment only refers to these habitats and species, no others.

What types of habitats is the plan being assessed against?

- 1.12 Habitats Regulations Assessment refers to the assessment of the potential effects of a development plan on one or more European Sites, including Special Protection Areas and Special Areas of Conservation:
 - SPAs are classified under the European Council Directive 'on the conservation of wild birds' (79/409/EEC; 'Birds Directive') for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex 1 of the Birds Directive, and migratory species).
 - SACs are designated under the Habitats Directive and target particular habitats (Annex 1) and/or species (Annex II) identified as being of European importance.
- 1.13 Planning Policy Statement 9: Biodiversity and Geological Conservation (OPDM, 2005) also expects potential SPAs (pSPAs), candidate SACs (cSACs) and Ramsar sites to be included within the assessment.
 - Ramsar sites support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention, 1971).
- 1.14 For ease of reference during HRA, these three designations are collectively referred to as **Natura 2000** or **European sites**, despite Ramsar designations being at the international level.

What is a 'likely significant effect' on a European Site?

1.15 The first step in the process is to consider whether the plan or project is likely to have a significant effect on a Natura 2000 site alone or in-combination. This is often referred to as a scoping or screening exercise. It is often hard to define what

- is **significant**. To assess a likely significant effect, the sites' **conservation objectives and designated features** should be considered.
- 1.16 Judgements of likely significant effect should be made in relation to the features for which the European site was designated and their conservation objectives (Regulations 20, 33 and 48). Proposals having no or de minimis effects can be progressed without further consideration under the Habitats Regulations although reasons for reaching this decision must be justified and recorded
- 1.17 Likely significant effect is, in this context, any effect that may reasonably be predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which the site was designated, but excluding trivial or inconsequential effects.
- 1.18 Finally the **likeliness** of a significant effect brings in the precautionary principle and an appropriate assessment should be carried out unless the likeliness of a significant effect can be ruled out.

What are conservation objectives and designated features?

1.19 Conservation objectives define the **desired state of each site** in terms of the features for which they have been designated. When these features are being managed in a way which maintains their nature conservation value, then they are said to be in 'favourable condition'. Conservation objectives are accompanied by one or more habitat extent and quality definition(s) (or 'attribute(s)') for each interest feature of the site. Targets are set for each attribute and condition monitoring measures whether the targets are being met.

How will a decision be made on whether there is a significant effect?

- 1.20 The likely scale of impact is important. In some cases the decision that no significant effect is likely will be obvious. Very short lived impacts would generally require only minimal further consideration under such conditions, provided there were no persistent, cumulative effects from repeated or simultaneous impacts of the same nature. Even here there will be exceptions, however. For example very brief disturbance to a seabird colony may have a lasting effect on the population (as determined by careful monitoring), even though activity may appear (through casual observation at the time) to return rapidly to normal.
- 1.21 At the other extreme, some cases will very clearly be likely to have a significant effect. Any proposal which would require an environmental under the Environmental Assessment Directive (85/337/EEC) (as amended) on account of its effects, among others, on a European site, can be judged as being likely to have a significant effect, although reasons for this must still be recorded. This will then require an **appropriate assessment** (AA) under the Habitats Regulations, which may be addressed by the competent authority alongside or as part of the wider environmental assessment.

- 1.22 In some cases the judgement about a likely significant effect will be less clear cut and it will be necessary to look particularly at the **nature of the effect and its timing**, **duration and reversibility**, taking into account any readily available information on the site, and especially its conservation objectives.
- 1.23 Furthermore in most cases, it will not be possible to subject a LDD to the same level of rigor in respect of regulations 85A-E as a specific project submitted for consent would be assessed under regulation 48 of the Habitats Regulations. There will not normally be the same level of information about:
 - the changes that may be predicted as a result of implementing a policy or proposal in a LDD; or
 - what the effects of the changes may be on the site(s) potentially affected, or
 - how the effects may be avoided or mitigated; or
 - if necessary how the effects may be compensated for.
- 1.24 Strategies will vary in their geographic extent and therefore their propensity to affect international sites; strategies could potentially affect no sites, one site, a few sites, or many sites over a wide area. The sites affected may be of a similar kind, for example, uplands, estuaries or rivers or may be of different kinds. This variable, and usually broader, level of Habitats Regulations assessment is acknowledged by the EC. It was explicitly addressed, for example, in the Advocate General's opinion leading up to the ECJ judgment9. What is expected is as rigorous an assessment as can reasonably be undertaken.
- 1.25 Permanent reductions in habitat area or species populations are likely to be significant unless they are very small scale. In the case of certain sites a loss of, say, a few square metres of the site area may not be considered significant (for example, there may be circumstances when this might apply in the case of estuarine SPAs which are selected for their bird interest), in others, such as limestone pavement, any further loss of the area of qualifying interest may be unacceptable. Any activity which affects the attainment of conservation objectives will probably be significant.
- 1.26 When it is clear that the plan or project is not likely to have a significant effect then only limited further consideration, to enable the reasons for reaching this decision to be justified and recorded, is required. After this, permission for the plan or project may be granted.
- 1.27 Screening has to be approached on a precautionary basis and a recent European court judgement¹ helps interpret the concept of significant effect and has confirmed that a significant effect is triggered when:

¹ In line with the European Court Waddenzee judgment, which states that "The competent national authorities, taking account of the appropriate assessment ... are to authorise such an activity only if they

- There is a probability or a risk of a plan or project having a significant effect on a European site.
- The plan is likely to undermine the site's conservation objectives.
- A significant effect cannot be excluded on the basis of objective information.

What process is being undertaken in this Report?

1.28 The HRA is usually undertaken in stages (this being a screening report) and should conclude whether or not a proposal or policy included in a development plan would adversely affect the integrity of the site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex 1 habitats, Annex II species, and Annex 1 bird populations for which it has been designated). Significantly, HRA is based on a rigorous application of the precautionary principle and therefore requires those undertaking the exercise to prove that the plan will not have an adverse effect on the site's integrity. Where uncertainty or doubt remains, an adverse impact should be assumed.

Stage 1	Task	Outcome
Screening	 Description of the plan Identification of poten effects on European S Assessing the effects of European Sites 	tial unlikely, prepare a ites 'finding of no significant

1.29 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the inclusion of mitigation measures designed to avoid, reduce or abate effects.

Who carries out the HRA?

1.30 The HRA should be undertaken by the 'competent authority'; in this case Southend Borough Council. The HRA also requires close working with Natural England as the statutory nature conservation body in England in order to obtain necessary information. Natural England has responded to consultation on the HRA Screening

have made certain that it will not adversely affect the integrity of that site. That is the case where no reasonable scientific doubt remains as to the absence of such effects."

Report (and AA) for the Core Strategy (December 2007). This information has been used to establish the conservation objectives and designated features which may be impacted upon by this plan as the Core Strategy covers a wider area than the SCAAP. The comments received from Natural England in relation to the Core Strategy documents have been taken into account within the HRA of the SCAAP, where appropriate.

1.31 Consultation with other bodies and the public is at the discretion of the plan making authority and following good practice guidance the HRA information will be made publically available.

What other plans have HRA's been produced for?

1.32 The findings of the HRA of the Core Strategy (2007) have been reported separately. A Screening Report has also been produced for the Development Management DPD submission version. A Screening Report for the Issues and Options Consultation of the SCAAP was produced in August 2010.

2. The Approach to Screening the SCAAP

What guidance was used to formulate an approach to HRA?

2.1 Guidance from the Department of Communities and Local Government (CLG) on HRAs (Planning for the Protection of European Sites: Appropriate Assessment – Guidance for Regional Spatial Strategies and Local Development Documents (August 2006)) summarises the HRA process prescribed in Article 6(3) and (4) of the Habitat Directive into three main stages:

Stage 1 – Likely significant effects

Stage 2 – Appropriate assessment to ascertain adverse impacts on site integrity

Stage 3 – Mitigation and alternative solutions

- 2.2 Stage 1 of the process is to identify whether a plan option may have likely significant effects on European sites and is referred to as a 'screening' exercise under the regulations. This determines whether stages 2 and 3 (the HDA) are required.
- 2.3 In accordance with the regulations a HDA is required when, in view of a European Site's objectives, the effect of a land use plan:
 - is likely to have adverse impact on a European site in Great Britain (either alone or in combination with other plans and projects); and
 - is not directly connected with or necessary to the management of the site.

What is the purpose of the screening exercise?

- 2.4 Screening for HRA will determine whether the plan is likely to have a significant adverse impact on the conservation objectives of European sites and therefore whether stage 2 and stage 3 (the HRA) are required. In situations where significant indirect impacts of the plan implementation could occur within Natura 2000 Sites beyond the plan area, these remote sites should be considered at the HRA screening stage.
- 2.5 In essence the screening process is to initially identify those plans or policies that clearly or self-evidently would have no significant effects upon European Sites so that they can be screened out of the assessment at an early stage.

What approach has been taken to carry out this HRA?

2.6 In accordance with 'Planning for the Protection of European Sites: Appropriate Assessment' and 'The Assessment of Regional Spatial Strategies and Sub-Regional

Strategies under the Provisions of Habitats Regulation Guidance' (the guidance) the following methodology ('Tasks') was adopted for this screening report:

1) Identification of Natura 2000 sites

2.7 This involved the identification of European sites within or in close proximity (within 15km) to Barnet.

2) Site information

2.8 Information was obtained for each European site, based on information relating to the site's qualifying features, geographical boundaries and conservation objectives, available from the Joint Nature Conservation Committee (JNCC), the statutory advisor to the government on UK nature conservation.

3) Analysis of the plan for potential adverse impacts

2.9 Providing a framework of criteria against which the policies can be assessed for impact.

4) Screening Analysis of the Southend Central Area Action Plan policies

2.10 Using the codes / criteria for recording the effect and impacts of a policy on a European Site, the options for each issue of the SCAAP will be assessed for its impact on a European Site.

5) Assessment of 'in-combination' effects

- 2.11 This involved the consideration of other plans which may, in combination with the Core Strategy, have the potential to adversely impact European sites.
- 2.12 The policies in the SCAAP policies document are described and a test is applied to identify any likely significant effects on the likely impact of the principles on the conservation objectives of designated Natura 2000 sites.
- 2.13 Where one or more likely significant effects are found, or where it cannot be objectively shown that adverse impact on site integrity will not occur, the second stage of the process will commence and the Plan becomes subject to a HRA against the conservation objectives of each of the Natura 2000 sites. If no adverse impacts on site integrity are identified, the HRA policies document can proceed.

3. Characteristics of European or Natura 2000 Sites

3.1 For the authority to undertake this part of the screening assessment, it is necessary to identify which Natura 2000 sites should be considered in the assessment. Only then can an assessment be made as to whether the SCAAP document is directly connected with or necessary to the management of the Natura 2000 sites.

What European sites have been included in this HRA?

3.2 The European Sites to be included within this assessment were established during previous LDF consultations and correspondence between the Council and Natural England. These include Benfleet and Southend Marshes SPA/Ramsar site, Thames Estuary & Marshes SPA/Ramsar site and Essex Estuaries SAC (including Foulness SPA / Ramsar site and Crouch and Roach Estuaries SPA/Ramsar site). Parts of each of these sites are also designated as a European Marine Sites. All these European sites were considered to have the potential to be influenced by the policies of the Core Strategy DPD and as such will form the basis for HRA assessment in respect to the SCAAP as they linked to the strategic policies set out in the Core Strategy.

Where has the information related to these sites been obtained from?

3.3 Specific information regarding the interest features, sensitivities, vulnerabilities, condition and conservation objectives of the identified European sites have been acquired **Joint Nature Conservation Committee** website. This baseline data has been interpreted in order to identify specific vulnerabilities and areas of concern for each of the European Sites that could be assessed directly against each policy issue in the SCAAP.

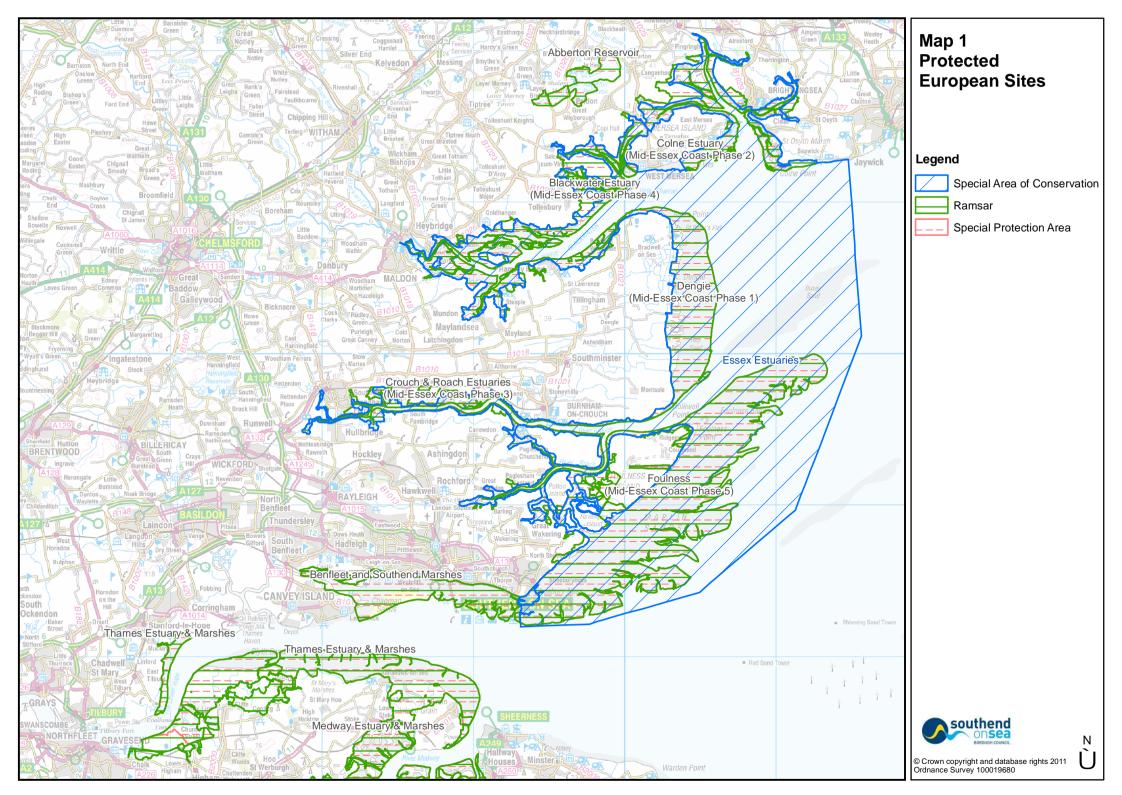
Tasks

Task 1 - Identification of European (Natura 2000) sites (see Map 1)

- 3.4 The European sites were selected following the HRA consultation with Natural England during the Core Strategy DPD production. The Natura 2000 Sites are listed below and their conservation objectives and designated features (see Table 1):
 - (a) Benfleet and Southend Marshes (SPA and Ramsar site);
 - (b) Foulness (SPA and Ramsar site);
 - (c) Essex Estuaries (SAC and Ramsar site);
 - (d) Crouch and Roach Estuaries (SPA);
 - (e) Thames Estuary and Marshes SPA.
- 3.5 In the HRA to the Core Strategy the Council has also had regard to the vulnerability of a 'feature' or 'sub feature'. A feature or sub-feature is considered vulnerable if, it is both sensitive to, and likely to be exposed to, one or more of the

human activities which may cause damage or disturbance. These vulnerabilities have been summarised below and fully detailed in **Table 1**.

- (i) Direct physical loss Sea-level rise exacerbated by coastal squeeze/coastal erosion and Smothering by sediments driven by storm tides and siltation.
- (ii) Physical damage to habitats and prey species caused by coastal squeeze, water abstraction and increased water and land recreational pressures.
- (iii) Non-physical disturbance caused by increases in noise, car movement and recreation.
- (iv) Water quality deterioration caused by toxic and non-toxic contamination.
- (v) Biological disturbance through the introduction of non-native species and selective fishing activities.
- 3.6 These identified areas of concern/vulnerabilities have been used as criteria against which to assess each policy and proposal, taking account of spatial considerations, in order to identify those policies and proposals that could result in an adverse effect on a European Site.



Task 2 – Site Information

Table 1 - Conservation Objectives and Designated Features of European Sites

(a) Benfleet and Southend Marshes (SPA and Ramsar Site) - Benfleet and Southend Marshes SSSI; Southend-on-
Sea Foreshore Local Nature Reserve; Leigh National Nature Reserve
Benfleet and Southend Marshes SPA site comprises the intertidal part of the Thames Estuary from Benfleet to Shoeburyness,
which is predominantly occupied by mudflats, with small areas of saltmarsh and sandy beach.
Benfleet and Southend Marshes qualifies under article 4.2 of the EU Birds Directive by supporting:
 Internationally important populations of regularly occurring migratory species; and
An internationally important assemblage of waterfowl
Southend Marshes SPA internationally important populations of regularly occurring migratory bird species:
i) Subject to natural change, maintain in favourable condition the habitats for the internationally important
populations of regularly occurring migratory bird species under the Birds Directive, in particular:
Shell banks;
Saltmarsh;
 Intertidal Mudflats and Sandflat communities; and
 Eelgrass beds.
The conservation objective for the internationally important assemblage of waterfowl:
ii) Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of
waterfowl under the Birds Directive, in particular:
Shell banks;
Saltmarsh;
 Intertidal Mudflats and Sandflat communities; and
Eelgrass beds.

Condition	SSSI name: Benfleet And Southend Marshes Source: Natural England June 2011						
	% Area meeting PSA target		% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed	
	92.26%	78.04%	14.22%	0.00%	7.74%	0.00%	
Vulnerabilities			•			•	stem and an area of grazing
/ areas of		•				•	ment, especially to 'coastal
concern	and regulat of the Habit SPA and Ra agreement. regulatory of intertidal the eelgrass agreed a W levels. Althosediment will areas and a interest feat	ion. Infrastruct rat Regulation msar site. Bot The sea fishe order. Dredgir habitat and v the marsh i rater Level Mo bugh sewage of thin the intertivativities such ures of this sit	ture works to facing s, have the potenth wildfowling and ries are regulated ag of the Thames in ability of the eels suffering from the putfalls have received as dredging, have	ilitate visitor attractification in the cockle fishing and by Kent and Essa and inputs of her grass Zostera bed he lack of freshworthe grazing materally been upgraduated levels of cope the capacity to eat the capacity the eat the eat the capacity the eat the capacity the eat the eat the capacity the eat the eat the eat the capacity the eat the ea	ctions, although or in combination re also potential the ex Sea Fisheries whicides to the muster inputs due to urshes part of the ed to comply with oper and TBT. Codisturb and mobilist	dealt with under to adversely af threats which cusing bye-law portallers may be haderway to deter low rainfall. The site which will not the EC Directions equently, devilise these pollut	the planning control provisions fect the interest features of this arrently are well regulated by ower granted by a sea Fisheries aving indirect effects on the loss mine the effect of herbicides on a Environment Agency has maintain appropriate water wes, it is understood that relopment within the intertidal ants thus posing a threat to the Nature Reserve and covered by

Site	(b) Foulness (SPA and Ramsar site) - Foulness SSSI; Partly Southend-on-Sea Foreshore Local Nature Reserve
Features of	This site comprises a large area of mudflats and sandflats known as Maplin Sands, running from Shoeburyness Point to

Interest

Foulness Point, and smaller areas of saltmarsh and marshland around and on Foulness Island itself.

Foulness SPA qualifies under article 4.1 of the EU Birds Directive by supporting:

- Internationally important breeding populations of regularly occurring Annex 1 species: sandwich tern (*Sterna sandvicensis*), common tern (*Sterna hirundo*), little tern (*Sterna albifrons*) and avocet (*Recurvirostra avosetta*); and
- For supporting an internationally important wintering population of the Annex 1 species: hen harrier (*Circus cyaneus*).

Foulness SPA also qualifies under article 4.2 of the EU Birds Directive in that it supports:

- An internationally important assemblage of waterfowl (wildfowl and waders); and
- Internationally important populations of regularly occurring migratory species; and
- Nationally important breeding populations of a regularly occurring migratory species: ringed plover (*Charadrius hiaticula*)

Conservation Objectives

The conservation objective for the Foulness SPA internationally important populations of the regularly occurring Annex 1 Bird species:

- i) Subject to natural change, maintain the habitats for the internationally important populations of the regularly occurring Annex 1 Bird species in favourable condition, in particular:
- Shell, sand and gravel shores banks
- Intertidal Mudflats and sandflats
- Saltmarsh
- Shallow coastal waters

The conservation objective for the internationally important populations of regularly occurring migratory bird species:

ii) Subject to natural change, maintain the habitats for the internationally important populations of regularly occurring migratory bird species in favourable condition, in particular:

- Saltmarsh
- Intertidal Mudflats and sandflats
- Boulder and cobble shores

The conservation objective for the internationally important assemblage of waterfowl:

- iii) Subject to natural change, maintain the habitats for the internationally important assemblage of waterfowl in favourable condition, in particular:
- Saltmarsh
- Intertidal Mudflats and sandflats

Condition

SSSI name: Foulness Source: Natural England June 2011

		unfavourable	unfavourable	unfavourable declining	% Area destroyed / part destroyed
99.98%	77.52%	22.46%	0.02%	0.00%	0.00%

Vulnerabilities / areas of concern

At the time of citation of the Foulness SPA much of the area was **owned by the Ministry of Defence and is not,** therefore, subject to development pressures or public disturbance. This position has started to change with the release of Shoebury Garrison (Old Ranges) for approved (and partially completed) mixed development scheme. The New Ranges is subject to investigations for potential development. Offshore aggregate dredging and seismic surveys, which could possibly adversely affect the Maplin sands, will be addressed through the Essex Estuaries marine Special Area of Conservation (SAC) management scheme, of which Foulness is part. Natural processes are adversely affecting the southeast coastline and saltmarshes are being eroded. Maintenance of the integrity of the intertidal and saltmarsh habitats of the Mid-Essex Coast Ramsar sites as a whole is being addressed by soft sea defence measures, managed retreat and foreshore recharge. The cockel beds on the Maplin Sands support internationally important numbers of wading birds: the Kent and

Essex Sea Fisheries Committee control the cockle fishery through regulatory orders.

The site includes areas of grazing marsh and ditches. These areas are low lying, protected by sea walls and surrounded by areas of arable land. The main ditches that run through these marshes are saline and are fed from sea water which floods through sluices. The combination of lower rainfall and improved drainage to facilitate arable production means that the grazing marshes are becoming too dry. The rainfall has been too low in recent years to enable maintenance of the water levels by selecting damming ditches. To offset this, the main ditch is deliberately fed with sea water to keep it topped up. This operation has increased in frequency in the past 8- 10 years.

Site (c) Essex Estuaries (SAC and Ramsar Site) - Foulness SSSI

Features of Interest

The Essex Estuaries SAC has been created as a result of the Habitats Directive that required the establishment of a network of protected wildlife sites across the European Union.

The Essex Estuaries SAC is one of the **best examples of a coastal plain estuary system on the British North Sea coast** and comprises the estuaries of the Rivers Colne, Blackwater, Crouch and Roach, as well as extensive open coastal flats at Foulness, Maplin and Dengie. In addition to intertidal mudflats and sandflats there are rich marine communities supporting internationally important numbers of over-wintering waders and wildfowl. Saltmarsh and other marine vegetation communities may be found on areas that are subject to tidal flooding.

In summer the site hosts breeding populations of Annex 1 listed birds on the sand and gravel beaches.

Foulness SPA qualifies under the EU Habitat Directive in that it supports the following Annex 1 habitat features:

- Salicornia and other annuals colonising mud and sand (pioneer saltmarsh)
- Spartina swards (Spartinion) (cordgrass swards)
- Atlantic salt meadows (Glauco-Puccinellietalia)

	 Mediterranean and therm-Atlantic halophilous scrubs (Arthrocnemetalia fruticosae) (Mediterranean saltmarsh scrubs) Estuaries Mudflats and sandflats not covered by seawater at low tide (intertidal mudflats and sandflats)
Conservation	The conservation objectives for Essex Estuaries SAC interest features:
Objectives	i) Subject to natural change, maintain the following in favourable condition:
	• Salicornia and other annuals colonising mud and sand, in particular:
	- Glasswort/annual sea-blite community - Sea aster community
	 Spartina swards (Spartinion), in particular:
	- Small cordgrass community - Smooth cordgrass community
	 Atlantic salt meadows (Glauco-Puccinellietalia), in particular:
	 Low/mid-marsh communities Upper marsh communities Upper marsh transitional communities Drift-line community
	 Mediterranean and thermo-Atlantic halopilous scrubs (Arthrocnemetalia fruticosae), in particular:
	- Shrubby sea-blite community - Rock sea lavender/sea heath community

• Estuaries, in particular:

- Saltmarsh communities
- Intertidal mudflat and sandflat communities
- Rock communities
- Subtidal mud communities
- Subtidal muddy sand communities
- Subtidal mixed sediment communities
- Mudflats and sandflats not covered by seawater at low tide, in particular:
 - Mud communities
 - Muddy sand communities
 - Sand and gravel communities

Condition

Sandbanks which are slightly covered by sea water all the time - for which the area is considered to support a significant presence.

The estuaries are considered to be one of the best areas in the United Kingdom.

The mudflats and sandflats not covered by seawater at low tide for which this is considered to be one of the best areas in the United Kingdom.

Salicornia and other annuals colonising mud and sand for which this is considered to be one of the best areas in the United Kingdom.

Spartina swards (Spartinion maritimae) for which this is one of only two known outstanding localities in the United Kingdom and is considered to be rare as its total extent in the United Kingdom is estimated to be less than 100 hectares.

Atlantic salt meadows (Glauco-Puccinellietalia maritimae) for which this is considered to be one of the best areas in the

	United Kingdom.
	Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>) for which this is one of only four known outstanding localities in the United Kingdom and is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares.
Vulnerabilities	At the time of citation of the Essex Estuaries SAC the saltmarshes and mudflats were under threat from 'coastal squeeze' -
/ areas of	man-made sea defences prevent landward migration of these habitats in response to sea-level rise. These habitats are also
concern	vulnerable to plans or projects (onshore and offshore) which have impacts on sediment transport. English Nature's
	Regulation 33 advice was issued June 2000. A scheme of management is being established with the aim of addressing such problems

Site	(d) Crouch and Roach Estuaries SPA - Crouch and Roach Estuaries SSSI
Features of Interest	The Crouch and Roach Estuaries SPA qualifies under Article 4.2 of the EU Birds Directive in that it supports: an internationally important assemblage of waterfowl (wildfowl and waders); and internationally important populations of regularly occurring migratory species
Conservation Objectives	The conservation objective for the Crouch and Roach Estuaries SPA internationally important populations of regularly occurring migratory bird species i) Subject to natural change, maintain the habitats for the internationally important populations of regularly occurring migratory bird species in favourable condition, in particular:
	 Saltmarsh Intertidal mudflats and sandflats

Boulder and cobble shores

The conservation objective for the internationally important assemblage of waterfowl

- ii) Subject to natural change, maintain the habitats for the internationally important assemblage of waterfowl in favourable condition, in particular:
- Saltmarsh
- Intertidal mudflats and sandflats
- Boulder and cobble shores

Condition

SSSI name: Crouch And Roach Estuaries Source: Natural England June 2011

	favourable	unfavourable	unfavourable	unfavourable declining	% Area destroyed / part destroyed
99.33%	22.87%	76.46%	0.67%	0.00%	0.00%

Vulnerabilities / areas of concern

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. Water-skiing is largely controlled by the Crouch Harbour Authority. Most grazing marshes are managed under ESA/Countryside Stewardship Agreements and/or management agreements with English Nature.

Low water levels caused by abstraction will be tackled through the Environment Agency's Review of Consents process (in

accordance with regulation 50 of 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 Countryside Stewardship schemes to control the application of these chemicals, whilst on most of the adjacent grassland it is controlled by ESA or 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 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.

Site	(e) Thames Estuary & Marshes SPA - South Thames Estuary and Marshes and Mucking Flats and Marshes SSSI
Features of	The Thames Estuary European marine site encompasses the extensive mudflats and small areas of saltmarsh on the south
Interest	bank of the Thames between Shorne Marshes and Grain, together with Mucking Flats on the north shore. Thames Estuary and Marshes SPA qualifies under Article 4.1 of the EU Birds Directive by supporting:
	• Internationally important populations of regularly occurring Annex 1 species. It also qualifies under Article 4.2 of the EU Birds Directive in that it supports:
	 Internationally important populations of regularly occurring migratory species; and An internationally important assemblage of waterfowl.
Conservation	The conservation objective for the internationally important population of the regularly occurring Annex 1 bird species
Objectives	i) Subject to natural change, maintain in favourable condition the habitats for the internationally important population of the regularly occurring Annex 1 bird species, under the Birds Directive, in particular:

	 Intertidal mudflats Intertidal saltmarsh 						
	The conservation objective for the internationally important populations of regularly occurring migratory bird species						
	 ii) Subject to natural change, maintain in favourable condition the habitats for the internationally important populations of regularly occurring migratory bird species, under the Birds Directive, in particular: Intertidal mudflats Saltmarsh Intertidal shingle 						
The conservation objective for the internationally important assemblage of waterfowl iii) Subject to natural change, maintain in favourable condition the habitats for the internation assemblage of waterfowl, under the Birds Directive, in particular:					ationally important		
Condition	 Intertidal mudflats Saltmarsh Intertidal shingle SSSI name: South Thames Estuary And Marshes Source: Natural England June 2011 						
	% Area	% Area	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed	
	97.63%	95.28%	2.35%	0.59%	1.79%	0.00%	
Vulnerabilities	There is evi	There is evidence of coastal squeeze and erosion of intertidal habitat within the site. English Nature (now Natural					

/ areas of concern

England) 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—based recreation. This is being addressed by information dissemination as part of an estuary management plan. 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. 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 1994.

Task 3 - Analysis of the plan for potential adverse impacts

- 3.7 Each of the policies and proposals within the SCAAP Issues and Options Consultation Document has been screened and those options and proposals identified to have 'no effect' on any European Sites has been screened out of the assessment. Table 3 below sets out the criteria used to identify the 'no effect' policies in 'The Assessment of Regional Spatial Strategies and Sub Regional Strategies under the Provisions of the Habitats Regulations' (2006) prepared for Natural England Draft Guidance, Annex II written by Tyldesley and Associates.
- 3.8 Using the following coding for recording effects and impacts on a European Site, each SCAAP policy has been assessed and the relevant criterion / criterion determined for each. Those awarded one or more of the criterion numbered 1-7 in the table below will be assessed as having no effect on a European Site. Those policies awarded 8 are considered to have a potential impact and those awarded a 9 are likely to have a significant effect on a European site. Policies considered to have no impact on a European Site, do not require an Appropriate Assessment.

Reason why policy would not have likely significant effects on a European Site

- 1. The policy itself will not itself lead to development (e.g. it related to design or other qualitative criteria for development, or it is not a land use planning policy).
- 2. The policy makes provision for a quantum / type of development (and may or may not indicate one or more broad locations e.g. county, or district, or sub region) but the location of the development is to be selected following consideration of options in lower tier plans (Development Plan Documents).
- 3. No development could occur through this policy alone, because it is implemented through sub-ordinate policies that are more detailed and therefore more appropriate to assess for their likely significant effects on a European Site and associated sensitive areas.
- 4. Concentration of development in urban areas will not affect a European Site and will help to steer development and land use change away from a European Site and associated sensitive areas.
- 5. The policy will help to steer development away from a European Site and associated sensitive areas, e.g. not developing in areas of flood risk or areas otherwise likely to be affected by climate change.
- 6. The policy is intended to protect the natural environment, including biodiversity.
- 7. The policy is intended to conserve or enhance the natural, built or historic environment, and enhancement measure will not be likely to have any effect on a European Site.

Reason why policy could have a potential effect

8. The Local Development Framework steers a quantum or type of development towards, or encourages development in, an area that includes a European Site or an area where development may indirectly affect a European Site.

Reason why policy would likely to have a significant effect

9. The policy makes provision for a quantum, or kind of development that in the location(s) proposed would be likely to have a significant effect on a European Site. The proposal must be subject to appropriate assessment to establish, in light of the site's conservation objectives, whether it can be ascertained that the proposal would not

adversely affect the integrity of the site.

- 3.9 Potential effect' policies Screening (Task 3) takes into account the following broad, judgement based criteria:
 - Proximity of policy area to a European Site;
 - Scale of proposals;
 - Likely associated adverse direct and indirect impacts, considering duration and magnitude and identified areas of concern/vulnerabilities
- 3.10 At this stage, if the policy or supporting text includes a caveat or criterion that excludes support for potentially damaging proposals on a European Site then this policy was also screened out.

Task 4 - Screening Analysis of the Southend Central Area Action Plan policies

This section screens the policies contained within the Development Management Policies submission stage report. The policies are assessed, for their impact, against the criteria provided in Task 3.

Southend Central Area Action Plan Policy	European Site Effect	Likelihood of Impact	Comments
Policy DS1: New and enhanced shopping facilities	4	No likely significant effects	This policy sets out the approach to retail and shopping development in the Town Centre. There is no effect on any European sites directly related to this policy.
Policy DS2: Shopping frontages and use of floors above shops	4	No likely significant effects	This policy sets out the approach to primary and secondary shop frontage in the Town Centre. There is no effect on any European sites directly related to this policy.
Policy DS3: Retail Markets	4, 1	No likely significant effects	This policy sets out the approach to maintain and enhance retail market provision in the town centre. There is no effect on from any European sites directly related to this policy.
Policy DS4: Employment development within the central area	4	No likely significant effects	This policy describes the focused locations for employment development within the central area. There is no effect on any European sites directly related to this policy.
Policy DS5: Education and higher and further education	4	No likely significant effects	This policy encourages provision of further educational establishments in the town centre. There is no effect on any European sites directly related to this policy.
Policy DS6: Provision of facilities	7, 8	Proximity would indicate potential	This policy looks to enhance or diversify the range of arts, culture, entertainment, leisure and recreational facilities including Southend

for culture, leisure,		however policy	Pier, the beach, foreshore and Estuary and the central seafront. This
tourism and		approach to	policy may involve intensification of some uses close to European
entertainment		biodiversity and	sites. Nevertheless when read in conjunction with Policy CS2:
		European	Seafront Principles which requires all development proposals to
		designations ensures	"safeguard and where appropriate enhance the biodiversity
		that there is no likely	importance of the foreshore and respect the European
		significant effects	designations". It also states that "Development south of the seawall
			will not normally be permitted". Furthermore Policy CS4: Nature
			Conservation and Biodiversity will "ensure that all development
			proposals are accompanied by an appropriate assessmentto
			guarantee that the foreshore designations are respected and that
			there are no negative impact to them" among other things.
Policy DS7: Social	1, 4,	No likely significant	This policy makes provision for health care, social care as well as
and Community		effects	maintain and enhancing faith, community and voluntary sector.
Infrastructure			There is no effect on any European sites directly related to this
			policy.
Policy DS8: Housing	4	No likely significant	This policy describes the area where housing will be focused. All the
		effects	areas stated are brownfield sites which would be redeveloped or
			regenerated. There is no effect on any European sites directly
			related to this policy.
Policy PR1: Open	6, 7	No likely significant	This policy seeks to enhance green space in the central area. It
Space Provision		effects	acknowledges the RAMSAR site and looks to provide positive
			biodiversity benefits and integrate with the wider green grid network.
Policy PR2: Public	1, 7	No likely significant	This policy seeks to enhance the streetscape, improve legibility and
Realm		effects	permeability through the built environment. There is no effect on any
Enhancements			European sites directly related to this policy.
Policy PR3: Visually	1, 7	No likely significant	This policy seeks create more active frontages in areas of the town
Active Frontages		effects	centre where there are blank, inactive and unattractive backs of
			buildings with public art, green walls and detailed signage . There is

			no effect on any European sites directly related to this policy.
Policy PR4: Protection of Visually Important Views	1, 6, 7	No likely significant effects	This policy seeks to resist any development which is considered to cause harm to the 'visually important views' identified. There is no effect on any European sites directly related to this policy.
Policy PR5: Landmark Buildings	1, 7	No likely significant effects	This policy protects landmark buildings or landscape features, and enhances their setting. There is no effect on any European sites directly related to this policy.
Policy HE1: The Clifftown Quarter	7	No likely significant effects	This policy seeks to protect and enhance conservation areas and the historic environment in Clifftown Quarter. It looks to improve the environment. There is no effect on any European sites directly related to this policy.
Policy HE2: The Central Seafront Area	7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	This policy seeks to protect and enhance historic buildings in the central seafront including the Southend Pier and the Kursaal and seeks to enhance their setting. Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things.
Policy HE3: Prittlewell Gateway	7	No likely significant effects	This policy seeks improvements to the public realm and environment. There is no effect on any European sites directly related to this policy.
Policy HE4: The High Street	7	No likely significant effects	This policy seeks improvements to the public realm and improves the quality of the buildings and natural environment. There is no effect on any European sites directly to this policy.

HE5: Frontages of Townscape Merit in the Central Area	1,7	No likely significant effects	This policy will ensure that special regard is paid to the preservation and restoration of features which contribute to the special character of their frontage. There is no effect on any European sites directly related to this policy.
HE6: Conversion of Heritage Assets in the Central Area	1, 7	No likely significant effects	This policy protects conservation assets to protect historic buildings and architectural character of areas. There is no effect on any European sites directly related to this policy.
Policy HE7: Areas of Archaeological Potential in the Central Area	7	No likely significant effects	This policy ensures that archaeological assessments are made of key new developments. There is no effect on any European sites directly related to this policy.
Policy TA1: Town Centre and Central Area	1, 3	No likely significant effects	This policy seek better to improve the transport network prioritising pedestrians, cyclists, public transport user and improving accessibility and increase road safety. There is no effect on any European sites directly related to this policy.
Policy TA1: 'The Victorias' Phases 2, 3 and 4 Traffic and Public Realm Scheme	1, 3, 4	No likely significant effects	This policy looks to improve the public realm in and around 'The Victorias'. There is no effect on any European Sites directly related to this policy.
Policy TA1b: 'City Beach' Phase 2 – Traffic and Public Realm Scheme	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	This policy looks to improve the public realm in and around 'City Beach'. The policy contains wording 'to enhance the ecological value of the site and respect the protected status of the foreshore'. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall

Policy TA2: Public Transport	1	No likely significant	will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things. This policy looks to rebalance the model of transport from car to bus and rail. There is no effect on any European sites directly related to
·			this policy.
Policy TA3: Walking and Cycling	1, 3	No likely significant effects	This policy looks to encourage a shift to sustainable modes such as walking and cycling. There is no effect on any European sites directly related to this policy.
Policy TA4: Town Centre Parking Management	1, 3	No likely significant effects	This policy outlines measures for parking management in the town centre. There is no effect on any European sites directly related to this policy.
Policy TA5: Other measures to Improve Accessibility	1, 3	No likely significant effects	This policy encourages improvements to taxi provision, travel plans, car clubs etc. There is no effect on any European sites directly related to this policy.
Policy IF1: Central Area Infrastructure	1, 3	No likely significant effects	This policy seeks to ensure that there is appropriate capacity for infrastructure including additional requirements including provision of a primary school and Primary Care Centre. There is no effect on any European sites directly related to this policy.
Policy IF2: \$106 Planning Obligations and Developer Contributions	1, 3	No likely significant effects	This policy refers to the presumption that contributions will be sort towards the delivery of public infrastructure from new development. There is no effect on any European sites directly related to this policy.
Policy IF3: Flood Risk Management	1, 3, 5	No likely significant effects	This policy describes the need for flood risk assessment in areas of local flood risk and a need for SuDS. There is no effect on any European sites directly related to this policy.

Policy DP1: The	1, 4, 7	There is no effect on	This policy maintains the town centre's role as a primary retail
High Street		any European sites.	destination, preservation and restoration of features which contribute
Development			to special character and public realm improvements. There is no
Principles			effect on any European sites directly related to this policy.
Policy DP2:	1, 4, 7	No likely significant	This policy sets out development principles in Queensway and
Queensway and		effects	London Road/Broadway to improve the offer and public realm. It
London			looks to pursue urban greening projects. There is no effect on any
Road/Broadway			European sites directly related to this policy.
Development			
Principles			
Proposal Site Policy	2, 3, 4, 7	No likely significant	This policy proposal describes the Sainsbury's site in the town centre
PS2a: Sainsbury's		effects	and options for redevelopment should they relocate. There is no
and adjacent			effect on any European sites directly related to this policy.
buildings, London			
Road Proposal Site)	
Policy DP3: Elmer	1, 4, 7	No likely significant	This policy sets out development principles for Elmer Square which
Square Development		effects	will include educational facilities as well as access and public realm
Principles			improvements. There is no effect on any European sites directly
D I C'I D I'	0 2 4 7	NI III I · · · · · · · · · · ·	related to this policy.
Proposal Site Policy	2, 3, 4, 7	No likely significant	This policy proposal outlines the approach to a phased
PS3a: Elmer Square		effects	redevelopment of the site, including a new public library, public art
Proposal Site			and realm improvements. There is no effect on any European sites
Policy DP4:	1, 4, 7	No likoly significant	directly related to this policy
Queensway and	1, 4, /	No likely significant effects	This policy describes the development principles for Queensway and
Southchurch Avenue		ellecis	Southchurch Avenue for provision of new and improved housing, office and secondary retail as well as community uses. It also
Development			includes improvements to access and the public realm. There is no
Principles			effect on any European sites directly related to this policy.
Proposal Site Policy	2 3 4 7	No likely significant	This policy proposal outlines the approach to redevelopment at
Froposal Site Policy	2, 3, 4, 7	140 likely significant	This policy proposal outlines the approach to redevelopment at

PS4a: Queensway House and adjacent buildings		effects	Queensway House and adjacent buildings. It promotes the delivery of additional housing and new commercial development, office and secondary retail and community facilities. It also looks to pursue urban greening within the development. including the use of green walls and roof gardens and the creation of green space. There is no effect on any European sites directly related to this policy.
Policy DP5: Warrior Square Development Principles	1, 4, 7	No likely significant effects	This policy seeks a mixed use development and the provision of a multi storey car park and access and public realm improvements. There is no effect on any European sites directly related to this policy.
Proposal Site Policy PS5a: Warrior Square Car Park Proposal Site	2, 3, 4, 7	No likely significant effects	This policy proposal outlines the approach to the redevelopment of Warrior Square Car Park as a mixed use development. It includes commercial and residents as well as improvements to the environment. There is no effect on any European sites directly related to this policy.
Proposal Site Policy PS5b: Whitegate Road	2, 3, 4, 7	No likely significant effects	This policy proposal describes the principles for the redevelopment of this site in close proximity to Warrior Square Car Park. There is no effect on any European sites directly related to this policy.
Policy DP6: Clifftown Development Principles	1, 4, 7	No likely significant effects	This policy seeks a mixed use redevelopment of Alexandra Street and Clarence Road Car Parks as well as promoting of smaller commercial and retail. There is also scope for improvement to access and the public realm and improvements to heritage assets. There is no effect on any European sites directly related to this policy.
Proposal Site Policy PS6a: Clarence Road Car Park	2, 3, 4, 7	No likely significant effects	This policy proposal describes the approach to the redevelopment of the site including car parking, smaller retail, cafes, offices etc and a new public square. There is no effect on any European sites directly related to this policy.
Proposal Site Policy	2, 3, 4, 7	No likely significant	This policy proposal describes the approach to the redevelopment of

PS6b: Alexandra Street Car Park		effects	Alexandra Street Car Park. This includes small retail and residential units etc. There is no effect on any European sites directly related to this policy.
Policy DP7: Tylers Avenue Development Principles	1, 4, 7	No likely significant effects	This policy describes the development principles for Tylers Avenue which includes large retail units, expansion of retail circuits, public realm improvements, and better links with the central seafront.
Proposal Site Policy PS7a: Tylers Avenue	2, 3, 4, 7	No likely significant effects	This policy proposal describes redevelopment of Tylers Avenue which quality larger retail units supported by office and residential uses. There is no effect on any European sites directly related to this policy.
Proposal Site Policy PS7b: Pitman's Close	2, 3, 4, 7	No likely significant effects	This policy proposal describes the principles for the redevelopment of this site in close proximity to Tyler's Avenue. There is no effect on any European sites directly related to this policy.
Policy CS1: Landmark Buildings and Key Spaces	1, 7	No likely significant effects	This policy supports proposals which enhance the setting, appearance and character of important buildings on the seafront. There is no effect on any European sites directly related to this policy.
Policy CS2: Central Seafront Strategy: Key Principles	1, 3, 6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	This policy sets out the approach to development in the Central Seafront area. It supports development opportunities which improve the leisure, culture and tourism, appropriate located and sustainable residential development, protection and enhancement of conservation areas, green and well connected environment, environmental, landscaping and public realm improvements. It also describes the need to consider flood risk and safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European Designations. This policy may involve intensification of some uses close to European sites. It states that development south of the seawall will not normally be permitted.

Policy CS3: Flood	1, 5	No likely significant	Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things. This policy sets out the measures to manage and reduce flood risk,
Risk	1, 3	effects	especially on major seafront development sites as the central seafront is identified by the Environment Agency as being liable to tidal flooding.
Policy CS4: Nature Conservation and Biodiversity	1, 5, 6, 7	No likely significant effects	This policy will ensure that all development proposals are accompanied by an appropriate assessment and associated documentation to guarantee that the foreshore designations are respected and that there is no negative impact to them and ensure that development proposals which are likely to have an adverse impact, either directly or indirectly on a SSSI will not be permitted.
Policy CS5: The Waterfront	1, 5, 6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	This policy looks to promote appropriate cultural, leisure and tourism activities in the central seafront area as well as continuing to maintain the quality and cleanliness of the beach and foreshore experience including integrating the protection of biodiversity interests, heritage assets and landscape features. The policy also states that proposals will need to demonstrate that there will be no unacceptable impact upon biodiversity, flood risk, special character and designations. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature

Policy CS6: Central Seafront Development Principles	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things. This policy sets out the development principles for the whole of the central seafront area including development at Seaways Car Park, enhance or diversify the range of arts, culture, entertainment, leisure and recreational facilities subject to assessment of the scale, character and impact of any proposal on existing facilities and foreshore designations. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things.
Proposal Area Policy CS6a: Southend Pier	7,8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely	This policy proposal describes measures which are planned to rejuvenate Southend Pier. This includes the provision of cultural and leisure activities. This policy would reinstate a number of uses which were previously an integral part of the operation of the Pier. It also includes a scheme to install some creative lighting. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard"

Proposal Area Policy CS6b: Seaway Car Park and Marine Parade	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things. This policy proposal outlines the approach to potential redevelopment of Seaways Car Park and parts of Marine Parade. The approach will increase the leisure, culture and tourism offer and provide new access route to the promenade and seafront. It states that development must incorporate the best environmental practice in design and layout. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things.
Policy CS7: Western Esplanade, The Cliffs and Shrubbery	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and	This policy seeks to improve the connectivity between the town centre and seafront, improve quiet leisure, culture and tourism activities including bird watching, sailing, maritime recreation etc which ensure that foreshore designations are respected and are not compromised. It states that all proposals will need to produce an

		European designations ensures that there is no likely significant effects	appropriate assessment to demonstrate this. Furthermore it suggests an approach to cliff stabilisation which includes a New Southend Museum and public realm improvements. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things.
Proposal Area Policy CS7a Cultural Centre and New Southend Museum	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	This Policy outlines the principles for the New Southend Museum and Cultural Centre which will also provide the necessary structural support required for cliff stabilisation. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things.
Policy CS8: Eastern	6, 7, 8	Proximity would	This policy seeks to ensure that development proposal in the area

Esplanade and City Beach Gateway		indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	respect conservation areas, historic buildings, delivery regeneration, public realm and environmental improvements and greening and landscaping. Its states that proposals for seafront development along Eastern Esplanade will need to demonstrate that there will be no unacceptable impact upon biodiversity, flood risk or the special character or designations. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS2: Seafront Principles which requires all development proposals to "safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations". It also states that "Development south of the seawall will not normally be permitted". Furthermore Policy CS4: Nature Conservation and Biodiversity will "ensure that all development proposals are accompanied by an appropriate assessmentto guarantee that the foreshore designations are respected and that there are no negative impact to them" among other things.
Proposal Area Policy CS8: Woodgrange Drive (Kursaal) Estate	4, 5	No likely significant effects	This policy proposes regeneration and enhancement of the Woodgrange Drive Estate to integrate it with the surrounding residential area. It states that proposals should incorporate low carbon technologies etc. There is no effect on any European sites directly related to this policy.
Policy DP9: Victoria Gateway Neighbourhood Development	4, 5	No likely significant effects	This policy seeks to create a mixed use low carbon community and promotes three development sites at Victoria Avenue, Roots Hall Football Ground and Northumbria Water Board site in North Road. It also seeks public realm and access improvements. There is no effect on any European sites directly related to this policy.
Proposal Site Policy PS9a: The Victoria	3, 4	No likely significant effects	This policy proposal outlines the approach to the redevelopment of Victoria Avenue as a low carbon mixed use development. There is

Office Area Site			no effect on any European sites directly related to this policy.
Proposal Site Policy PS9b: Former Essex and Suffolk Water Board Site	3, 4	No likely significant effects	This policy proposal encourages the promotion of enhanced cultural and creative facilities. There is no effect on any European sites directly related to this policy.
Proposal Site Policy PS9c: Roots Hall Football Ground and Environs	3, 4	No likely significant effects	This policy proposal outlines the principles for redevelopment of the site with a mixed use development. There is no effect on any European sites directly related to this policy.
Policy DP10: Sutton Gateway Neighbourhood Development Principles	3, 4	No likely significant effects	This policy outlines the development principles within Sutton Gateway. It includes the development of three key sites at the former B & Q, Coleman Street and Sutton Road. It also mentions improvements to access and the public realm. There is no effect on any European sites directly related to this policy.
Proposal Site PS10a: Former B & Q Site	3, 4	No likely significant effects	This policy proposal outlines the approach to the redevelopment of the site with a new large format food store, car parking and youth facilities. There is no effect on any European sites directly related to this policy.
Proposal Site PS10b: Sutton Road	3, 4	No likely significant effects	This policy proposal outlines the approach to the redevelopment of this area for high quality housing with supporting uses at ground floor. It will also provide for a new public open space. There is no effect on any European sites directly related to this policy.
Proposal Site PS10c: Coleman Street	3, 4	No likely significant effects	This policy proposal explores the opportunities for the regeneration of this site to provide provision of additional social housing and neighbourhood renewal. There is no effect on any European sites directly related to this policy.

4. Identification of Other Plans and Projects which may have 'in combination' Effects

- 4.1 Regulation 102 of the Amended Habitats Regulations 2010 requires an Appropriate Assessment where 'a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site'. The first stage in identifying 'in combination' effects involved identifying which other plans and projects may be affecting the European sites included in this assessment.
- 4.2 A review of other plans has been undertaken in order to identify any components that could have an impact on European sites within the area considered for this screening assessment. These may be areas where additional development is proposed near to the European sites and therefore where there could be adverse effects associated with the transport, water use, infrastructure requirements and recreation pressures associated with new developments.
- 4.3 The Southend Core Strategy DPD spatial strategy makes provision for a large share of the Borough's new growth and regeneration to be focussed in the central area of the Borough. The purpose of the SCAAP is, therefore, is to give more detailed consideration to how and where employment-led regeneration and growth can sustainably be accommodated in the town centre, central seafront area and surrounding neighbourhoods. These site specific proposals may have the potential to impact European and international sites for nature conservation.
- 4.5 It is also essential to consider the various other pressures to which the site is exposed during the plan's lifetime. A list of each Other Plan and Programme (including the Core Strategy) is listed below.

Other Plans and Programs Considered

- 1. Southend-on-Sea Core Strategy DPD (2007)
- 2. Rochford Core Strategy: Submission (2010)
- 3. Castle Point Core Strategy: Submission (2010)
- 4. Thames Estuary 2100 Project
- 5. Essex and South Suffolk Shoreline Management Plan (consultation draft)
- 6. Essex Catchment Flood Management Plan (CFMP) December 2008
- 4.6 The following paragraphs summarises those plans that may have an 'incombination effect'. In addition, the Thames Estuary 2100 Project, Essex and South Suffolk Shoreline Management Plan consultation and Essex Catchment Flood Management Plan are considered.

Southend-on-Sea Core Strategy DPD (2007)

- 4.7 The policies contained in the Core Strategy have already been judged to have no significant impacts on Natura 2000 sites through an 'Appropriate Assessment'. All policies have also been subject to a Sustainability Appraisal to help identify the policies for use in making decisions on planning applications. The requirement to ensure that the European designations for nature conservation are not adversely affected by development is embedded into the Southend-on-Sea Core Strategy. Paragraph 2.5 of the Core Strategy which provides the supporting text for Policy KP1 which sets out the Spatial Strategy references the Seafront states that biodiversity and other natural resources should be safeguarded and enhanced. It is also stated that European and international sites for nature conservation on the Southend foreshore should not be adversely affected by development. Regard will be given to interest features and particular sensitivities of a site in relation to:
 - Direct physical loss;
 - Physical damage to habitats and prey species;
 - Non- physical disturbance;
 - Water quality deterioration; and
 - Biological disturbance.
- 4.8 It is reiterated in the Core Strategy DPD that the Seafront AAP (which has now been incorporated into the Development Management submission document and presubmission SCAAP) will seek to safeguard, conserve and enhance the significant biodiversity, green space and other environmental resources of the area, particularly ensuring the European and international sites for nature conservation on the extensive foreshore are not adversely affected by any new development.
- 4.9 Policy KP1 states that the Seafront's role as a successful leisure and tourist attraction and place to live will be enhanced, subject to the safeguarding of the biodiversity importance of the foreshore and in particular ensuring that European and international sites for nature conservation are not adversely affected by any new development.
- 4.10 Policy KP2 of the Core Strategy sets out the development principles. Part 4 of this policy states that development must respect, conserve and enhance and where necessary adequately mitigate effects on the natural environment, including the borough's biodiversity and green space resources and ensure that European and international sites for nature conservation are not adversely affected and contribute positively towards the 'Green Grid' in Southend.
- 4.11 Policy KP3 of the Core Strategy considers implementation and resources. Part 8 of the policy states that an 'Appropriate Assessment' will be required where development may adversely affect national, European and international nature conservation designations.

- 4.12 Policy CP7 of the Core Strategy considers sport, recreation and green space. This policy sets out a quantum of recreational space that is required to meet the demand that will be generated by the additional dwelling provision over the period to 2021 whilst minimising recreational pressures on European and international sites for nature conservation.
- 4.13 When considered in combination with the proposed growth targets of the adjacent Boroughs (Castle Point Borough Council, Basildon District Council and Rochford District Council), the Core Strategy was found to be acceptable. The policy suite within the Core Strategy provides a suitable strategic framework to ensure that significant risks of adverse effects to the interest features of European sites can be effectively minimised, designed-out and/or addressed. It is noted in the Appropriate Assessment to the Core Strategy that more detailed strategic direction within lower tier local development documents will need to be set within this strategic framework.

Castle Point Core Strategy: Submission Version

- 4.14 A number of amendments were made at the Preferred Options Stage of the Core Strategy with the aim of improving the submission version of this document in respect to its impact on the European Sites. These recommendations included the removal of locations that were more likely to have an impact on European Sites, the inclusion of policies on water efficiency and the inclusion of a policy on protecting environmental amenity.
- 4.15 The HRA to the Castle Point Core Strategy: Submission document identified a potential impact upon the Benfleet and Southend Marshes. In particular Policy SS1 which sets out the spatial strategy allows housing growth around Hadleigh and around South Benfleet. This may result in the Discharge Consents for the Benfleet Sewage works being exceeded. Benfleet Sewage works feeds into Benfleet Creek, which in turn flows into Benfleet and Southend Marshes SPA. This has the potential to affect the Benfleet and Southend Marshes and the Thames Estuary through deterioration in water quality.
- 4.16 It is also suggested in the HRA that growth of business activities to the South West of Canvey Island may have an impact on the Canvey Wick SSSI. As part of the wildlife network locally, this may ultimately impact on the Thames Estuary SPA and Benfleet and Southend Marshes SPA. Leisure and recreation growth associated with the TGSE Green Grid Strategy may also place additional pressures on the Benfleet and Southend Marshes SPA. The spatial strategy will also result in an increased number of residents that may result in increased use of Hadleigh Castle Country Park, Canvey Heights Country Park and Canvey Seafront. These uses may result in direct and indirect biological disturbance resulting in direct and indirect impacts on the Benfleet and Southend Marshes SPA particularly and less so the Thames Estuary and Marshes SPA. The Core Strategy states that the impacts identified by

- future development can be mitigated against by requiring an ecological assessment as proposals come forward.
- 4.18 With regard to Policy CP2 which relates to green infrastructure it was considered in the HRA that the Olympic Mountain Biking Event has the potential to cause harm to the Benfleet and Southend Marshes SPA. As with the Spatial Strategy it is considered that this can be prevented by requiring an ecological assessment of the Olympic proposals as they are developed.
- 4.19 Objective 16 considers flood defences. The objective related to the maintenance of sea defences in Castle Point has implications for the Benfleet and Southend Marshes SPA and could result in coastal squeeze. The objective can be made more appropriate with regard to its potential effects on European Sites by including reference to other sustainable flood management measures as well as sea defences in order to limit impact.
- 4.20 Potential in-combination effects may be summarised as follows:
 - Disturbance as a result of development near/adjacent to European sites that could include increased: recreation; light pollution; and noise pollution
 - Atmospheric Pollution generated as a result of housing, employment and transport growth.
 - Water Pollution increased pressure on sewerage capacity and an increase in non-permeable surfaces.
 - Water Abstraction potential for reduced water levels.
 - Modified Drainage as a result of proposed development altering surface and groundwater flow.
 - Land Take / Coastal Squeeze as a result of proposed development.

Rochford Core Strategy: Submission

- 4.21 The HRA of the Rochford Core Strategy: Submission document found that this document had the potential for likely significant effects both alone and incombination on European sites through; increased disturbance, increased atmospheric pollution and reduced water levels and quality. However it was considered that the Core Strategy contained sufficient policy mitigation and monitoring measures to avoid likely significant effects on European sites either alone or in-combination through increased atmospheric pollution.
- 4.22 The assessment could not conclude with certainty that the level of development proposed in the Core Strategy and surrounding areas will not have likely significant in-combination effects on European sites via reduced water quality and increased water resource demand.
- 4.23 The assessment makes a number of recommendations to address these uncertainties and mitigate the potential likely significant effects. The

recommendations include the addition of two water quality indicators into the Monitoring Framework, which will allow the Council to determine if developments being implemented through the plan are having adverse effects on the biological and chemical water quality of the European sites. To address the issues identified in relation reduced water levels, the assessment recommends additional supporting text for Policy H1 to ensure that the water supply necessary for developments can be supplied sustainably, with no adverse effects on European sites.

- 4.24 The in-combination effects can be summarised as:
 - Disturbance as a result of development near/adjacent to European sites that could include increased: recreation; light pollution; and noise pollution.
 - Atmospheric Pollution generated as a result of housing, employment and transport growth.
 - Water Pollution increased pressure on sewerage capacity and an increase in non-permeable surfaces.
 - Water Abstraction as a result of proposed development, potential for reduced water levels.
 - Modified Drainage as a result of proposed development altering surface and groundwater flow.

Thames Estuary 2100 Project

- 4.25 The Thames Estuary 2100 project (TE2100) was established in 2002 with the aim of developing a long-term tidal flood risk management plan for London and the Thames estuary. The project, lead by the Environment Agency, covers the Tidal Thames from West London through to Sheerness and Shoeburyness in Kent and Essex. This project seeks to develop an adaptable long term plan in the context of a changing estuary. It was acknowledged that the Thames was changing in relation to its climate, people and property in the floodplain and an underlying essential but ageing flood defence system.
- 4.26 The TE2100 project recognises the interconnectivity and dynamics within the Thames Estuary and acknowledges that the measures employed to manage coastal flood risk at a specific location have the capacity to affect upriver and downriver designated areas within the riparian districts of the Thames estuary. The TE2100 vision seeks improvements to the flood risk management system to provide amenity, recreation and environmental enhancement and be designed to minimise any adverse impacts on the frontage whilst supporting and enhancing the fishing industry activities.
- 4.27 The TE2100 Project highlights that the main sources of flooding in Southend-on-Sea come from: tidal flooding associated with the River Thames; fluvial flooding from Prittle Brook; and local drainage. The TE2100 Projects states that the recommended flood risk management policy for Leigh-on-Sea & Southend-on-Sea

is to take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change).

- 4.28 It is recognised by the TE2100 Project that is likely that the Southend-on-Sea frontage will continue to be developed and improved as it is an important leisure and recreation area. The intention of the TE2100 Plan would be to minimise visual impacts of flood defences on Leigh-on-Sea as much as possible by implementing further floodplain management measures. The TE2100 Project suggests that any new development in Southend-on-Sea should also be designed so that the potential flood impacts are minimised and a programme of public information is required to ensure that residents are aware of these floodplain management arrangements.
- 4.29 The TE2100 project requires LDFs to be more flexible to take account of the environmental trends of rising sea levels and the adverse effects of coastal squeeze. The TE2100 project recommends the use of the term 'appropriate coastal flood risk management options' rather than 'coastal flood defences', to ensure there is adequate flexibility at this strategic level to provide lower tier plans with sufficient scope to fully consider options that can avoid adverse affects on the integrity of the European Sites, either alone and/or in combination with other plans or projects.
- 4.30 The Project has split the Thames Estuary into 23 separate Policy Management Units (PMU) based upon the character of the local area and where the floodwaters would flow during a flood event. Each PMU offers different opportunities for managing flood risk, both at a local level and on an estuary-wide scale and has therefore been subject to a number of detailed studies and appraisals to assist TE2100 in identifying a flood risk management policy specific to the area.

The table below summarises the preferred policy options for PMUs present within Southend on Sea.

Policy Management Unit PMU	Recommended Preferred Option
Leigh-on-Sea and Southend- on-Sea (Action Zone 8)	This PMU has a continuous sea frontage with beaches and very extensive (designated) intertidal areas and a pier. Whilst most of Southend-on-Sea is on high ground and not at risk from tidal flooding, much of the sea front is at risk of flooding and there is a flood defence along the entire frontage.
	There are five schools, six care homes and 21 electricity sub stations within the flood risk area. This is an important amenity and recreation area, with a parallel road and footpaths along much of the frontage. The two main areas of floodplain are to the east of the city centre.
	Policy P4 to take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change).
	The number of properties at risk is relatively small but, as the standard of protection is lower than elsewhere on the estuary, the flood risk is relatively high at 0.5% (or 1:200) per annum or greater compared to the general standard of 0.1% (or 1:1,000) elsewhere in the estuary.
	Leigh-on-Sea has a narrow but historic frontage bounded by the railway line to the north. It has close links with the estuary with a strong fishing tradition, and floodplain management is practised to avoid creating a barrier between the village and the Estuary.
	This means that the defence level is low and properties have been built with raised thresholds and other resilience

Policy Management Unit PMU	Recommended Preferred Option
	measures to protect against tidal flooding. There is evidence that more recent riverside users are unaware of this and stock for shops is stored in the floodable area.
	Raised and new defences on the Southend-on-Sea frontage should be designed so that:
	 They do not encroach into the Estuary. The raised part of the defences could consist of a new defence on a new alignment behind the sea front where space permits (for example, park areas) so that the heights of walls on the sea front are limited. Walkways are raised to provide sea views, and access points are improved. Demountable defences and gated access points may be included in the designs in some areas providing that satisfactory arrangements can be made for security of closure.
	The Southend-on-Sea frontage is subject to wave attack and overtopping. Beach recharge has been implemented both to improve the beach and reduce the impacts of waves. Improvements to this approach would reduce the need for defence raising.
Lower Estuary Marshes- Hadleigh Marshes and	The Hadleigh Marshes is identified in this unit as being an area of marshes open to grazing crossed by a railway line. It is identified in the TE2100 plan as policy P2. Two Tree Island is also included in this policy unit, part of the Island lies outside the borough boundary but it is owned by Southend-on-Sea BC.
Two Tree Island (Action Zone 6)	Policy P2 to reduce existing flood risk management actions (accepting that flood risk will increase over time).

Policy Management Unit PMU	gement	
	The policy unit goes on to state:	
	'Local issues and choices	
	 There are flood defences on Two Tree Island adjacent to Hadleigh Marshes. Our Plan assumes that these will be abandoned. However further study is needed because there is a potential contamination issue on the island. Measures will be needed to manage fluvial flood risk from the marsh drainage system and watercourses that drain into the marshes. This would consist of improvements to channels and outfalls as the needs arise. 	
	Floodplain management	
	The need for floodplain management responses will be limited because the policy unit is largely undeveloped. There are no communities apart from visitors to the marshes and Two Tree Island. However flood warning will be needed for the railway line (which continues through Leigh-on-Sea & Southend-on-Sea policy unit to the east and	
	Bowers Marshes policy unit to the west). Choices for local flood risk management have not been designed or assessed in detail, and are included in our action plan for investigation, consultation and subsequent appraisal.'	

Policy Management Unit PMU	Recommended Preferred Option
The assignment of Policy Unit P2 to this action zone suggests the risk of flooding in this area is likely to increase time unless considerations of the contamination issues associated with the area are strong enough to just maintained defence line.	

Policy Management Unit PMU	Recommended Preferred Option
Leigh-on-Sea and Southend- on-Sea (Action Zone 8)	This PMU has a continuous sea frontage with beaches and very extensive (designated) intertidal areas and a pier. Whilst most of Southend-on-Sea is on high ground and not at risk from tidal flooding, much of the sea front is at risk of flooding and there is a flood defence along the entire frontage.
	There are five schools, six care homes and 21 electricity sub stations within the flood risk area. This is an important amenity and recreation area, with a parallel road and footpaths along much of the frontage. The two main areas of floodplain are to the east of the city centre.
	Policy P4 to take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change).
	The number of properties at risk is relatively small but, as the standard of protection is lower than elsewhere on the estuary, the flood risk is relatively high at 0.5% (or 1:200) per annum or greater compared to the general standard of 0.1% (or 1:1,000) elsewhere in the estuary.
	Leigh-on-Sea has a narrow but historic frontage bounded by the railway line to the north. It has close links with the estuary with a strong fishing tradition, and floodplain management is practised to avoid creating a barrier between the village and the Estuary.
	This means that the defence level is low and properties have been built with raised thresholds and other resilience measures to protect against tidal flooding. There is evidence that more recent riverside users are unaware of this and

Policy Management Unit PMU	Recommended Preferred Option	
	stock for shops is stored in the floodable area.	
	Raised and new defences on the Southend-on-Sea frontage should be designed so that:	
	 They do not encroach into the Estuary. The raised part of the defences could consist of a new defence on a new alignment behind the sea front where space permits (for example, park areas) so that the heights of walls on the sea front are limited. Walkways are raised to provide sea views, and access points are improved. Demountable defences and gated access points may be included in the designs in some areas providing that satisfactory arrangements can be made for security of closure. The Southend-on-Sea frontage is subject to wave attack and overtopping. Beach recharge has been implemented both to improve the beach and reduce the impacts of waves. Improvements to this approach would reduce the need 	
	for defence raising.	
Lower Estuary Marshes- Hadleigh Marshes and	The Hadleigh Marshes is identified in this unit as being an area of marshes open to grazing crossed by a railway line. It is identified in the TE2100 plan as policy P2. Two Tree Island is also included in this policy unit, part of the Island lies outside the borough boundary but it is owned by Southend-on-Sea BC.	
Two Tree Island (Action Zone 6)	Policy P2 to reduce existing flood risk management actions (accepting that flood risk will increase over time).	
(tellott Zotte 0)	As part of the TE2100 consultation stage concerns were raised over the reduction of flood risk management for both	

Policy Management Unit PMU	Recommended Preferred Option	
	Hadleigh Marshes and Two Tree Island with respect to contamination.	
	The policy unit goes on to state:	
	'Local issues and choices	
	 There are flood defences on Two Tree Island adjacent to Hadleigh Marshes. Our Plan assumes that these will be abandoned. However further study is needed because there is a potential contamination issue on the island. Measures will be needed to manage fluvial flood risk from the marsh drainage system and watercourses that drain into the marshes. This would consist of improvements to channels and outfalls as the needs arise. 	
	Floodplain management	
	The need for floodplain management responses will be limited because the policy unit is largely undeveloped. The no communities apart from visitors to the marshes and Two Tree Island. However flood warning will be needed for railway line (which continues through Leigh-on-Sea & Southend-on-Sea policy unit to the east and	
	Bowers Marshes policy unit to the west). Choices for local flood risk management have not been designed or assess in detail, and are included in our action plan for investigation, consultation and subsequent appraisal.'	
	The assignment of Policy Unit P2 to this action zone suggests the risk of flooding in this area is likely to increase over	

Policy Management Unit PMU	Recommended Preferred Option	
time unless considerations of the contamination issues associated with the area are strong enougeness. maintained defence line.		

Essex and South Suffolk Shoreline Management Plan (consultation draft)

- 4.31 Shoreline Management Plans identify the best ways to manage coastal flood and erosion risk to people and the developed, historical and natural environment. The objective of the Essex and South Suffolk Shoreline Management Plan (ES SMP) is to outline the intent of management for the coast and estuaries of Essex and South Suffolk. The plan aims to achieve the best possible balance for all the features that have been identified as valuable by partners and stakeholders around the coast. Another implication of focusing growth within coastal floodplains is the necessity to maintain adequate protection through suitable flood risk management options.
- 4.32 The current Shoreline Management Plan (Mouchel 1997) proposes maintenance of the 'hold the line' option within the Southend seafront and Shoeburyness area, which in practice requires maintaining hard coastal flood defences.
- 4.33 The following list sets out the some of the key coastal and estuary processes and pressures in the Essex and South Suffolk SMP area. These have played an important role in developing the plan.
 - Intertidal areas are typically wide, flat areas consisting of mud and silt that are sometimes dry, and sometimes under water. The intertidal area is important because it stops waves reaching flood and erosion defences and it is also a habitat for many rare plants and animals.
 - Coastal squeeze The natural response of intertidal areas is to gradually move inland. The estuaries and coastline in the Essex and South Suffolk SMP area are constrained by high ground and by man-made flood defences. This means that the saltmarshes and mudflats cannot move in a landward direction: they do lose area from their seaward edge, but they don't gain area on their landward edge. This is called 'coastal squeeze'. It puts pressure on the flood defences, which become more difficult to maintain, and it leads to loss of important habitats.
 - Open coast processes these frontages experience the full force of waves from the North Sea with the strongest waves coming from the north-east. The wave energy moves sediment around the coast. Sediment tends to build up in certain areas where the wave and current energy is less. There can also be a loss of sediment where this energy is greater. This loss of sediment causes a loss of beaches, saltmarshes and mudflats and can result in undermining of coastal and flood defences.
- 4.34 The following sets out the management units identified by the ES SMP that relate specifically to Southend-on-Sea.
 - Management Unit I (Foulness, Potton and Rushley Islands) This Management Unit is an open coast frontage with tidal channels that form a group of islands, part of the Foulness area. These tidal channels are connected to the River Roach and to the open coast. The islands are all

low-lying and are defended against flooding by earth embankments. On the south-east coast of Foulness Island, which is exposed to and under pressure from the sea, there is an extensive intertidal area known as Foulness Sands and Maplin Sands, the largest intertidal area in Britain. The overall intention for the islands is to sustain and support the viability of communities, tourism and commercial activities while creating new intertidal habitats and focusing flood risk management on frontages where it is most needed. The policy to achieve this intent is to maintain flood defence to Foulness and Potton Islands, including all dwellings and key infrastructure at risk of flooding, combined with a gradual increase of natural processes by realigning the defences of Rushley Island.

Management Unit J (Southend-on-Sea) – This management unit covers the area from Shoeburyness to Leigh-on-Sea (Two Tree Island). The frontage is an open coast frontage with sea cliffs along half of the frontage and substantial low-lying sections in between. Mud and fine sand beaches characterise the entire frontage. The Southend-on-Sea frontage is eroding and is defended by concrete seawalls, promenades, wave return walls and beach control structures. These beach control structures tend to trap coarse sand between them. The overall intention for Southend-on-Sea is to sustain and support its viability as a seaside town and its communities, tourism and commercial activities. This means a continuation of the current management approach: holding the current alignment where there are defences. Although the defences are under pressure, holding the line is necessary to sustain the seafront which is essential to the viability of Southend-on-Sea as a seaside resort. All dwellings and infrastructure would remain protected. The footpaths on top of the existing sea banks will be maintained. Heritage assets and landscape will remain protected and largely unchanged. The SMP's policies are compatible with the policy proposed by the Thames Estuary 2100 strategy. This includes intent to maintain the standard of protection, including compensation for climate chanae.

Essex Catchment Flood Management Plan (CFMP) December 2008

- 4.35 Catchment Flood Management Plans are high-level strategic planning documents that provide an overview of the main sources of flood risk and how these can be managed in a sustainable framework for the next 50 to 100 years. The Environment Agency engages stakeholders within the catchment to produce policies in terms of sustainable flood management solutions whilst also considering the land use changes and effects of climate change.
- 4.36 The South Essex CFMP provides information relating to the fluvial flood risk, as well as risk from surface water drainage systems and sewers across South Essex. The Plan highlights the main sources of flood risk to people, property and infrastructure in South Essex and recommends broad policies for the management of the present and future flood risk in the South Essex CFMP area.

4.37 This CFMP covers Southend-on-Sea BC and provides valuable records of historical flooding from fluvial systems, as well as surface, sewer and ground water flooding in the area. This information has been used to inform this Level 1 SFRA. The South Essex CFMP also presents preferred policy options for several Policy Units within Southend-on-Sea BC.

These have been summarised in the table below.

Summary of Preferred Policies for Policy Units in Southend-on-Sea BC, South Essex CFMP, 2008

Policy Unity	Problem/ Risk	Recommended Preferred Option
2 Southend- on-Sea and Rayleigh	This policy unit currently has a fluvial source of flooding from Prittle and Eastwood Brook. It also has a fluvial/tidal source of flooding in the downstream Prittle Brook from Pembroke House. Surface water flooding also occurs in localised areas of Rayleigh, Eastwood and Southend-on-Sea, due to impermeable surfaces. Channel improvements (including the deepening and straightening of the watercourse with a concrete bed) exist along 7.6km of Eastwood Brook and have a standard of protection that ranges along the reach from a 1 –20% AEP SoP. A natural earth flood embankment exists at the downstream end of Prittle Brook and protects to a 1% AEP SoP. The Prittle flood relief tunnel also exists on Eastwood Brook and protects to a 1% AEP SoP. This diverts flood flow into the River Thames.	 Develop a Flood Risk Study for Southend-on-Sea to investigate the feasibility of building new defences along Prittle and Eastwood Brook. Develop a System Asset Management Plan (SAMP) to investigate how we can continue with the current level of flood risk management throughout all systems in this policy unit. Develop an Emergency Response Plans for the A roads and railway. Develop an Emergency Response Plan to mitigate flood risk in Southend, Rayleigh and Eastwood from the risk of the defences failing. Flood Forecasting and Warning delivery plan to maintain the current level of flood forecasting/warning service. Develop an Integrated Urban Drainage Plan for Southend-on-Sea, and Eastwood.

Policy Unity	Problem/ Risk	Recommended Preferred Option
	The main areas at risk from the 1% AEP flood event are Southend-on-Sea and Eastwood, with a total of 950 people and 503 properties at risk respectively. In the future, this will increase by 142% and 130% for the 1% AEP flood event, with a total of 2,305 people and 1,157 properties at risk respectively.	
12 Thames Urban Tidal (Hadleigh Marshes)	This PU is low lying, generally below 5m AOD, covering the south western coastal areas of the CFMP area from Tilbury to Purfleet and Canvey Island and also includes the area of Hadleigh Marshes and Two Tree Island. The catchment is highly urbanised, responding quickly to rainfall.	Policy Option 4: to take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change). Although the policy relates to the largely urban areas that make up this policy unit.
	The PU is predominantly tidal but is protected by sea defence up to a 0.1% AEP SoP. Current flood risk management includes flood warning with our flood warnings direct as the main dissemination method. There are no raised defences within this policy unit, although and extensive array of arterial drains. There may be some	

Policy Unity	Problem/ Risk	Recommended Preferred Option
	informal/private defences.	

5. HRA Screening Report: conclusions and recommendations

- 5.1 The purpose of this HRA Screening Report is to assess whether any of the policies within the SCAAP are 'likely to have a significant effect' on any European (or Natura 2000) sites. It uses the precautionary principle in so far as if there is any doubt about the effect of any policies alone or in combination with other plans and policies, it would be necessary to conduct an 'appropriate assessment'.
- 5.2 A likely 'significant effect' is judged by the definition of the conservation objectives and designated features of the European sites. Proposals which have no or de minimis effects can be progressed without further consideration under the Habitats Regulations. Likely significant excludes trivial and inconsequential effects. In addition the likely scale of impact is an important consideration. Permanent reductions in habitat area or species populations are likely to be significant unless they are very small scale. In the case of certain sites a loss of, say a few square metres of the site area may be considered significant (for example, there may be circumstances when this may apply in the case of estuarine SPA's which are selected for their bird interest) in others, such as limestone pavement, any further loss of the area of qualifying interest may be unacceptable.
- 5.3 The European sites included in this assessment are (a) Benfleet and Southend Marshes (SPA and Ramsar site), (b) Foulness (SPA and Ramsar), (c) Essex Estuaries (SAC and Ramsar), (d) Crouch and Roach Estuaries (SPA) and (e) Thames Estuary and Marches (SPA). They have been included as they are a habitat for internationally important populations of regularly occurring migratory bird species and internationally important assemblage of waterfowl under the Birds Directive.
- An established criteria was used to assess whether there is reason to conclude that a policy should be subject to appropriate assessment or may be ruled out at the screening stage. The judgement-based took into account the (a) proximity of policy area to the European site, (b) the scale of proposals and (c) the likely associated adverse direct or indirect impacts, considering duration and magnitude and identified area of concern/vulnerabilities.
- 5.5 It has already been established through Appropriate Assessment that the Southend on Sea Core Strategy (December 2007) will have no impacts on Natura 2000 sites. The requirement to ensure that the European designations for nature conservation are not adversely affected by development is embedded into the Southend on Sea Core Strategy. It includes specific reference to the Southend seafront and Policy KP1 ensures that biodiversity and other natural resources should be safeguarded and enhanced. It also states that European and International sites for nature conservation on the Southend foreshore should not be adversely affected by development.

- Policy KP1 also identifies the Seafront's role and continuing role as a successful leisure and tourist attraction and place to live which will be enhanced, subject to the safeguarding of biodiversity importance of the foreshore and in particular ensuring that the European and International sites for nature conservation are not adversely affected by any new development. Protection of the European designated is included within other key policies within the document (KP2, KP3 and CP7). Furthermore it is noted in the Appropriate Assessment of the Core Strategy that more detailed strategic direction within lower tier local development documents will need to be set within this strategic framework. The HRA for the local authorities which share a boundary with Southend highlighted potential impacts which were considered to be mitigated by ecological and appropriate assessment as well as appropriate wording in policy ensuring the safeguarding and protection of European sites.
- 5.7 The SCAAP includes areas which are in close proximity to the European designations and the regeneration and growth expected in the town centre and seafront, as initially proposed in the adopted Southend Core Strategy, and translated at area specific level in the SCAAP, will result in an increase in activity and development. The policy approach taken in the Southend Core Strategy has been adopted in the SCAAP.
- 5.8 The central seafront strategy section comprises policy with specific wording to ensure that the European designations are respected and conserved:
 - Policy CS2: Central Seafront Key Principles states that the Council will "require all development proposals in the central seafront area to: (iii) safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations" and that "Development south of the seawall will not normally be permitted".
 - Policy CS4: Nature Conservation and Biodiversity states that the Council will "ensure that all development proposals are accompanied by an appropriate assessment and associated documentation to guarantee that the foreshore designations (SSSI, Ramsar and SPA) are respected and that there is no negative impact to them. Furthermore the Council will "ensure that development proposals which are likely to have an adverse impact, either directly on a Site of Special Scientific Interest (SSSI) will not be permitted". A need to make visitors and residents aware of the significance of the SSSI's sites is recognised and promoted in the policy, where the Council will "consider favourably the development of a high quality visitor facility close to the foreshore which interprets the natural habitat in the area providing visitors a better understanding of the ecosystems and biodiversity".
 - Policy CS5: The Waterfront states that "Proposals for waterfront development within the central seafront area and improved facilities will need to demonstrate that there will be no unacceptable impact upon

- navigation, biodiversity, flood risk or the special character and designations".
- Policy CS7: Western Esplanade, the Cliffs and Shrubbery states that "consider favourably development proposals...(a) where they are associated with quiet leisure, cultural and tourism activities including bird watching, sailing, maritime activities and other acceptable water based pursuits" and "(b) which ensure that foreshore designations (SSSI, Ramsar and SPA) are respected and are not compromised – all proposals will need to produce an appropriate assessment to demonstrate this".
- Policy CS8: Eastern Esplanade and City Beach Gateway states that "Proposals for seafront development along Eastern Esplanade will need to demonstrate that there will ne no unacceptable impact upon navigation, biodiversity, flood risk or the special character and designations".
- 5.9 These policies are written to ensure that European designations are safeguarded and protected, whilst equally allowing practices which have been traditionally associated with the central seafront and town centre to continue and flourish. In addition, policies have been created which seek to highlight the importance and raise awareness of the European designations in and around Southend for educational and recreational purposes.
- 5.10 It is always difficult to reach an appropriate balance between the social, economic and environmental needs and requirements of a population and the need to protect and conserve natural environments.
- 5.11 Article 6 of the Habitat Directive lays down important principles for managing the areas and preserving the balance between nature conservation and economic, social and cultural requirements. The intention is to promote sustainable development and at the same time protect biological diversity by means of the directive. The Natura 2000 areas are therefore not only intended as nature reserves, but also as areas for human activity. According to the EU, this network and economic progress actually go together very well and profitable activities such as agriculture/animal husbandry, tourism and many others can be developed further, provided that these do not conflict with the intended nature conservation.
- 5.12 The European Commission recognise that there is a need to take a practical approach to conservation and achieve a sustainable balance between the economy, tourism, recreation and the needs of European designations (Natura 2000) sites. Natura 2000 Networking Programme, on behalf of the European Commission, in a factsheet 'Removing misconceptions about Natura 2000' state that:
 - Natura 2000 designation is proof of the special nature value of the area, which can generate ecotourism income (especially foreign tourists).

- Many existing land use practices will continue as before because they are already compatible with the conservation of the habitats and species present.
- Where the land uses negatively affect the species and habitats present, adjustments can often be made without jeopardising productivity.
- Hunting, fishing, tourism and other recreational activities will continue provided that they are managed in a sustainable manner and do not adversely affect the rare species and habitats present or prevent their recovery.
- 5.13 It is recognised that tourism and recreational activities may also have negative impacts on biodiversity conservation, mainly linked to uncontrolled visitation and related land use changes, disturbances of species, invasive alien species, waste or pollution. Therefore it is essential to ensure that the focus is on sustainable forms of recreation and tourism. The Convention on Biological Diversity (CBD 2003) understand this and has developed Guidelines on Biodiversity and Tourism Development to provide a framework towards sustainable tourism development. The document addresses aspects such as strengthening protected area management system, increasing the value of ecosystems through generating income, jobs and business opportunities in tourism, capacity building, sharing information and allowing people to internalise the benefits of the biodiversity that has been a part of their historical, natural, and cultural heritage. In addition, the Council also accepts that certain areas may be not suitable for recreation or ecotourism at all due to their fragile ecosystems. In these cases it might be necessary to limit public access to be able to maintain or restore their favourable conservation status.
- 5.14 In conclusion, it is considered that this Screening Report demonstrates that the policies which comprise the SCAAP, in conjunction with the Southend on Sea Core Strategy and related documents, will not have a significant effect on European sites. The Policies will ensure that European sites are protected and enhanced for the benefit of both the bird populations which frequent the marshes and mudflats, and the resident's population of Southend and wider population who may use the seafront for recreation and tourism. The European Commission have highlighted the scope for ecotourism and sustainable tourism and that a balance can be achieved between conservation and social and economic needs and intentions of an area. It is considered that the approach in this document is in line with the aims and objectives of the European Commission and the objectives of the Natura 200 sites in close proximity to Southend on Sea.