

habitat regulations assessment -
screening report (draft)
June 2016

development plan document
southend central area action plan

southend on sea borough council
local development framework

delivering regeneration and growth

Southend Central Area Action Plan Habitat's Regulation Assessment (HRA) – Screening Report (draft)

1. Introduction to the principles and process for HRA

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 Plan. 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.

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?

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 (proposals sites) which will help to deliver regeneration and growth within the designated boundary of the SCAAP. The SCAAP will form part of the Local Plan, along with a number of other documents including the Southend Core Strategy Development Plan Document (DPD), Development Management DPD, Streetscape Manual Supplementary Planning Document (SPD) and Design and Townscape Guide (SPD).

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 a Preferred Options 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 preferred approach, including key development principles and policies as well as proposal sites. It is a spatial plan that will eventually form part of the statutory Local Plan for the Borough.

At the Preferred Options stage the SCAAP contains a preferred approach to policies and site specific proposals, which aim to strengthen and transform 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.

The SCAAP was previously consulted on at a Pre-submission Stage, however, a decision has been taken to carry out a 'Preferred Options' Consultation to take account of the National Planning Policy Framework (NPPF), which was published after the previous iteration of the SCAAP; and as a period of time has passed since the last consultation in

Autumn 2011, and there is an update to parts of the Plan to reflect current Council objectives and the deliverability of some sites.

The Pre-Submission was accompanied by an HRA Screening Report which was assessed by Natural England. The response stated that:

'Natural England is generally supportive of the Southend Central Area Action Plan, which provides a clear statement of the Council's vision for this part of Southend, along with guidance for developers.'

The assessment concludes that:

*'Several of the policies may result in additional development and/or intensification of some uses close to the European sites (particularly Bentfleet and Southend Marshes SPA and Ramsar site). However, Natural England agrees with the Screening Report that, when read in conjunction with Policy CS2: Seafront Principles and Policy CS4: Nature Conservation and Biodiversity, **sufficient policy safeguards are in place to ensure that there should not be any adverse effects on the integrity of the European sites.**'*

Why is an HRA being carried out?

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.

More recently, the Regulations concerning the protection of habitats and species of wild birds have been amended. On the 16th August 2012 The Conservation of Habitats and Species (Amendment) Regulations 2012 came into force. The aim of the amendments to the Conservation of Habitats and Species Regulations 2010 are 'to help preserve, maintain and re-establish habitats for wild birds'. Whilst the amendments appear to be minor, they are necessary to update the legislation and regulations in line with ever changing environments and requirements.

The Regulations place a duty on competent authorities to use all reasonable endeavours to avoid any pollution or deterioration of these habitats. The regulations also place a duty on any competent authority, in exercising any of their functions, to have regard to the requirements of Directive 2009/147/EC (the "Wild Birds Directive") and of Directive 92/43/EEC (the "Habitats Directive").

The Wild Birds Directive (Council Directive 79/409/EEC now codified in Directive 2009/147/EC) provides a mechanism for protecting all wild bird species naturally occurring in the European Union. It was adopted as a response to increasing concern about the decline in Europe's wild bird populations resulting from pollution, loss of habitats as well as their unsustainable exploitation.

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.

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)

Therefore, when preparing SCAAP, Southend Borough Council is required by law to carry out a Habitats Regulations Assessment.

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?

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.

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?

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.

NPPF recognises that the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes. It states in paragraph 118 that potential Special Protection Areas and possible Special Areas of Conservation; listed or proposed Ramsar Sites; and sites identified or required, as compensatory measures for adverse effects on European Sites, potential Special Areas of Conservation, and listed or proposed Ramsar Sites, should be given the same protection as European Sites.

It also states in paragraph 119 that the presumption in favour of sustainable development (paragraph 14) does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.

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?

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.

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.

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.

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?

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?

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.

At the other extreme, some cases will very clearly be likely to have a significant effect. Any proposal which would require an environmental impact assessment 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.

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.

Furthermore in most cases, it will not be possible to subject a local development document (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.

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 European Commission. It was explicitly addressed, for example, in the Advocate General’s opinion leading up to the European Court of Justice judgment¹. What is expected is as rigorous an assessment as can reasonably be undertaken.

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. 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.

Screening has to be approached on a precautionary basis and a relatively recent European court judgement¹ helps interpret the concept of significant effect and has confirmed that a significant effect is triggered when:

- 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?

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	<ul style="list-style-type: none"> ▪ Description of the plan ▪ Identification of potential ▪ Effects on European Sites 	<ul style="list-style-type: none"> ▪ Where effects are unlikely, prepare a ‘finding of no significant effect report’. ▪ Where effects judged likely, or lack of

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 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.”

	<ul style="list-style-type: none"> ▪ Assessing the effects on European Sites 	information to prove otherwise, proceed to Appropriate Assessment (Stage 2).
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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?

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 Report (and AA) for the Core Strategy (December 2007) and for the Development Management DPD (2015) and earlier versions of the SCAAP (2011). This information has been used to establish and develop the conservation objectives and designated features which may be impacted upon by this plan. It is noteworthy that the Core Strategy covers a wider area than the SCAAP. The comments received from Natural England in relation to the Core Strategy document have been taken into account within the HRA of the SCAAP, where appropriate, as well as the other plan referred to herein.

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?

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 and then also for the Pre-Submission version in September 2011.

2. The Approach to Screening the SCAAP

What guidance was used to formulate an approach to HRA?

In the absence of an updated publication, 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

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 HRA) are required.

In accordance with the regulations a HRA 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?

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.

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?

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

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

2) Site information

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

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

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

This involved the consideration of other plans which may, in combination with the Core Strategy, have the potential to adversely impact European sites.

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.

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

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?

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, Mucking Flats and Marshes 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 are linked to the strategic policies set out in the Core Strategy.

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

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)

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 - South Thames Estuary and Marshes and Mucking Flats and Marshes SSSI




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.

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.

Map 1 Protected European Sites

Legend

-  Special Area of Conservation
-  Ramsar
-  Special Protection Area



Task 2 – Site Information

Table 1 - Conservation Objectives and Designated Features of European Sites

Site	(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											
Features of Interest	<p>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.</p> <p>Benfleet and Southend Marshes qualifies under article 4.2 of the EU Birds Directive by supporting:</p> <ul style="list-style-type: none"> ▪ Internationally important populations of regularly occurring migratory species; and ▪ An internationally important assemblage of waterfowl 											
Conservation Objectives	<p>Southend Marshes SPA internationally important populations of regularly occurring migratory bird species:</p> <p>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:</p> <ul style="list-style-type: none"> ▪ Shell banks; ▪ Saltmarsh; ▪ Intertidal Mudflats and Sandflat communities; and ▪ Eelgrass beds. ▪ The conservation objective for the internationally important assemblage of waterfowl: <p>ii) Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of waterfowl under the Birds Directive, in particular:</p> <ul style="list-style-type: none"> ▪ Shell banks; ▪ Saltmarsh; ▪ Intertidal Mudflats and Sandflat communities; and ▪ Eelgrass beds. 											
Condition	<p>SSSI name: Benfleet And Southend Marshes Source: Natural England 19 June 2015</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 16.6%;">% Area meeting</td> <td style="width: 16.6%;">% Area favourable</td> <td style="width: 16.6%;">% Area unfavourable</td> <td style="width: 16.6%;">% Area unfavourable</td> <td style="width: 16.6%;">% Area unfavourable</td> <td style="width: 16.6%;">% Area destroyed /</td> </tr> </table>						% Area meeting	% Area favourable	% Area unfavourable	% Area unfavourable	% Area unfavourable	% Area destroyed /
% Area meeting	% Area favourable	% Area unfavourable	% Area unfavourable	% Area unfavourable	% Area destroyed /							

	PSA target		recovering	no change	declining	part destroyed
	92.26%	0.87%	91.39%	7.74%	0.00%	0.00%
Vulnerabilities / areas of concern	<p>Benfleet and Southend Marshes comprises extensive areas of foreshore with a tidal creek system and an area of grazing marsh. The vulnerability of the intertidal habitats is linked to changes in the physical environment, especially to 'coastal squeeze'. In principal, recreational activities are not currently perceived as a problem, subject to appropriate management and regulation. Infrastructure works to facilitate visitor attractions, although dealt with under the planning control provisions of the Habitat Regulations, have the potential either alone or in combination to adversely affect the interest features of this SPA and Ramsar site. Both wildfowling and cockle fishing are also potential threats which currently are well regulated by agreement. The sea fisheries are regulated by Kent and Essex Sea Fisheries using bye-law power granted by a sea Fisheries regulatory order. Dredging of the Thames and inputs of herbicides to the mudflats may be having indirect effects on the loss of intertidal habitat and viability of the eelgrass <i>Zostera</i> beds. Research is underway to determine the effect of herbicides on the eelgrass. The marsh is suffering from the lack of freshwater inputs due to low rainfall. The Environment Agency has agreed a Water Level Management Plan for the grazing marshes part of the site which will maintain appropriate water levels. Although sewage outfalls have recently been upgraded to comply with the EC Directives, it is understood that sediment within the intertidal contains elevated levels of copper 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. To secure protection of the site, most of the foreshore is a Local Nature Reserve and covered by the Thames Estuary Management Plan.</p>					

Site	(b) Foulness (SPA and Ramsar site) - Foulness SSSI; Partly Southend-on-Sea Foreshore Local Nature Reserve
Features of Interest	<p>This site comprises a large area of mudflats and sandflats known as Maplin Sands, running from Shoeburyness Point to Foulness Point, and smaller areas of saltmarsh and marshland around and on Foulness Island itself.</p> <p>Foulness SPA qualifies under article 4.1 of the EU Birds Directive by supporting:</p> <ul style="list-style-type: none"> ▪ Internationally important breeding populations of regularly occurring Annex 1 species: sandwich tern (<i>Sterna sandvicensis</i>), common tern (<i>Sterna hirundo</i>), little tern (<i>Sterna albifrons</i>) and avocet (<i>Recurvirostra avosetta</i>); and ▪ For supporting an internationally important wintering population of the Annex 1 species: hen harrier (<i>Circus cyaneus</i>). <p>Foulness SPA also qualifies under article 4.2 of the EU Birds Directive in that it supports:</p> <ul style="list-style-type: none"> ▪ An internationally important assemblage of waterfowl (wildfowl and waders); and

	<ul style="list-style-type: none"> ▪ Internationally important populations of regularly occurring migratory species; and ▪ Nationally important breeding populations of a regularly occurring migratory species: ringed plover (<i>Charadrius hiaticula</i>) 																	
Conservation Objectives	<p>The conservation objective for the Foulness SPA internationally important populations of the regularly occurring Annex 1 Bird species:</p> <p>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:</p> <ul style="list-style-type: none"> ▪ Shell, sand and gravel shores banks ▪ Intertidal Mudflats and sandflats ▪ Saltmarsh ▪ Shallow coastal waters <p>The conservation objective for the internationally important populations of regularly occurring migratory bird species:</p> <p>ii) Subject to natural change, maintain the habitats for the internationally important populations of regularly occurring migratory bird species in favourable condition, in particular:</p> <ul style="list-style-type: none"> ▪ Saltmarsh ▪ Intertidal Mudflats and sandflats ▪ Boulder and cobble shores <p>The conservation objective for the internationally important assemblage of waterfowl:</p> <p>iii) Subject to natural change, maintain the habitats for the internationally important assemblage of waterfowl in favourable condition, in particular:</p> <ul style="list-style-type: none"> ▪ Saltmarsh ▪ Intertidal Mudflats and sandflats 																	
Condition	<p>SSSI name: Foulness Source: Natural England June 2011</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #e0f2f1;">% Area meeting PSA target</th> <th style="background-color: #e0f2f1;">% Area favourable</th> <th style="background-color: #e0f2f1;">% Area unfavourable recovering</th> <th style="background-color: #e0f2f1;">% Area unfavourable no change</th> <th style="background-color: #e0f2f1;">% Area unfavourable declining</th> <th style="background-color: #e0f2f1;">% Area destroyed / part destroyed</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">97.28%</td> <td style="text-align: center;">72.61%</td> <td style="text-align: center;">24.68%</td> <td style="text-align: center;">0.02%</td> <td style="text-align: center;">2.70%</td> <td style="text-align: center;">0.00%</td> </tr> </tbody> </table>						% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed	97.28%	72.61%	24.68%	0.02%	2.70%	0.00%
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97.28%	72.61%	24.68%	0.02%	2.70%	0.00%													
Vulnerabilities	At the time of citation of the Foulness SPA much of the area was owned by the Ministry of Defence and is not, therefore,																	

/ areas of concern	<p>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 south-east coastline and saltmarshes are being eroded. Maintenance of the integrity of the intertidal and saltmarsh habitats of the Mid-Essex Coast Ramsar sites as a whole is being addressed by soft sea defence measures, managed retreat and foreshore recharge. The cockle beds on the Maplin Sands support internationally important numbers of wading birds: the Kent and Essex Sea Fisheries Committee control the cockle fishery through regulatory orders.</p> <p>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.</p>
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Site	(c) Essex Estuaries (SAC and Ramsar Site) - Foulness SSSI
Features of Interest	<p>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.</p> <p>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.</p> <p>In summer the site hosts breeding populations of Annex 1 listed birds on the sand and gravel beaches.</p> <p>Foulness SPA qualifies under the EU Habitat Directive in that it supports the following Annex 1 habitat features:</p> <ul style="list-style-type: none"> ▪ <i>Salicornia</i> and other annuals colonising mud and sand (pioneer saltmarsh) ▪ <i>Spartina</i> swards (<i>Spartinion</i>) (cordgrass swards) ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia</i>) ▪ Mediterranean and therm-Atlantic halophilous scrubs (<i>Arthrocnemetalia fruticosae</i>) (Mediterranean saltmarsh scrubs) ▪ Estuaries Mudflats and sandflats not covered by seawater at low tide (intertidal mudflats and sandflats)

<p>Conservation Objectives</p>	<p>The conservation objectives for Essex Estuaries SAC interest features:</p> <p>i) Subject to natural change, maintain the following in favourable condition:</p> <ul style="list-style-type: none"> ▪ <i>Salicornia</i> and other annuals colonising mud and sand, in particular: <ul style="list-style-type: none"> - Glasswort/annual sea-blite community - Sea aster community ▪ <i>Spartina</i> swards (<i>Spartinion</i>), in particular: <ul style="list-style-type: none"> - Small cordgrass community - Smooth cordgrass community ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia</i>), in particular: <ul style="list-style-type: none"> - Low/mid-marsh communities - Upper marsh communities - Upper marsh transitional communities - Drift-line community ▪ Mediterranean and thermo-Atlantic halophilous scrubs (<i>Arthrocnemetalia fruticosae</i>), in particular: <ul style="list-style-type: none"> - Shrubby sea-blite community - Rock sea lavender/sea heath community ▪ Estuaries, in particular: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - Mud communities
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	<ul style="list-style-type: none"> - Muddy sand communities - Sand and gravel communities
Condition	<p>Sandbanks which are slightly covered by sea water all the time - for which the area is considered to support a significant presence.</p> <p>The estuaries are considered to be one of the best areas in the United Kingdom.</p> <p>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.</p> <p><i>Salicornia</i> and other annuals colonising mud and sand for which this is considered to be one of the best areas in the United Kingdom.</p> <p><i>Spartina</i> swards (<i>Spartinion maritimae</i>) 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.</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) for which this is considered to be one of the best areas in the United Kingdom.</p> <p>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.</p>
Vulnerabilities / areas of concern	<p>At the time of citation of the Essex Estuaries SAC the saltmarshes and mudflats were under threat from 'coastal squeeze' - man-made sea defences prevent landward migration of these habitats in response to sea-level rise. These habitats are also vulnerable to plans or projects (onshore and offshore) which have impacts on sediment transport. English Nature's Regulation 33 advice was issued June 2000. A scheme of management is being established with the aim of addressing such problems</p>

Site	(d) Crouch and Roach Estuaries SPA - Crouch and Roach Estuaries SSSI
Features of Interest	<p>The Crouch and Roach Estuaries SPA qualifies under Article 4.2 of the EU Birds Directive in that it supports:</p> <ul style="list-style-type: none"> ▪ an internationally important assemblage of waterfowl (wildfowl and waders); and ▪ internationally important populations of regularly occurring migratory species
Conservation Objectives	<p>The conservation objective for the Crouch and Roach Estuaries SPA internationally important populations of regularly occurring migratory bird species</p> <p>i) Subject to natural change, maintain the habitats for the internationally important populations of regularly occurring migratory bird species in favourable condition, in particular:</p> <ul style="list-style-type: none"> ▪ Saltmarsh

	<ul style="list-style-type: none"> ▪ Intertidal mudflats and sandflats ▪ Boulder and cobble shores <p>The conservation objective for the internationally important assemblage of waterfowl</p> <p>ii) Subject to natural change, maintain the habitats for the internationally important assemblage of waterfowl in favourable condition, in particular:</p> <ul style="list-style-type: none"> ▪ Saltmarsh ▪ Intertidal mudflats and sandflats ▪ Boulder and cobble shores 												
<p>Condition</p>	<p>SSSI name: Crouch And Roach Estuaries Source: Natural England 22 June 215</p> <table border="1" data-bbox="432 582 1693 805"> <thead> <tr> <th data-bbox="432 582 602 751">% Area meeting PSA target</th> <th data-bbox="602 582 779 751">% Area favourable</th> <th data-bbox="779 582 1014 751">% Area unfavourable recovering</th> <th data-bbox="1014 582 1252 751">% Area unfavourable no change</th> <th data-bbox="1252 582 1487 751">% Area unfavourable declining</th> <th data-bbox="1487 582 1693 751">% Area destroyed / part destroyed</th> </tr> </thead> <tbody> <tr> <td data-bbox="432 751 602 805">99.33%</td> <td data-bbox="602 751 779 805">22.87%</td> <td data-bbox="779 751 1014 805">76.46%</td> <td data-bbox="1014 751 1252 805">0.67%</td> <td data-bbox="1252 751 1487 805">0.00%</td> <td data-bbox="1487 751 1693 805">0.00%</td> </tr> </tbody> </table>	% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed	99.33%	22.87%	76.46%	0.67%	0.00%	0.00%
% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed								
99.33%	22.87%	76.46%	0.67%	0.00%	0.00%								
<p>Vulnerabilities / areas of concern</p>	<p>The Crouch and Roach Estuaries SPA is vulnerable to coastal squeeze and changes to the sediment budget. <i>A hydraulic numerical model study of the Crouch and Roach Estuaries is being initiated to explore the various options, including managed retreat.</i> 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.</p> <p>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.</p> <p>Sea wall management by mowing may be potentially damaging and this is being addressed through consultation with the Environment Agency and individual owners. To secure protection of the site, the Marine Scheme of Management is in</p>												

	preparation, which will work alongside the Essex Shoreline Management Plan and various management plans and Site Management Statements for parts of the site.
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Site	(e) Thames Estuary & Marshes SPA - South Thames Estuary and Marshes and Mucking Flats and Marshes SSSI
Features of Interest	<p>The Thames Estuary European marine site encompasses the extensive mudflats and small areas of saltmarsh on the south 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:</p> <ul style="list-style-type: none"> ▪ 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 Objectives	<p>The conservation objective for the internationally important population of the regularly occurring Annex 1 bird species</p> <p>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:</p> <ul style="list-style-type: none"> ▪ Intertidal mudflats ▪ Intertidal saltmarsh <p>The conservation objective for the internationally important populations of regularly occurring migratory bird species</p> <p>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:</p> <ul style="list-style-type: none"> ▪ Intertidal mudflats ▪ Saltmarsh ▪ Intertidal shingle <p>The conservation objective for the internationally important assemblage of waterfowl</p> <p>iii) Subject to natural change, maintain in favourable condition the habitats for the internationally important assemblage of waterfowl, under the Birds Directive, in particular:</p> <ul style="list-style-type: none"> ▪ Intertidal mudflats ▪ Saltmarsh ▪ Intertidal shingle
Condition	SSSI name: South Thames Estuary And Marshes Source: Natural England 22 June 2015

	% Area meeting PSA target	% Area favourable	% 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 / areas of concern	<p>There is evidence of coastal squeeze and erosion of intertidal habitat within the site. English Nature (now Natural 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.</p> <p>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.</p>					

Task 3 - Analysis of the plan for potential adverse impacts

Each of the policies and proposals within the SCAAP Revised Proposed Submission 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.

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.

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.

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 SCAAP Preferred Options 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: Maintaining a Prosperous Retail Centre	4	No likely significant effects	This policy sets out the approach to retail development in the Town Centre and managing the Town Centre Primary Shopping Frontages. There is no effect on any European sites directly related to this policy.
Policy DS2: Key Views	1, 6, 7	No likely significant effects	This policy seeks to resist any development which is considered to cause harm to the key views identified. There is no effect on any European sites directly related to this policy.
Policy DS3: Landmarks and Landmark Buildings	1, 7	No likely significant effects	This policy conserves landmark buildings or landscape features from adverse effect and encourages the creation of new landmarks in specific areas. There is no effect on any European sites directly related to this policy.
Policy DS4: Flood Risk Management and Sustainable Drainage	1, 3, 5, 6	No likely significant effects	This policy seeks to ensure that there is appropriate policy for the management of flood risk and sustainable drainage when planning applications are proposed with the SCAAP area. There is no effect on any European sites directly related to this policy.
Policy DS5: Transport, Access and Public Realm	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 as well as a better public realm. It also seeks to rationalise car movements through intelligent signage to car parking areas. There is no effect on any European sites directly related to this policy.
Policy PA1: High	1, 4, 7	There is no effect on	This policy maintains the town centre's role as a primary retail

Street Policy Area Development Principles		any European sites.	destination, preservation and restoration of features which contribute to special character and public realm improvements. There is no effect on any European sites directly related to this policy.
Policy PA2: London Road Policy Area Development Principles	1, 4, 7	No likely significant effects	This policy sets out development principles in London Road/ to improve the town centre uses and offer including office space, retail floorspace, cafes/restaurant and residential as well as public realm improvements. It looks to pursue urban greening projects. There is no effect on any European sites directly related to this policy.
Policy PA3: Elmer Square Policy Area Development Principles	1, 4, 7	No likely significant effects	This policy sets out development principles for Elmer Square Policy Area which will include educational facilities as well as access and public realm improvements. There is no effect on any European sites directly related to this policy.
	2, 3, 4, 7	No likely significant effects	Opportunity Site PA3.1: Elmer Square Phase 2 outlines the approach to a phased 2 redevelopment of the site where planning permission will be granted for educational and supporting uses to complement phase 1 and reinforce the area as a learning hub including public realm improvements. There is no effect on any European sites directly related to this policy.
Policy PA4: Queensway Policy Area Development Principles	1, 4, 7	No likely significant effects	This policy describes the development principles for Queensway for provision of new and improved housing, office and secondary retail as well as community uses. It also includes improvements to access and the public realm. There is no effect on any European sites

	2, 3, 4, 7	No likely significant effects	<p>directly related to this policy.</p> <p>In addition it describes the approach for the Council's Better Queensway project (Opportunity Site PA4.1) to achieve a well-designed, sustainable comprehensive redevelopment of this area which includes residential including provision of social housing and well as commercial development in the appropriate locations. 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.</p>
Policy PA5: Warrior Square Policy Area Development Principles	1, 4, 7	No likely significant effects	<p>This policy seeks to promote residential-led mixed use development with office development at upper floors with active ground floor uses and access and public realm improvements. There is no effect on any European sites directly related to this policy.</p>
Policy PA6: Clifftown Policy Area Development Principles	1, 4, 7	No likely significant effects	<p>This policy seeks a mixed use redevelopment of the areas around and including 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.</p>

<p>Policy PA7: Tylers Avenue Policy Area Development Principles</p>	<p>1, 4, 7</p> <p>2, 3, 4, 7</p>	<p>No likely significant effects</p> <p>No likely significant effects</p>	<p>This policy describes the development principles for Tylers Avenue which includes well designed sustainable buildings that provide a mix of uses compatible with the area, including active ground floor retail uses with office and /or residential uses to upper floors as well as, public realm improvements, and better links with the central seafront. There is no effect on any European sites directly related to this policy.</p> <p>Opportunity Site PA7.1: Tylers Avenue seeks to provide a mix of uses compatible with the area, including active ground floor retail uses, with office and / or residential uses to upper floors, addresses replacement car park provision and provides an accessible and cycle friendly public realm with improved linkages with the Central Seafront area. There is no effect on any European sites directly related to this policy.</p>
<p>Policy CS1: Central Seafront Policy Area Development Principles</p>	<p>1, 3, 6, 7, 8</p> <p>7, 8</p>	<p>Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects</p>	<p>This policy sets out the approach to development in the Central Seafront Policy 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 in the Policy that development south of the seawall will not normally be permitted. In addition Policy CS2: Nature Conservation and Biodiversity will “ensure that all development proposals within the Central Seafront Area are accompanied by a Habitats Regulations assessment and associated documentation to guarantee that the International and European foreshore designations (SSSI, Ramsar</p>

	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	<p>and SPA) are respected and that there is no negative impact on them” ..</p> <p>Furthermore, the adopted Development Management Document states in Policy DM6: The Seafront that ‘All development within the Seafront Area which will (i) limit any adverse impacts and where possible enhance the biodiversity interests of the local nature reserves and coastal marine environment; and (ii) protect the valuable natural amenity areas of International, European, national importance.</p> <p>Opportunity Site CS1.1; Southend Pier 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 CS1: Central Seafront Policy Area Development 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 CS2: Nature Conservation and Biodiversity will “ensure that all development proposals are accompanied by a Habitats Regulations Assessment and associated documentation to guarantee that the International and European foreshore designations (SSSI, Ramsar and SPA) are respected and that there are no negative impact to them” among other things. In addition, the adopted Development Management Document states in Policy DM6: The Seafront that ‘All development within the Seafront Area</p>
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	6, 7, 8	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	<p>which will (i) limit any adverse impacts and where possible enhance the biodiversity interests of the local nature reserves and coastal marine environment; and (ii) protect the valuable natural amenity areas of International, European, national importance.</p> <p>Opportunity Site CS1.2: Seaway Car Park and Marine Parade 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 a 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 CS1: Central Seafront Area Development 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 the council will ‘not normally permit development south of the seawall.’ Furthermore Policy CS2: Nature Conservation and Biodiversity will “ensure that all development proposals are accompanied by a Habitats Regulations Assessment...to guarantee that the International and European foreshore designations (SSSI, Ramsar and SPA) are respected and that there are no negative impact to them” among other things. In addition, the adopted Development Management Document states in Policy DM6: The Seafront that ‘All development within the Seafront Area which will (i) limit any adverse impacts and where possible enhance the biodiversity interests of the local nature reserves and coastal marine environment; and (ii) protect the valuable natural amenity areas of International, European, national importance.</p>
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	4, 5	Proximity would indicate potential however policy approach to biodiversity and European designations ensures that there is no likely significant effects	<p>Opportunity Site CS1.3: New Southend Museum outlines the principles for the Museum site which will include a gallery space, planetarium, conference/events spaces, and associated café/restaurant, together with public car parking and the creation of high quality green space (including amphitheatre) within the Cliffs, and will also provide the necessary structural support required for cliff stabilisation. This policy may involve intensification of some uses close to European sites. This policy may involve intensification of some uses close to European sites. Nevertheless when read in conjunction with Policy CS1: Central Seafront Area Development 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 “ Not normally permit development south of the seawall”.</p> <p>Furthermore Policy CS2: Nature Conservation and Biodiversity will “ensure that all development proposals are accompanied by a Habitats Regulations Assessment...to ensure there will be no adverse effect on the European and International foreshore designations (SPA and Ramsar) either alone or in combination with other plans or projects ” among other things. In addition, the adopted Development Management Document states in Policy DM6: The Seafront that ‘All development within the Seafront Area which will (i) limit any adverse impacts and where possible enhance the biodiversity interests of the local nature reserves and coastal marine environment; and (ii) protect the valuable natural amenity areas of International, European, national importance.</p>
	4, 5	No likely significant effects	<p>Opportunity Site CS1.4: Woodgrange Drive (Kursaal) Estate proposes regeneration and enhancement of the Woodgrange Drive</p>

			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 CS2: 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 ensure that the International and European foreshore designations (SSSI, Ramsar and SPA) are respected and that there is no negative impact on 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 CS3: 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 CS1: Central Seafront Policy Area Development 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 “Not normally permit development south of the seawall.”. Furthermore Policy CS2: Nature Conservation and Biodiversity will “ensure that all development proposals within the Central Seafront Area are accompanied by a Habitats Regulations Assessment...to ensure there will be no adverse effect on the European and International foreshore designations (SPA and Ramsar) either alone or in combination with other plans or projects ” among other things.

			In addition, the adopted Development Management Document states in Policy DM6: The Seafront that 'All development within the Seafront Area which will (i) limit any adverse impacts and where possible enhance the biodiversity interests of the local nature reserves and coastal marine environment; and (ii) protect the valuable natural amenity areas of International, European, national importance.
Policy PA8: Victoria Gateway Neighbourhood Policy Area Development Principles	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.
	3, 4	No likely significant effects	Opportunity Site PA8.1: Victoria Avenue Office Area outlines the approach to the redevelopment of Victoria Avenue as a low carbon mixed use development. This development is expected to be delivered after 2021 and therefore will be part of preparation of the Local Plan if evidence for its delivery before then is not submitted. There is no effect on any European sites directly related to this policy.
	3, 4	No likely significant effects	Opportunity Site PA8.1: Baxter Avenue promotes the regeneration of the site for high quality mixed tenure residential development, including sheltered and additional affordable housing as well as amenity open space, urban greening and sustainability measures. There is no effect on any European sites directly related to this policy.
	3, 4	No likely significant effects	
Policy PA9: Sutton Gateway Neighbourhood	3, 4	No likely significant effects	This policy outlines the development principles within Sutton Gateway Neighbourhood Policy Area. It includes the development of the Opportunity Site 13: Sutton Road, regeneration of Grainger

Policy Area Development Principles			Road and Short Street as well as improvements to access and the public realm. There is no effect on any European sites directly related to this policy.
	3, 4	No likely significant effects	Opportunity Site PA9.1: Sutton Road outlines the approach to the redevelopment of this area for high quality housing with supporting uses at ground floor such as cafes/restaurants. It will also provide for a new public open space. There is no effect on any European sites directly related to this policy.
	3,4	No likely significant effects	Opportunity Site PA9.2: Guildford Road outlines redevelopment of this site to achieve a mixed use development including residential accommodation. The façade of the current building fronting onto Sutton road will be retained and incorporated into any proposal. The scheme will also include amenity open space, urban greening and sustainability measures. 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

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.

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.

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.

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 Plans and Programmes (including the Core Strategy) is listed below.

Other Plans and Programmes Considered
1. Southend-on-Sea Core Strategy
2. Castle Point Local Plan
3. Rochford Core Strategy
4 Maldon District Local Development Plan
5. Thurrock Core Strategy
6. Thames Estuary 2100 Project
7. Essex and South Suffolk Shoreline Management Plan (consultation draft)
8. Essex Catchment Flood Management Plan (CFMP)
9. Southend-on-Sea Shoreline Strategy Plan

The following paragraphs summarise those plans that may have an 'in-combination 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)

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 and states 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. 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.

It is reiterated in the Core Strategy DPD that the Seafront AAP (which has now been incorporated into the adopted Development Management DPD and pre-submission 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.

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.

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.

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.

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. 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 Local Plan

Determining Applications affecting Ecologically Sensitive and Designated Sites: Policy NE 8 requires that Proposals resulting in any adverse impacts to biodiversity Special Protection Areas, potential Special Protection Areas, Marine Conservation Zones, Sites of Special Scientific Interest, and Ancient Woodland should be considered and, where possible, controlled through avoidance, on-site management and on-site mitigation. Where this cannot be achieved development proposals will be refused.

Policy CC2-5: requires the maintenance and improvement of flood defences on Canvey Island, Hadleigh Marshes and South Benfleet to protect the resident population of around 40,000 people. This would result in coastal squeeze affecting the extent of the Benfleet and Southend Marshes SPA, and requiring compensatory provision of habitat. It is not possible to achieve this in Castle Point alone due to its size. The policy in the New Local Plan is based on the policy in the Thames Estuary 2100 Plan. This plan for the Thames Estuary identifies both areas that need protection from flooding and areas for new habitat creation to compensate for the loss of European sites through coastal squeeze. The impacts of policy CC2 are therefore addressed in combination with the Thames Estuary 2100 Plan. The Greater Thames Marshes Nature Improvement Area Business Plan sets out mechanisms for delivering these compensatory habitats.

Policy E10: Port Related Activities has the potential to allow for additional shipping activity in the Thames Estuary which may cause direct disturbance to estuary and marshland habitat through increased wash from ships, and also through biological disturbance through increased risk of the introduction of invasive species on the hulls of ships. Policy E10, as initially worded did not allow for the consideration of such impacts on European sites in the decision making process, although policy NE8 would have given some scope for this to occur. Therefore, it was considered appropriate to adjust policy E10 to specifically require the consideration of the impacts of proposals on European sites. This thereby reduced the potential harm of this policy on European sites.

Hub airport (in-combination project): Any proposals for a hub airport in the Thames Estuary will have a significant in-combination effect on European sites. If such proposals are pursued by the Government it will be necessary to amend the New Local Plan. However, it is likely that it take such time for any decision on this matter to be made, and many years before such a proposal could be delivered. It does not therefore threaten the integrity of the New Local Plan at this time.

Recreational disturbance (in-combination with other plans and projects): There is widespread acknowledgement amongst districts that good quality open space provision within new developments minimises recreational pressure on European sites. This will need to be achieved through engagement with other districts during their plan-making process (Duty to Cooperate).

Rochford Core Strategy: Adopted December 2011

The HRA Screening report found that the majority of Development proposed in the Core Strategy is focused on previously developed land in and around existing settlements in the west of the District, thereby minimising the potential for direct effects on European sites in the east of the District, including those along the Essex coastline and Thames Estuaries.

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

The assessment considered that the mitigation provided by the Core Strategy through the provision for new open space and alternative recreational opportunities – In the west of the District away from the European sites – would be sufficient to avoid likely significant effects as a result of increased disturbance. Similarly, it was considered that the Core Strategy contained sufficient policy mitigation and monitoring measures to avoid likely significant effects on European sites either alone or in-combination through increased atmospheric pollution.

Maldon District Local Development Plan

A number of individual policies were identified as having potential likely significant effects:

- S2 Strategic Growth: Potential pressure from housing growth on water resources and water quality could affect condition of Blackwater Estuary SPA and Ramsar site and Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site but adequate protection judged to exist from the Environment Maldon District Local Development Plan Agency's abstraction and effluent discharge consenting regimes. Potential recreational pressure from additional housing to the south of Maldon town and north of Heybridge but unlikely to significantly increase existing recreational pressure from these settlements and mitigation provided in the form of additional open space.
- S4 Maldon and Heybridge Garden Suburbs: Potential recreational pressure from additional housing at Maldon town and Heybridge but unlikely to significantly increase existing recreational pressure from these settlements and mitigation provided in the form of additional open space.

Concluded that there will not be any significant adverse effects on the integrity of European sites alone or in-combination from the Maldon District LDP.

Thurrock Core Strategy

The following types of potential likely significant effect were identified, but adverse effects on site integrity were ruled out after full Appropriate Assessment:

Coastal squeeze: Potential effects on Thames Estuary and Marshes SPA and Ramsar ruled out due to development being more than 700m from the European site and caveats within policies on waste and renewable energy development requiring avoidance of effects on European sites.

Recreational disturbance: Potential effects on Thames Estuary and Marshes SPA and Ramsar site ruled out due to provision of alternative recreational facilities, including a country park, commitments to management of existing open space and provisions within Thurrock Green Grid Strategy for creation and maintenance of green space and access restrictions. Thurrock Council have committed to working with the Thames Estuary Partnership (TEP) in order to manage recreation and monitor disturbance, such that the need for any enhanced measures to manage waterborne access can be delivered at the appropriate time. The HRA recommended that these be developed further in conjunction with the TEP in a cohesive management strategy which may need to be informed by visitor surveys of the SPA to determine patterns of recreational use with Thurrock's contribution commensurate with its population size. Recreational disturbance to Essex Estuaries SAC and component Mid-Essex Coast SPA/Ramsar sites ruled out due to existing recreation management plans at some of these European sites and Thurrock Council's commitment to working with TEP.

Air quality: Air quality reductions were not considered to pose likely significant effects on the Thames Estuary and Marshes SPA and Ramsar site. A consented power station at Tilbury (Tilbury Green Power) had been assessed and found not to require HRA. Core Strategy policies allow for the possibility of further renewable energy and/or waste sites, especially at Tilbury or London Gateway which would need to be subject to environmental assessment that should include consideration of the need for project-level HRA.

Water quality: Thames Estuary and Marshes SPA and Ramsar site was not considered to be particularly vulnerable to the effects of smothering macro-algal growth that nutrient enrichment has created in south coast waters. However, it was considered that reference should be included in the Core Strategy to the Thurrock Water Cycle Study and in particular to phasing of development in line with the WCS, in order to provide security that adverse effects on European sites would not result. Essex Estuaries SAC and component Mid-Essex Coast SPA/Ramsar also not considered particularly vulnerable to nutrient enrichment and their location in relation to the Plan area means that large dilution factors will apply. As for Thames Estuary and Marshes SPA and Ramsar site, the HRA recommended reference be made in the Plan to phasing of development in line with the WCS.

London Gateway Port (in-combination project): The policies of the Core Strategy were considered to have the potential for in-combination effects with the development of London Gateway Port on Thames Estuary and Marshes SPA and Ramsar site. Mitigation measures have been approved for this scheme, and the HRA concluded that provided that

these are adopted, there is no residual in combination impact likely through disturbance, reduced air quality reduced water quality or coastal squeeze.

Thames Estuary 2100 Project

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.

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.

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 and 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).

It is recognised by the TE2100 Project that it 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.

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.

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
<p>Leigh-on-Sea and Southend-on-Sea (Action Zone 8)</p>	<p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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 stock for shops is stored in the floodable area.</p> <p>Raised and new defences on the Southend-on-Sea frontage should be designed so that:</p> <ul style="list-style-type: none"> ▪ 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. <p>The Southend-on-Sea frontage is subject to wave attack and overtopping. Beach recharge has been implemented</p>

Policy Management Unit PMU	Recommended Preferred Option
	<p>both to improve the beach and reduce the impacts of waves. Improvements to this approach would reduce the need for defence raising.</p>
<p>Lower Estuary Marshes- Hadleigh Marshes and Two Tree Island (Action Zone 6)</p>	<p>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.</p> <p>Policy P2 to reduce existing flood risk management actions (accepting that flood risk will increase over time).</p> <p>As part of the TE2100 consultation stage concerns were raised over the reduction of flood risk management for both Hadleigh Marshes and Two Tree Island with respect to contamination.</p> <p>The policy unit goes on to state:</p> <p>'Local issues and choices</p> <ul style="list-style-type: none"> ▪ 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. <p>Floodplain management</p> <p>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.'</p> <p>The assignment of Policy Unit P2 to this action zone suggests the risk of flooding in this area is likely to increase over time unless considerations of the contamination issues associated with the area are strong enough to justify a maintained defence line.</p>

Policy Management Unit PMU	Recommended Preferred Option
<p>Leigh-on-Sea and Southend-on-Sea (Action Zone 8)</p>	<p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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 stock for shops is stored in the floodable area.</p> <p>Raised and new defences on the Southend-on-Sea frontage should be designed so that:</p> <ul style="list-style-type: none"> ▪ 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. <p>The Southend-on-Sea frontage is subject to wave attack and overtopping. Beach recharge has been implemented</p>

Policy Management Unit PMU	Recommended Preferred Option
	both to improve the beach and reduce the impacts of waves. Improvements to this approach would reduce the need for defence raising.

Essex and South Suffolk Shoreline Management Plan (2010)

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.

The Shoreline Management Plan proposes maintenance of the 'hold the line' option within the Southend seafront and Shoeburyness area, which in practice requires maintaining hard coastal flood defences.

The following list sets out 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.

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 change.

South Essex Catchment Flood Management Plan (CFMP) December 2008

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.

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.

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 present 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
<p>2 Southend-on-Sea and Rayleigh</p>	<p>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.</p> <p>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.</p> <p>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</p>	<p>Policy Option 5: Take further action to reduce flood risk now and in the future</p> <ul style="list-style-type: none"> ▪ 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. ▪ CFMP/SMP Compliance project to ensure that the policies selected in both plans are complementary; any issues of conflict need to be addressed.

Policy Unity	Problem/ Risk	Recommended Preferred Option
	properties at risk respectively.	
12 Thames Urban Tidal (Hadleigh Marshes)	<p>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. 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 an extensive array of arterial drains. There may be some informal/private defences.</p>	<p>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.</p>

Southend-on-Sea Shoreline Strategy Plan 1997

Completed in April 1997, the Shoreline Management Plan for Essex recommended that the coastal management policy for the Southend-on-Sea frontage should be to 'Hold the Existing Line'. The Plan went on to determine a number of key issues and objectives that would need to be addressed in specific detail during preparation of a long term management strategy for the frontage.

In development of this shoreline strategy plan, a number of key activities have been carried out in order to determine the condition of the existing environment and the likely developing trends of the frontage if the existing policy of reactive management is continued. Analysis of the hinterland, man made and environmental assets and condition of the existing sea defences and foreshore has led to division of the Southend frontage into a number of 'Operational Units'.

It states in relation to the Southend Foreshore that although there is some evidence to suggest that the tidal flats have eroded west of Southend pier since 1940, there is also evidence of a gradual increase in level at other locations. The conclusion is therefore that in general the flats have remained relatively stable in recent history. This is typified by the current level of the Victorian hardways in relation to the adjacent flats. Constructed around the turn of the century, the hardways were intended to provide pedestrian access across the flats to boats moored adjacent to the Ray Gut. Four of these hardways were originally constructed and only the two most western hardways remain. They however are still visible and at a level that would appear to suggest that levels on the flats at this location have not changed since their construction.

It recognises that most of the environmental designations located within or adjacent to the Southend on Sea study area frontage are associated with the immediate frontage and intertidal zones, including:

- Benfleet and Southend Marshes Special Protection Area and Ramsar Site designated in 1994 because of its international and nationally important wintering populations of waterfowl.
- Foulness Special Protection Area and Ramsar Site designated due to its internationally and nationally important wintering populations of waterfowl and nationally important breeding populations of Avocet, Sandwich and Little Terns.
- Benfleet and Southend- on- Sea Marshes Site of Special Scientific Interest (SSSI), originally designated in 1955 and the Leigh National Nature Reserve, declared under Section 19 of the National Parks and Access to the Countryside Act 1949.
- Foulness SSSI, originally designated 1956.
- Southend-on-Sea Local Nature Reserve, formally designated in 1996 and incorporating the important coastal sands at Gunners Park declared under Section 21 of the National Parks and Access to the Countryside Act 1949.
- Local Authority designated Sites of Importance for Nature Conservation.
- Areas, generally within the above designations, managed by the Essex Wildlife Trust as reserve areas at Shoebury Ness and Leigh Marshes.

The development of this strategy plan has sought to achieve the fundamental objectives of protection to properties and people and provide the basis for long term protection of the

Critical Natural Capital. Furthermore, impacts of the recommended strategy have been considered carefully and are considered to be in accordance with and not detrimental to, the requirements of the secondary objectives.

5. HRA Screening Report: conclusions and recommendations

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'.

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 effect 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.

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 approach 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.

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 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.

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.

The central seafront strategy section comprises policy with specific wording to ensure that the European designations are respected and conserved:

- Policy CS1: Central Seafront Policy Area Development Principles states that the Council will “require all development proposals in the central seafront area to: 9(b) safeguard and where appropriate enhance the biodiversity importance of the foreshore and respect the European designations in line with Policy CS2: Nature Conservation and Biodiversity” and that the Council will “not normally permit development south of the seawall.” as well as “seek to maintain foreshore views by restricting development south of the sea wall.”
- Policy CS2: Nature Conservation and Biodiversity states that the Council will “ensure that all development proposals within the Central Seafront Area are accompanied by a Habitats Regulations Assessment and associated documentation to ensure there will be no adverse effect on the European and International foreshore designations (SPA and Ramsar) either alone or in combination with other plans or projects”. Furthermore the Council will “not permit development proposals that will have an adverse impact, either directly or indirectly, on foreshore designations”. 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 which will assist with interpretation of the natural habitat in the area, providing visitors a better understanding of the ecosystems and biodiversity”.
- Policy CS3: 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”.

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.

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.

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 European Union, 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.

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' states 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.

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.

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 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 2000 sites in close proximity to Southend on Sea.

