



# Emerging Castle Point Local Plan Regulation 18 – Issues and Options

## Habitats Regulations Assessment Scoping Report

May 2024





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# Glossary

AA	Appropriate Assessment
AEOI	Adverse Effect on Integrity (of Habitats sites)
AMR	Annual Monitoring Report
CEMP	Construction Environment Management Plan
CJEU	Court of Justice of the European Union
EA	Environment Agency
EMS	European Marine Site
EU	European Union
HRA	Habitats Regulations Assessment
Ha	Hectares
IROPI	Imperative Reasons of Overriding Public Interest
IRZ	Impact Risk Zone
Km	Kilometre
LPA	Local Planning Authority
LTP	Local Transport Plan
LSE	Likely Significant Effect
MAGIC	Multi Agency Geographic Information about the Natural Environment
NE	Natural England
NPPF	National Planning Policy Framework
NSIP	Nationally Strategic Infrastructure Project
SAC	Special Area of Conservation
SACO	Supplementary Advice on Conservation Objectives
SIP	Site Improvement Plan
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

## Summary

This Habitats Regulations Assessment (HRA) draft Scoping report has been prepared by Place Services to support the emerging Castle Point Local Plan (Regulation 18 - Issues and Options). This report sets out the methodology for the approach to HRA scoping, screening and subsequent appropriate assessment (AA), should it be required. It also lists the Habitats sites which have been scoped in for inclusion within the HRA screening assessment, as well as the likely potential impact pathways that should be considered during the screening assessment. A list of plans and projects is also provided that may need to be considered in combination during the appropriate assessment.

The HRA screening report will be the first complete HRA stage that should be undertaken to enable Castle Point Borough Council to comply with Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended). The screening stage will determine whether an appropriate assessment (second stage) will be required. It is anticipated that AA will likely be required, based upon the scale of the Local Plan, its proximity to Habitats sites and reference to the previous Habitats Regulations Assessment produced for the withdrawn Castle Point Borough Pre-submission Local Plan 2018 – 2033, including proposed modifications. That HRA, by Place Services, is entitled '*New Castle Point Local Plan Pre-submission Plan 2018-2033 for Castle Point Borough Habitats Regulations Assessment (Screening Report and Appropriate Assessment), September 2020*'.

This draft HRA Scoping report sets out a list of 21 Habitats sites which are within scope for the HRA screening assessment. These are:

- Blackwater Estuary SPA and Ramsar
- Benfleet and Southend Marshes SPA and Ramsar site
- Crouch and Roach Estuaries SPA and Ramsar site
- Dengie SPA and Ramsar site
- Essex Estuaries SAC
- Foulness SPA and Ramsar site
- Medway Estuary and Marshes SPA and Ramsar site
- North Downs Woodlands SAC
- Outer Thames Estuary SPA (marine)
- Peters Pit SAC
- Queendown Warren SAC
- Thames Estuary and Marshes SPA and Ramsar site
- The Swale SPA and Ramsar site

The HRA Scoping report also lists the likely impact pathways that will be considered during the screening assessment. These are:

- Direct effects through land take
- Impact to features (qualifying species) outside the protected site boundary
- Increase in disturbance, including recreational disturbance
- Changes in water quality
- Changes to water quantity
- Changes in atmospheric pollution levels

This assessment reflects the geographical location of Castle Point borough and its proximity to Habitats sites. However, it has not considered any specific details of the Local Plan as they are not currently available.

It should also be borne in mind that Defra has recently published a policy paper entitled '*Smarter regulation: one year on*' which announces an intention to update their existing HRA guidance over the summer of 2024. This may ultimately influence the approach undertaken for the HRA screening and appropriate assessment.

This draft Scoping report does not need to be part of the statutory public consultation process. However, Natural England should be consulted and it should only be finalised once NE confirm this approach to be satisfactory.



# 1. Introduction

## 1.1 The Purpose of This Report

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- 1.1. This scoping report sets out the approach that is anticipated to be undertaken for the Habitats Regulations Assessment (HRA) for the emerging Castle Point Local Plan in accordance with Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended). The details of the Local Plan are currently being developed and so have not been used to create this report.
- 1.2. This HRA scoping report sets out:
- The approach and methodology for screening, including impact pathways.
  - A list of the Habitats sites scoped in for further assessment and their Conservation Objectives and Qualifying Features.
  - The approach and methodology for the appropriate assessment and integrity test.
  - An initial schedule of other plans and strategies to be incorporated into the assessment of in-combination effects.
- 1.3. This report considers and draws upon the issues and recommendations that arose from the previous Habitats Regulations Assessment produced for the withdrawn Castle Point Borough Pre-submission Local Plan 2018 – 2033, including proposed modifications. That HRA, by Place Services, is entitled '*New Castle Point Local Plan Pre-submission Plan 2018-2033 for Castle Point Borough Habitats Regulations Assessment (Screening Report and Appropriate Assessment), September 2020*'.
- 1.4. It should be borne in mind that Defra has recently published a policy paper entitled 'Smarter regulation: one year on'<sup>1</sup> which has announced an intention to update their existing HRA guidance over the summer of 2024. Paragraphs 72-73 are most relevant to the HRA process. It is anticipated that this HRA will assess the Local Plan after the guidance is published; therefore, this may affect the final approach and structure of the HRA to ensure that it aligns with the most up-to-date guidelines.
- 1.5. The Conservation of Habitats and Species Regulations 2017 (as amended) require the competent authorities (in this instance Castle Point Borough Council) to undertake a HRA before making a decision about permission for any plan or project that may result in an adverse effect on the integrity of an International Site<sup>2</sup> as defined in the National Planning Policy Framework (NPPF, December 2023).

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<sup>1</sup> This paper can be found at Smarter regulation: one year on (HTML version) - GOV.UK ([www.gov.uk](http://www.gov.uk))

<sup>2</sup> Habitats site: Any site which would be included within the definition at Regulation 8 of the Conservation of Habitats and Species Regulations 2017 (as amended) for the purpose of those regulations and those listed in paragraph 187 of the NPPF (December 2023). This includes 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 Habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

- 1.6. In line with the Court of Justice of the European Union judgement (CJEU People Over Wind v Coillte Teoranta C- 323/17), mitigation measures cannot be taken into account when carrying out a HRA Screening assessment to decide whether a plan or project is likely to result in significant effects on a Habitats site.
- 1.7. The Court judgement (CJEU Holohan C- 461/17) imposes more detailed requirements on the competent authority at Appropriate Assessment stage:
- 1.8. [...] an 'Appropriate Assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.
- 1.9. [...] the competent authority is permitted to grant to a plan or project consent which leaves the developer free to determine subsequently certain parameters relating to the construction phase, such as the location of the construction compound and haul routes, only if that authority is certain that the development consent granted establishes conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the site.
- 1.10. [...] where the competent authority rejects the findings in a scientific expert opinion recommending that additional information be obtained, the 'Appropriate Assessment' must include an explicit and detailed statement of reasons capable of dispelling all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned.
- 1.11. Should it be required, the HRA report will provide a (plan level) Stage 1 HRA Screening and Stage 2 Appropriate Assessment as required by Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).
- 1.12. The Conservation of Habitats and Species Regulations 2017 (as amended) are commonly known as the 'Habitats Regulations'. Requirements are set out within Regulations 63 and 64 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect Habitats sites. The steps and tests set out within Regulations 63 and 64 are commonly referred to as the 'Habitats Regulations Assessment' process. The Government has produced core guidance for competent authorities and developers to assist with the HRA process. This can be found on the Government website <sup>3</sup>, though as stated above, it should be noted that the Government has announced an intention to update the existing HRA guidance.
- 1.13. The HRA should demonstrate how the Plan or Project is compatible with UK obligations, which includes the need to undertake a HRA and forms a plan level HRA as required by Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

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<sup>3</sup> <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>

- 1.14. Plans and projects should only be permitted when it has been proven that there will be no adverse effects on the integrity of Habitats sites. The legal process can allow projects that may result in negative impacts on the integrity of a site if the competent authority is satisfied that, there are no alternative solutions, the plan or project must be carried out for Imperative Reasons of Overriding Public Interest (IROPI) (Regulation 64). However, this will require suitable compensation to ensure that the overall coherence of the series of such sites is retained.
- 1.15. The HRA should be undertaken by the ‘competent authority’ - in this case Castle Point Borough Council - and Place Services has been commissioned to complete this on behalf of the Council. The HRA also requires close working with Natural England as the statutory nature conservation body.

## 1.2 Emerging Castle Point Local Plan

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- 1.16. The emerging Castle Point Local Plan is currently at Issues and Options stage (Regulation 18); it will ultimately outline the strategy for the growth of Castle Point Borough. The emerging Local Plan will be assessed for likely impacts on Habitats sites as part of the HRA screening and appropriate assessment (if necessary) once the information becomes available.

## 1.2 Habitats (International) sites

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- 1.17. Habitats sites is the term used in the NPPF (2023) to describe the UK network of sites of European and international designated nature protection areas. These now form part of the UK national network of sites for nature protection. The aim of the network is to assure the long-term survival of UK’s most valuable and threatened species and habitats. The aim of the network is to assure the long-term survival of Europe’s most valuable and threatened species and habitats.
- 1.18. All Special Protection Areas (SPAs) are designated for birds and Special Areas of Conservation (SACs) are designated for other species, and for Habitats. Wetlands of International Importance (Ramsar sites) are also part of the Habitats (sites) network. This is because all SPAs and SACs are comprised of Sites of Special Scientific Interest (SSSIs) and all Ramsar sites in England are SSSIs. Together, SPAs, SACs and Ramsar sites make up the Habitats sites in England. The following offers a description and explanation of SPAs, SACs and Ramsar sites.
- 1.19. The following table (Table 1) offers a description and explanation of SPAs, SACs and Ramsar sites.

**Table 1. Description and Explanation of SPAs, SACs and Ramsar Sites**

<b>Special Protection Areas (SPAs)</b>
SPAs are areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found

within EU countries. Example: Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. The site is comprised of an extensive series of saltmarshes, mudflats, and grassland which support a diverse flora and fauna, including internationally important numbers of wintering waterfowl. *Legislation: Conservation of Habitats and Species Regulations 2017 (as amended).*

### **Special Areas of Conservation (SACs)**

SACs are areas designated to protect habitat types that are in danger of disappearance, have a small natural range, or are highly characteristic of the region; and to protect species that are endangered, vulnerable, rare, or endemic. Example: The Essex Estuaries SAC comprises an extensive complex of estuaries and intertidal sand and silt flats, including several islands, shingle and shell beaches and extensive areas of saltmarsh. It follows the boundaries of five SSSIs: the Colne Estuary, the Blackwater Estuary, Dengie, the River Crouch Marshes and Foulness. *Legislation: Conservation of Habitats and Species Regulations 2017 (as amended).*

### **Ramsar Sites (Wetlands of International Importance)**

Ramsar Sites are designated to protect the biological and physical features of wetlands, especially for waterfowl Habitats. For example, Dengie Ramsar Site (Mid-Essex Coast Phase 1) qualifies by virtue of the extent and diversity of saltmarsh habitat present. Dengie, and the four other sites in the Mid-Essex Coast Ramsar site complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. Ramsar sites often overlap with SACs and SPAs and UK planning policy determines that they should be accorded the same importance when developments are proposed. *Legislation: Ramsar Convention (1971) – Wetlands of International Importance.*

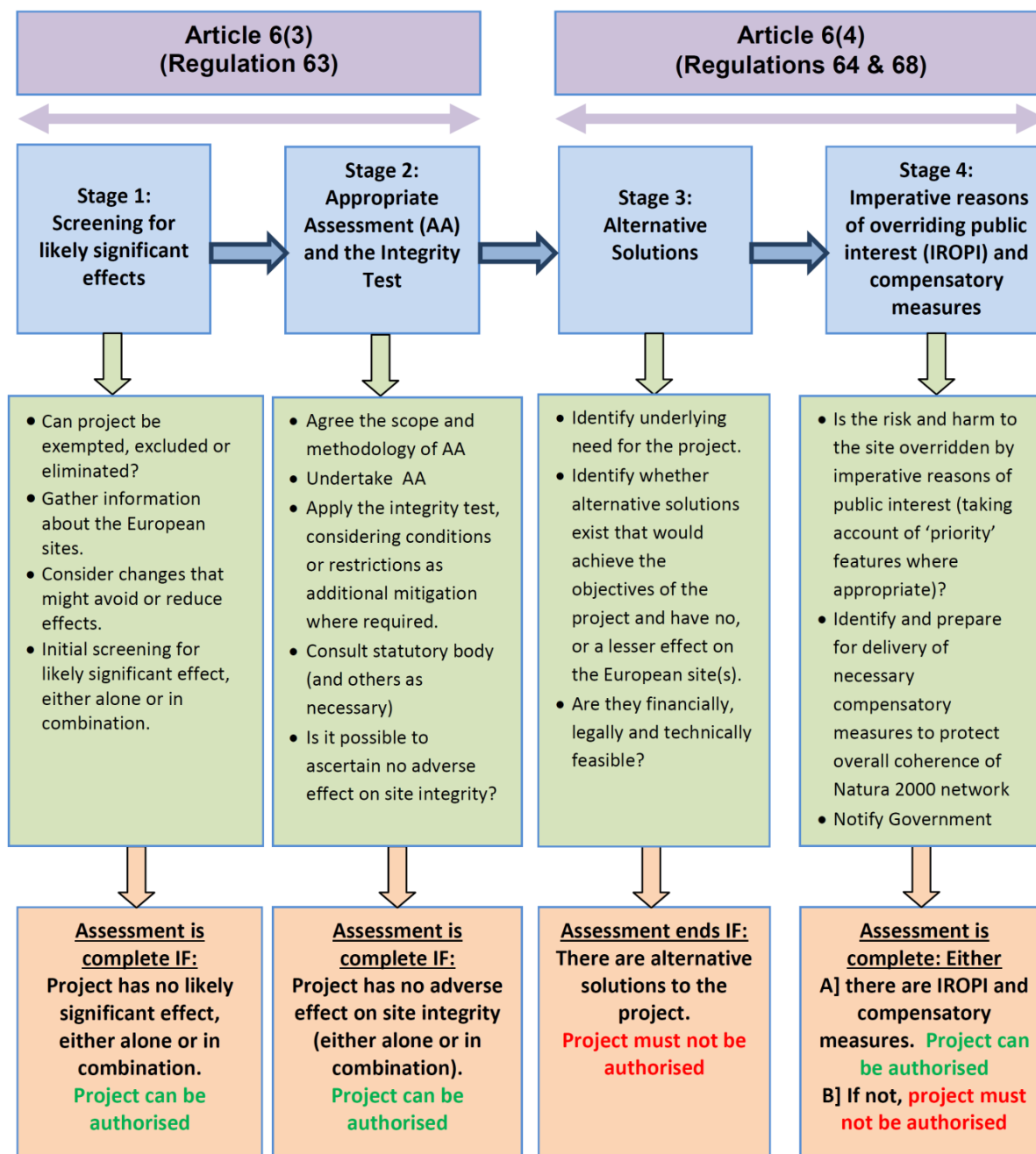
## 2. Method and Approach

- 2.1.1 HRA is a statutory requirement and should be undertaken by the competent authority to ensure that plans and projects comply with the Conservation of Habitats and Species Regulations 2017 (as amended).
- 2.1.2 HRA is the process by which the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) are implemented and ensures that plans or projects will not adversely affect Habitats sites.
- 2.1.3 The legal process does not require a fixed method, but case law has shaped the way it should be undertaken. The HRA is a sequential process and it is generally divided into four stages, which are set out below in Table 2.
- 2.1.4 Each of the stages contains a number of sequential steps, comprising the tests or procedures required by the Conservation of Habitats and Species Regulations 2017 (as amended). This report addresses Regulation 63 which covers the first stage, *i.e.* HRA Screening and stage 2, Appropriate Assessment.
- 2.1.5 Figure 1 below shows the recommended approach taken in the DTA Publications Handbook<sup>4</sup>. This has been used in the approach of this HRA, as shown in Table 2.

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<sup>4</sup> The DTA Publications Handbook can be found at [www.dtapublications.co.uk](http://www.dtapublications.co.uk). Place Services has a subscription to use this information.

**Figure 1. Outline of the Four Stage Approach to the Assessment of Plans under the Habitats Regulations**



Extract from *The Habitats Regulations Assessment Handbook*, [www.dtapublications.co.uk](http://www.dtapublications.co.uk)  
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**Table 2. Stages of the Habitats Regulations Assessment Process**

Stage	Tasks	Outcome
<p>Stage 1 Habitats Regulations Assessment (HRA) Screening (Regulation 63)</p>	<ul style="list-style-type: none"> <li>List the policies and allocations.</li> <li>Identify potential effects to a Habitats site from the Local Plan.</li> <li>Assess if any significant effects on a Habitats site from the Plan, either alone or in combination, with other plans or projects.</li> </ul>	<ul style="list-style-type: none"> <li>Where significant effects are unlikely, prepare a ‘finding of no significant effect’ report and Local Plan can be adopted.</li> <li>Where significant effects are judged likely, either alone or in combination or there is a lack of information to prove otherwise, go to Stage 2.</li> </ul> <p><i>People over Wind (CJEU) ruling (April 2018) means that it is not possible to consider mitigation measures when screening for impacts.</i></p>
<p>Stage 2 Appropriate Assessment (AA) (Regulation 63)</p>	<ul style="list-style-type: none"> <li>List policies and allocations within scope.</li> <li>List Habitats sites within scope.</li> <li>Set out methodology of the AA and agree with Natural England.</li> <li>Assess the implication of the policies and allocations against the designated features and species not listed but which could be using the habitat features.</li> <li>Apply the integrity test.</li> <li>Where there may be adverse effects on the ecological integrity of Habitats sites, in view of the Site’s conservation objectives, consider mitigation measures.</li> <li>Ensure mitigation is embedded into the Local Plan.</li> <li>Assess in combination effects with other plans and projects.</li> <li>Apply the integrity test. Where there may be adverse effects on the ecological integrity of Habitats sites, in view of the</li> </ul>	<ul style="list-style-type: none"> <li>If no Adverse Effect On site Integrity (AEOI) either alone or in combination, the Local Plan can be adopted.</li> <li>If it is not possible to ascertain no AEOI, go to Stage 3.</li> </ul> <p><i>Holohan CJEU ruling (November 2018) imposes more detailed requirements on the competent authority at Appropriate Assessment stage.</i></p>

	<p>Site's conservation objectives, consider mitigation measures.</p> <ul style="list-style-type: none"> <li>• Consult Natural England.</li> </ul>	
<p>Stage 3 Assessment of alternative solutions (Regulation 64)</p>	<ul style="list-style-type: none"> <li>• Identify whether alternative solutions exist that would achieve the objectives of the Local Plan and have no or a lesser effect on the integrity of a Habitats site(s).</li> <li>• If effects remain after alternative solutions been considered, consider whether the policies and/or projects should proceed with modification or the policies (and projects) be removed from the Local Plan.</li> </ul>	<ul style="list-style-type: none"> <li>• If there are alternative solutions to the Local Plan, it cannot be adopted without modification.</li> <li>• If no financially, legally or technically viable alternatives exist, go to Stage 4.</li> </ul>
<p>Stage 4 Imperative Reasons of Overriding Public Interest (IROPI) (Regulation 64)</p>	<ul style="list-style-type: none"> <li>• Consider if the risk and harm to the Habitats site is over-ridden by Imperative Reasons of Overriding Public Interest.</li> <li>• Identify and prepare delivery of compensatory measures to protect the overall coherence of the Natura 2000 network and notify Government.</li> </ul>	<ul style="list-style-type: none"> <li>• If there are IROPI and compensatory measures, the Local Plan can be adopted.</li> <li>• If there are no IROPI and the Local Plan cannot be adopted.</li> </ul>

2.1.6 Plans should not contain proposals that would be vulnerable to failure under the Habitats Regulations at project assessment stage, as this would be regarded as 'faulty planning'.

2.1.7 'Significant effects' has been defined through case law. A significant effect is any effect that would undermine the conservation objectives for the qualifying features of Habitats sites potentially affected, alone or in combination with other plans or projects. There must be a causal connection or link between the Local Plan and the qualifying features of the site (s) which could result in possible significant effects on the site (s). Effects may be direct or indirect and a judgement must be taken on a case-by-case basis. The decision as to whether or not a potential impact is significant depends on factors such as: magnitude of impact, type, extent, duration, intensity, timing, probability, cumulative effects and the vulnerability of the habitats and species concerned. So, what may be significant in relation to one site may not be in relation to another.

2.1.8 An effect which is not significant can be described as 'insignificant', 'de minimis' or 'trivial'- *i.e.* it would not undermine the conservation objectives.



- 2.1.9 A risk-based approach involving the application of the precautionary principle has been used in the assessment. A conclusion of 'no significant effect' was only reached where it was considered very unlikely, based on current knowledge and the information available, that a proposal in the Local Plan would have a significant effect on the integrity of a Habitats site.
- 2.1.10 Key advice guidance and information has also come from the following sources:
- DTA Publications Handbook: <https://www.dtapublications.co.uk/>
  - Suffolk Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS)
  - HRAs of neighbouring authorities Local Plans
  - Extensive experience of producing other HRAs
  - Government information regarding Habitats sites and their 'zones of influence', e.g. [www.magic.gov.uk](http://www.magic.gov.uk)

## 2.1 Assessment of Likely Significant Effects

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- 2.1.11 The screening stage identifies whether the Local Plan may result in a Likely Significant Effect to any Habitat site, alone or in combination with other plans or projects. The screening process should identify all aspects of the Local Plan that are:
- Exempt from assessment
  - Excluded from assessment
  - Eliminated from further assessment
  - Have no Likely Significant Effects, alone or in combination with other plans or projects and therefore be screened out
  - Screened in as it is not possible to rule out Likely Significant Effects. In line with the 2018 Court judgment (CJEU People Over Wind v Coillte Teoranta C-323/17) mitigation measures cannot be taken into account when carrying out a screening assessment. Consequently, any aspect of the Local Plan which cannot be ruled out as having Likely Significant Effects should continue to Stage 2 Appropriate Assessment
- 2.1.12 Habitats sites which have been included for assessment are those which are within the IRZ for the underpinning Site of Special Scientific Interest (SSSIs) as identified on MAGIC [www.magic.gov.uk](http://www.magic.gov.uk).
- 2.1.13 It has been established that this Plan requires an HRA for the following reasons:
- Can the plan be exempt? - No, the Local Plan is not directly connected with or necessary to management of any Habitats sites.

- Can the plan be excluded? - No, the Local Plan cannot be excluded as it falls within the definition of being a plan within the Habitats Regulations.
- Can the plan be eliminated? - No, the Local Plan as a whole cannot be eliminated as it proposes a number of policies which may have a Likely Significant Effect on one or more Habitats site. However, individual policies can be eliminated.

## 2.2 Identifying Habitats sites, their Conservation Objectives and Qualifying Features to be included in HRA

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- 2.2.1 The qualifying features and conservation objectives of the Habitats sites, together with current pressures on and potential threats, was drawn from the Standard Data Forms for SACs and SPAs and the Information Sheets for Ramsar Wetlands as well as Natural England's Site Improvement Plans (SIP) and the most recent conservation objectives. An understanding of the designated features of each Habitats site and the factors contributing to its integrity has informed the assessment of the potential Likely Significant Effects of the Local Plan.
- 2.2.2 Key sources of the Habitats sites information were found at:
- JNCC: <http://jncc.gov.uk/>
  - Site Designation features and Conservation Objectives- Designated Sites View: <https://designatedsites.naturalengland.org.uk/>
  - Site Improvement Plans, e.g.:  
<http://publications.naturalengland.org.uk/publication/6270737467834368>
  - MAGIC (the Multi Agency Geographic Information website):  
[www.magic.gov.uk](http://www.magic.gov.uk)
  - "Managing Natura 2000 sites- The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC"  
[http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions\\_Art\\_.nov\\_2018\\_endocx.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_.nov_2018_endocx.pdf)
- 2.2.3 The list of Habitats sites within scope, their qualifying features, conservation objectives and key vulnerabilities / factors affecting site integrity can be found in Appendix 1 which is provided separately due to the document's large size.
- 2.2.4 A distance of 20km will be used to identify Habitats sites likely to be affected by impacts relating to Castle Point Local Plan. Beyond this distance is considered to be over precautionary, based on previous advice from Natural England. The Habitats sites scoped in are shown in Table 6.
- 2.2.5 At screening stage, the Impact Risk Zones (IRZ) will be reviewed on [Magic.defra.gov.uk](http://Magic.defra.gov.uk), which help identify whether a development is likely to impact a

Habitats site. Zones of Influence (ZOI) should also be reviewed, which are also listed on **Magic.defra.gov.uk**, as development (predominantly residential and / or tourism) within a Habitats sites ZOIs will likely result in adverse effects to site integrity.

## 2.3 Screening and Impact Pathways

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- 2.3.1 This section of the HRA considers potential impact pathways which could connect any element of the Local Plan to Habitats sites and thus lead to a Likely Significant Effect.
- 2.3.2 Where a potential impact pathway on a Habitats site is identified, through which the Local Plan could create a Likely Significant Effect, these are considered further at screening stage. Potential impact pathways between the Plan and Habitats sites are ruled out due to distance (>20km), lack of hydrological connectivity or where the issues and key vulnerabilities are unrelated to potential impacts from the Local Plan.
- 2.3.3 A table will be provided setting out Habitats sites scoped in for Further Assessment and impact Pathways showing which pathways might be feasible. This will include interrogation of the key vulnerabilities and issues affecting these Habitats sites, as identified in the relevant Site Improvement Plans.
- 2.3.4 There are a wide range of potential impacts and the following impacts summarised below, are considered most likely to cause a Likely Significant Effect:
- Habitat loss and fragmentation / land take as a result of development.
  - Impacts on protected species outside the designated site (*loss of functionally linked land*). Impact on site features (species) which travel outside the protected sites may be relevant where development could result in effects on qualifying interest species within the Habitats sites, for example through the loss of feeding grounds for an identified species.
  - Increase of any type of *disturbance*, for example from *recreational use* resulting from new housing development and / or improved access due to transport infrastructure projects.
  - Changes in *water quality* as a result of new development and greater pressure on water treatment services.
  - Changes in *water quantity* as a result of increased surface runoff or increased groundwater extraction.
  - Changes in *air quality* such as atmospheric pollution levels due to increased traffic, and pollution discharges from developments such as industrial developments, and waste management facilities.
- 2.3.5 The Impact Risk Zones (IRZz) including any Zone of Influence (ZOIs) for the underpinning SSSIs, which are provided on the MAGIC website **www.magic.gov.uk**, will be used as a starting point in determining Likely Significant Effect on Habitats sites

and spatial data will be used to determine the proximity of potential development locations to the Habitats sites.

- 2.3.6 There are many uncertainties associated with using trigger distances as there are very few standards available as a guide to how far impacts will travel. When considering the potential for effects on Habitats sites, distance itself is not a definitive guide to the likelihood or severity of an impact. There are other factors that will influence the relative distance at which an impact can occur, such as the prevailing wind or river flow direction. This means that development proposed in a plan that is some distance away from a Habitats site could potentially affect the site, and therefore should be considered as part of HRA screening.
- 2.3.7 Rather than rely on distance alone, best practice is to use a ‘source-pathway-receptor’ model which focuses on whether there is a potential link or causal connection (pathway) from the source (the direct or indirect change occurring as a result of development) by which impacts from a plan can affect the vulnerabilities/sensitivities of a Habitats site’s features to the predicted changes. The pathway is the route or mechanism by which any Likely Significant Effect would be manifest in the environment and would reach the receptor (i.e. the Habitats site). Therefore, during the screening stage a number of assumptions based on professional judgement have been applied in relation to assessing the Likely Significant Effects on Habitats sites that may result from the Local Plan, as described below.
- 2.3.8 The risks of effects to occur are predicted in light of assumptions, limitations and confidence in predictions. Then, taking no account of the mitigation measures incorporated into the Local Plan, the potential effects on qualifying features are determined and assessed on whether they are likely to be ‘significant’.
- 2.3.9 Each potential impact pathway is considered in more detail below.

### **Habitat Loss and Fragmentation / Land Take by Development**

- 2.3.10 Direct or indirect impacts to a Habitats site could cause habitat loss, degradation or fragmentation.
- 2.3.11 Loss of land may have the potential to result in Likely Significant Effects to Habitats sites where the habitat affected contributes towards maintaining the interest feature for which the Habitats sites are designated.
- 2.3.12 Benfleet and Southend Marshes SPA and Ramsar site are situated within Castle Point Borough. The majority sits within Hadleigh Castle Country Park and the creek adjacent to it. However, these sites also abut the northeastern corner of Canvey Island.
- 2.3.13 Any policy which may directly affect Benfleet and Southend Marshes SPA and Ramsar site would automatically be screened in for further assessment Island.

2.3.14 Therefore, any direct land take and potential habitat loss and fragmentation is within scope.

### **Impacts on protected species outside the designated site (loss of Functionally Linked Land)**

2.3.15 Functionally linked land is land situated outside the Habitats site but which supports their designated features. Loss of land may have the potential to result in Likely Significant Effects to Habitats sites where the habitat affected contributes towards maintaining the interest feature for which the Habitats sites is designated, for example through the loss of feeding grounds for an identified species.

2.3.16 Mobile interest features listed in the relevant Habitats sites- i.e. the birds- may use off-site habitat for feeding, roosting, foraging and loafing, especially large fields comprising arable and pastoral land uses and coastal habitats. Natural England has advised that the recognised foraging distance threshold for the majority of wetland bird species is 2km from a designated site.

2.3.17 Therefore, any potential loss of functionally linked land is within scope.

### **Water Quality**

2.3.18 An important determinant of the nature of wetland Habitats sites and the species that they support is the quality of the water that feeds them. Poor water quality can have a range of environmental impacts. Due to the very nature of watercourses, hydrological connectivity can continue for considerable distances, creating lengthy potential impact pathways.

2.3.19 High levels of toxic chemicals and metals can result in immediate death of aquatic life and have detrimental effects even at lower levels, including changes in wildlife behaviour and increased vulnerability to disease. Therefore, any discharge from construction sites into water sources which are functionally linked to designated sites could therefore result in a Likely Significant Effect if management plans or discharge consents from Environment Agency are not provided to support schemes.

2.3.20 Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. In the marine environment, nitrogen is the limiting plant nutrient, so eutrophication is often associated with discharges containing available nitrogen. Algal blooms, which commonly occur due to eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes that often accompanies eutrophication deoxygenates water further, increasing the oxygen-depleting effects of eutrophication.

- 2.3.21 Sewage and industrial effluent discharges contribute to increased nutrients levels in Habitats sites, particularly to phosphate levels in watercourses leading into them. Some components of sewage effluent, pesticides, and industrial chemicals, are suspected to interfere with hormones, possibly having negative effects on the reproduction and development of aquatic life. Diffuse pollution, including that from urban run-off, is considered to be a major factor in the unfavourable condition of some Habitats sites. Tidal mudflats, on which many SPA bird species depend, are vulnerable to smothering by increased macroalgal growth due to treated effluent discharge and scouring by increased flow volumes.
- 2.3.22 The court judgement (R (on the Application of Preston) v Cumbria County Council [2019] EWCA 1362) indicates that local authorities have to consider impacts from the construction of sewage outfalls for applications that will have a direct impact pathway to designated sites. Therefore, local authorities will need to exercise their own judgment on applications involving the operational impacts of sewage water drainage, albeit giving due weight to the views of a body such as the Environment Agency. Consequently, project level Habitats Regulations Assessment should be undertaken by the local authority to support such schemes prior to the permission of development. As a result, any policies which involve the provision of new sewage outfalls should be identified and screened in within Habitats Regulations Assessments.
- 2.3.23 Furthermore, greater pressure on water treatment services due to new development, especially housing, may increase the risk of effluent entering aquatic environments. This is because the allocation of large numbers of new homes in certain locations may result in the capacity of existing available infrastructure being exceeded, a situation that could potentially cause service failures relating to wastewater including increased volumes of wastewater being discharged from the Water Recycling Centres or combined sewer overflows, particularly during high rainfall events.
- 2.3.24 Therefore, any potential impact to water quality is within scope.

## **Water Quantity**

### **Surface Water Flooding**

- 2.3.25 Development on green field locations can create impermeable surfaces which can increase surface drainage rates. This can cause changes in depth, duration, frequency, magnitude and timing of water supply or flow, which can have significant implications for some water birds in sensitive habitats. Such changes may affect the quality and suitability of habitats used by birds for drinking, preening, feeding or roosting.

- 2.3.26 Canvey Island is flat and largely below sea level. Its flat, low-lying topography creates particular issues associated with surface water management and the ability to drain water away during heavy rainfall events.
- 2.3.27 Due to its elevated topography, tidal flood risk is less of an issue in Hadleigh and Thundersley compared to Canvey, although there are some low-lying areas still at risk in South Benfleet. Surface water flood risk however presents a more significant issue, particularly in parts of South Benfleet and Thundersley. The predominant solid geology underlying the Castle Point Borough is London Clay, which is impermeable and therefore causing rapid runoff.
- 2.3.28 Therefore, any potential impacts to water quantity (Surface Water Flooding) is within scope.

### **Reduced Water Resources**

- 2.3.29 Housing growth may increase regional water abstraction rates, which can have serious negative impacts on Habitats sites. This is because over-abstraction can reduce water levels in rivers, causing reduced flow velocity. This can have wide ranging effects on river and wetland habitat parameters, including increased temperatures and nutrient concentrations and reduced oxygen concentrations. Such impacts can be significantly detrimental to rivers' floristic characteristics and to notable species.
- 2.3.30 Increased use of water sources by a Local Plan also has the potential to affect terrestrial habitats. Excessive abstraction from underlying aquifers could cause a lowering of the water table and affect the water quality of sensitive wetland habitats.
- 2.3.31 Therefore, any potential impacts to water quantity (Reduced Water Resources) is within scope.

### **Air Quality**

- 2.3.32 There are number of atmospheric pollutants which can result in direct or indirect impacts to Habitats sites. These impacts are usually caused when the qualifying features are plants, soils and wetland habitats. However, some species may also be indirectly impacted from air pollution causing changes in habitat composition. The primary contributor to atmospheric pollution is transport related activities. Therefore, the main pollutants to atmospheric pollution are considered to be oxides of nitrogen (NO<sub>x</sub>) or sulphur dioxide (SO<sub>2</sub>) from traffic emissions. However, high intensities of agricultural practices are also considered to have a significant impact to air pollution. Potential impacts from pollutants and their sources have been highlighted within Table 3.
- 2.3.33 The primary contributor to atmospheric pollution is transport related activities. Therefore, the main pollutants to atmospheric pollution are considered to be oxides

of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>) and ammonia (NH<sub>3</sub>) from traffic emissions. However, high intensities of agricultural practices are also considered to have a significant impact to air pollution.

- 2.3.34 A distance of 200m will be used for considering Likely Significant Effects from potential air pollution. This is taken from the National Highways: Standards for Highways: Design Manual for Roads and Bridges) 5 which assumes that air pollution from roads is unlikely to be significant beyond 200m from the road itself. This HRA will therefore take into account any significant effects on receptors up to 200 metres from proposed development areas, as well as 200 metres from the major roads that would be anticipated to be required to support them.
- 2.3.35 Therefore, Atmospheric Pollution, particularly nitrogen deposition, should be considered and Air Quality has been scoped in for the HRA screening.

**Table 3. Main sources and effects of air pollutants on Habitats sites**

Pollutants	Source	Effects on habitats and species
Acid Deposition	SO <sub>2</sub> , NO <sub>x</sub> and ammonia all contribute to acid deposition. Although future trends in sulphur emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased nitrogen emissions may cancel out any gains produced by reduced sulphur levels.	Can affect habitats and species from acid rain, as well as dry deposition. Some habitats will be more susceptible depending on soil type, geology, weathering rate and buffering capacity.
Ammonia (NH <sub>3</sub> )	Ammonia is released following decomposition and volition of animal wastes. It is naturally occurring trace gas, but levels have increased considerably within increased agricultural practices (primarily pig or poultry farming). Ammonia reacts with acid pollutants such as the products of SO <sub>2</sub> and NO <sub>x</sub> emissions to produce fine ammonium (NH <sub>4</sub> ) containing aerosol which may be transferred much longer distances (can therefore be a significant trans-boundary issue).	Adverse effects are as a result of nitrogen deposition leading to eutrophication. As emissions mostly occur at ground level in the rural environment and NH <sub>3</sub> is rapidly deposited, some of the most acute problems of NH <sub>3</sub> are for small relict nature reserves located near to intensive agricultural landscapes.

5 National Highways: Standards for Highways: Design Manual for Roads and Bridges, LA 105 REV 0 Air Quality  
<https://www.standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90>



Pollutants	Source	Effects on habitats and species
Nitrogen oxides (NO <sub>x</sub> )	Nitrogen oxides are mostly primarily produced in combustion processes, such as coal fire power stations.	Deposition of nitrogen compounds (Nitrates, nitrogen dioxide and nitrate acid), can lead to both soil and freshwater acidification. In addition, nitrogen compounds can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.
Nitrogen deposition (N)	The pollutants that contribute to nitrogen deposition are derived mainly from NO <sub>x</sub> and NH <sub>3</sub> emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow growing perennial species and bryophytes are most at risk from Nitrogen eutrophication, due to its promotion of competitive and invasive species which can respond readily to elevated levels of N. N disposition can also increase the risk of damage from abiotic factors e.g. drought and frost.
Ozone (O <sub>3</sub> )	A secondary pollutant generated by photochemical reactions from NO <sub>x</sub> and volatile organic compounds. These are mainly released by the combustion of fossil fuels in the UK has led to a large increase in background ozone concentration, leading to an increased number of days when levels across the region are above 40ppb. Reducing ozone pollution is believed to require action at international level to reduce levels of the precursors that form ozone.	Concentrations of O <sub>3</sub> above 40 ppb can be toxic to humans and wildlife, and can affect buildings. Increased ozone concentrations may lead to a reduction in growth of agricultural crops decreased forest production and altered species composition in semi-natural plant communities.
Sulphur Dioxide (SO <sub>2</sub> )	Main sources of Sulphur Dioxide emission are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total sulphur dioxide emissions have decreased substantially in the UK since the 1980's.	Wet and dry depositions of Sulphur Dioxide acidify soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.

## Disturbance

- 2.3.36 Disturbance concerns species, rather than habitats e.g. wetland birds. It may be limited in time (noise, source of light etc.). The intensity, duration and frequency of repetition of disturbance are therefore important parameters. The following factors can be regarded as significant disturbance.
- 2.3.37 Any event, activity or process contributing to the:
- The long-term decline of the population of the species on the site.
  - The reduction, or to the risk of reduction, of the range of the species within the site.
  - The reduction of the size of the available habitat of the species.
- 2.3.38 Factors such as noise, light, dust and vibration, litter are capable of causing significant disturbances for species, e.g. Wintering waterfowl populations.
- 2.3.39 *Managing Natura 2000 Sites* states that: “Disturbance of a species occurs on a site from events, activities or processes contributing, within the site, to a long-term decline in the population of the species, to a reduction or risk of reduction in its range, and to a reduction in its available habitat. This assessment is done according to the site’s conservation objectives and its contribution to the coherence of the network.”
- 2.3.40 Recreation can create increased pressure on the qualifying features of the Habitats sites scoped in. They all have bird interest and / or associated habitats which have the potential to be adversely affected by increased recreational pressure.
- 2.3.41 The adopted Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) has identified Zones of Influence (ZOI) for recreational disturbance, and those relevant to the Local Plan are set out in Table 4 below. The Essex Estuaries SAC overlaps with the Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie, Foulness and Thames Estuary SPA and Ramsar sites and so follow the respective ZOIs throughout.

**Table 4. Zones of Influence for Recreational Disturbance**

Designated Site	Underpinning SSSIs	Zone of Influence (km)
Blackwater SPA & Ramsar Site	Blackwater Estuary SSSI	22
Benfleet and Southend Marshes SPA and Ramsar site	Benfleet and Southend Marshes SSSI	4.3
Crouch and Roach Estuaries SPA and Ramsar site	Crouch and Roach Estuaries SSSI	4.5
Dengie SPA and Ramsar site	Dengie SSSI	20.8
Foulness SPA and Ramsar site	Foulness SSSI	13

Designated Site	Underpinning SSSIs	Zone of Influence (km)
Thames Estuary and Marshes SPA and Ramsar site	Mucking Flats and Marshes SSSI	8.1

## 2.4 Screening categorisation

2.4.1 The screening exercise will be recorded, using the precautionary principle. Each policy and land allocation included in the Local Plan will be categorised. A ‘traffic light’ system will be used to record the potential for policies and allocated sites to have a Likely Significant Effect, using the system of colours in Table 5 below.

**Table 5. Screening Categorisation**

<b>Category A: Significant effects not likely</b>
<p>Category A identifies those policies that would not result in a Likely Significant Effect and are considered to have no adverse effect. These policies can be ‘screened out’ and no further assessment is required. This is because, if there are no adverse effects at all, there can be no adverse effect to contribute to in combination effects of other plans or projects.</p>
<b>Category B: Significant effects uncertain</b>
<p>Category B identifies those policies which will have no significant adverse effect on the site. That is, there could be some effect but none which would undermine the conservation objectives, when the policy is considered on its own. Given that there may be some effect this now needs to be considered in combination with other plans or projects. If these effects can be excluded in combination, the policy can be screened out and no further assessment required. However, if the possibility of a significant adverse effect in combination cannot be ruled out there will be a Likely Significant Effect in combination, and Appropriate Assessment will be required.</p>
<b>Category C: Likely Significant Effect</b>
<p>Category C identifies those policies which cannot be ruled out as having a Likely Significant Effect upon a Habitat Site, alone, that is the effect could undermine the conservation objectives. In this case an Appropriate Assessment is triggered without needing to consider in combination effects at screening stage, although they may need to be considered at Appropriate Assessment.</p>

### 3. Scoping of Habitats sites

- 3.1.1 The table below shows which Habitats sites have been scoped in, based on the 20km distance from the Borough boundary. There are 21 Habitats sites which lie within 20km of Castle Point borough boundary including some marine sites. Figure 2 below shows the geographical location of these sites in the context of the Borough boundary. This encompasses the Blackwater Estuary SPA and Ramsar Zone of Influence (ZOI) which has an evidenced ZOI of 22km.
- 3.1.2 As stated in the methodology above, these Habitats sites will be considered further at screening stage once the details of the Local Plan become available and taking into account Impact Risk Zones (IRZ) and Zones of Influence.
- 3.1.3 The list of Habitats sites within scope, their qualifying features, conservation objectives and key vulnerabilities / factors affecting site integrity can be found in Appendix 1.

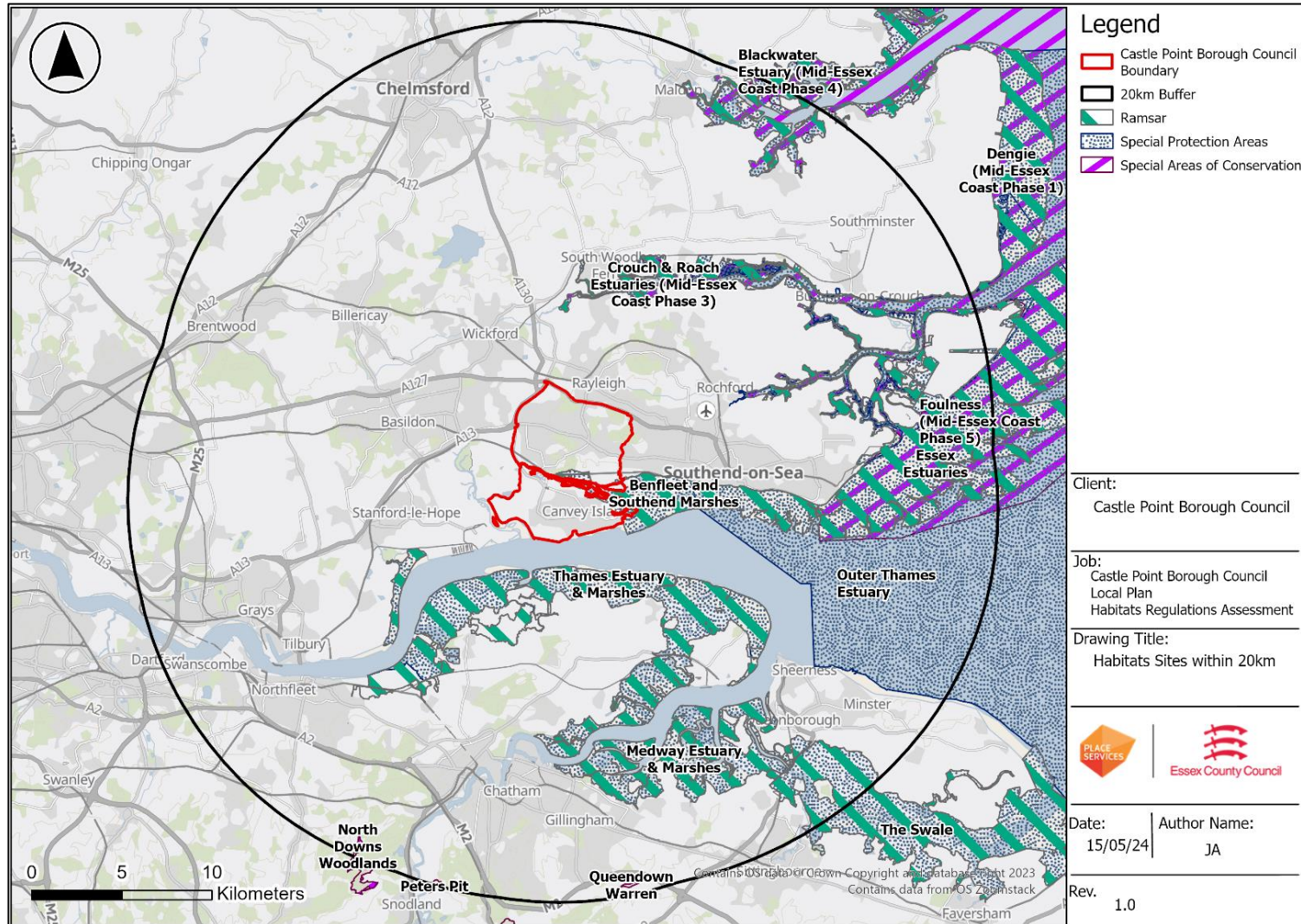
**Table 6. Habitats sites scoped in due to being located within 20 km of Borough Boundary**

Designated Site	Location
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site	Estuary from Maldon to Mersea Island
Benfleet and Southend Marshes SPA and Ramsar site	South Essex on the Thames coastline coast, including Hadleigh Ray between the north east coastline of Canvey Island and southern edge of Hadleigh Castle County Park.
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site	Estuaries from South Woodham Ferrers, between Dengie Peninsular and Foulness
Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar site	Dengie Peninsula, east of Maldon and Burnham-on-Crouch
Essex Estuaries SAC	Estuaries from Clacton on Sea to Southend
Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site	Covers south east corner of Essex, near Southend

Designated Site	Location
Medway Estuary and Marshes SPA and Ramsar site	Estuary near Sheerness (Kent)
North Downs Woodlands SAC	South and south west of Rochester (Kent)
Outer Thames Estuary SPA (marine)	Covers most marine areas near to Essex coast
Peters Pit SAC	South of Rochester (Kent)
Queendown Warren SAC	South east of Gillingham (Kent)
Thames Estuary and Marshes SPA and Ramsar site	A small area at Mucking, Essex, 4km east (upstream) of site. Also, large amount on North Kent coast.
The Swale SPA and Ramsar site	Estuary south of the Isle of Shelley (Kent)



**Figure 2. Habitats sites within 20km of the Castle Point Boundary**



## 4. The Approach and Method for the Appropriate Assessment and Integrity Test

### 4.1 Approach and Method

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- 4.1.1 Where any policies of the Castle Point Local Plan have been screened in as having the potential to cause Likely Significant Effects without considering mitigation measures, Castle Point Borough Council, as the competent authority, needs to progress to the second stage, i.e. undertake Appropriate Assessment.
- 4.1.2 Where it is considered at screening that the Local Plan for Castle Point may cause Likely Significant Effects, the next steps are to undertake an Appropriate Assessment of the implications of the plan (either alone or in combination with other plans or projects) and establish whether there may be an Adverse Effect On site Integrity (AEOI) of any Habitats sites in view of their Conservation Objectives.
- 4.1.3 Some policies of the Local Plan can be used to mitigate some of the potential Likely Significant Effects which have been identified. These can be considered at Appropriate Assessment. This stage thus becomes an iterative process as avoidance and reduction measures can be incorporated in order to be able to ascertain that there is no Adverse Effect on Integrity on any Habitats site, before making a final assessment.
- 4.1.4 The Appropriate Assessment should assess all aspects of the Local Plan which can by themselves, or in combination with other plans and projects, affect the sites' Conservation Objectives of one or more Habitats sites although these are not set for Ramsar sites. The assessment must consider the implications for each qualifying feature of each potentially affected Habitats site. The focus of the appropriate assessment is therefore on the species and / or the habitats for which the Habitats site is designated.
- 4.1.5 Key vulnerabilities are set out in Appendix 1 and the Site Improvement Plans were used to obtain this information. Site Improvement Plans have been developed for each Habitats site in England as part of the 'Improvement Programme for England's Natura 2000 sites (IPENS)'. Each Site Improvement Plan provides a high-level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. These can be found at: <http://publications.naturalengland.org.uk/category/5458594975711232>.

- 4.1.6 The Appropriate Assessment stage should undertake objective scientific assessment of the implications of the Local Plan on the Qualifying Features of the listed Habitats sites using the best scientific knowledge in the field. It should apply the best available techniques and methods to assess the extent of the effects of the Local Plan on the integrity of the Habitat sites. The description of the site's integrity and the impact assessment should be based on the best possible indicators specific to the Habitat sites' qualifying features, which can also be useful in monitoring the impact of the Local Plan's implementation.
- 4.1.7 The best scientific knowledge<sup>6</sup> should be used when carrying out the Appropriate Assessment in order to enable the competent authority to conclude with certainty that there will be no Adverse Effect on the Integrity of any Habitats site. This will therefore support a conclusion that is "beyond scientific doubt".
- 4.1.8 It is important that the Appropriate Assessment provides a better understanding of potential effects and can therefore assist in the identification of mitigation measures where possible to avoid, reduce or cancel significant effects on Habitats sites which could be applied when undertaking the 'integrity test'. All mitigation measures built into the Local Plan can be taken into account. The Appropriate Assessment is an iterative process, re-assessing changes and new or different mitigation measures before making its final conclusion. It must be clear which mitigation measures are being relied upon in order to meet the integrity test.
- 4.1.9 The integrity test must apply the precautionary principle. However, plan assessments are less precise than project assessments, and so it is important for the assessment process to eliminate the prospect of adverse effects integrity insofar as it is possible, given the level of specificity of this Local Plan.
- 4.1.10 In order to fulfil the above requirements, this Appropriate Assessment will therefore use the following process, and will be structured by the potential impact pathways that will be highlighted at screening stage.
- 4.1.11 Advice has been provided from the European Court of Justice regarding the 'tiering' of HRAs where there are multiple levels of plan-making, recognising that the purpose of a high-level plan is to set out broad policies and intentions without going into any detail. When the UK was first required to undertake HRA of plans, Advocate-General Kokott commented on the apparent tension between the requirements of the Habitats Directive and the intentionally vague nature of high-level strategic plans. She responded that to address this apparent tension 'It would ...hardly be proper to require a greater level of detail in preceding plans [rather than lower tier plans or planning applications] or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed

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<sup>6</sup> Waddenzee ruling (C-127/02 paragraphs 52-54, 59)



at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan [emphasis added]. This assessment would therefore need to be updated with increasing specificity in subsequent stages of the procedure' [*i.e.* for planning applications or lower tier plans] (Opinion of Advocate-General Kokott, 2005).

- 4.1.12 Explicitly enshrining the requirement for project-level HRA in the plans – since it is not possible to rule out adverse effects on the integrity of many Habitats sites due simply to the high-level nature of the plan policies, 'down-the-line' assessment becomes essential.
- 4.1.13 A monitoring and Iterative Plan Review (IPR) provision therefore may need to be embedded in the Local Plan. Monitoring is not mitigation; however, where there is a lack of detail over the precise effects of a plan (because, as in this case, the purpose of the plan is to set over-arching policy, not present specific proposals), an Iterative Plan Review process enables the delivery of development to be managed and the plan (and its HRA) to be updated in future reviews. It involves recognising the fact that development associated with policies in the plan will not be delivered all at once but piecemeal over the entire plan timetable. This process will involve a phased and iterative approach to plan-implementation which is linked to ongoing project developments and their associated monitoring work and with the findings from such project-level work feeding back into the next phases of plan-implementation. This is done so that results from monitoring data from consented projects and on-going research programmes can be fed into subsequent developments in order for lessons to be learnt and evidence gaps filled, thus reducing potential impacts to Habitats sites.

## 4.2 Policies / Allocations and Habitats Sites within Scope

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- 4.2.1 Any Likely Significant Effects considered at screening stage will be carried forward for consideration at Appropriate Assessment. The policies and their potential to have adverse effects on any Habitats site through a variety of impact pathways will now be considered in more detail, for example disturbance, direct and indirect effects; extent of the effects (habitat area, species numbers or areas of occurrence); importance and magnitude (*e.g.* considering the affected area or population in relation to the total area and population size).
- 4.2.2 Key vulnerabilities of each Habitats site are set out in Appendix 1 using the relevant Site Improvement Plans.

## 4.3 Court Judgements and their consideration in this Report

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### **CJEU People Over Wind v Coillte Teoranta C-323/17**

- 4.3.1 As previously mentioned, in line with the Court judgement (CJEU People Over Wind v Coillte Teoranta C-323/17), mitigation measures cannot be taken into account when carrying out a screening assessment to decide whether a plan or project is likely to result in significant effects on a Habitats site. The HRA Appropriate Assessment will therefore consider mitigation measures for the assessment of Likely Significant Effects resulting from the Castle Point Local Plan.
- 4.3.2 In accordance with this Judgement, all mitigation measures already built into the Local Plan can now be taken into account for the Appropriate Assessment. At this stage other policies of the Plan can be considered in order to mitigate some of the potential Likely Significant Effects which have been identified. This stage is an iterative process as avoidance and reduction measures can be incorporated in order to be able to avoid the potential impacts identified in the Appropriate Assessment or reduce them to a level where they will no longer adversely affect the site's integrity.
- 4.3.3 An example may include a requirement for Sustainable Drainage Schemes (SuDS) for new housing and employment sites which can help to mitigate for surface water flooding and prevent water pollution.
- 4.3.4 Where there may still be adverse effects on the ecological integrity of Habitats sites, in view of the Site's conservation objectives, additional mitigation measures may also need to be proposed. Generic mitigation is used where possible which may should help to address water quality, air pollution, noise, and other (non-recreational) forms of disturbance. Construction Environment Management Plans (CEMP - Biodiversity) – often a condition of consent - can help to direct seasonal working, damping down of dust and measures to alleviate noise pollution.

### **CJEU Holohan C- 461/17**

- 4.3.5 Court rulings include CJEU Holohan C-461/17 (7 November 2018) which imposes more detailed requirements on the competent authority at Appropriate Assessment stage:

*1. [...] an 'Appropriate Assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site.*

*2. [...] the competent authority is permitted to grant to a plan or project consent which leaves the developer free to determine subsequently certain parameters relating to the construction phase, such as the location of the construction compound and haul routes, only if that authority is certain that the development consent granted establishes conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the site.*

*3. [...] where the competent authority rejects the findings in a scientific expert opinion recommending that additional information be obtained, the 'Appropriate Assessment' must include an explicit and detailed statement of reasons capable of dispelling all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned.*

4.3.6 It is therefore necessary to consider species likely to be present on the Habitats sites, but for which that site has not been listed – e.g. birds which are designated features of the underpinning SSSI – and to consider the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site. Those species found outside the European designated site boundary are likely to be covered by the consideration of impacts on functionally linked land.

4.3.7 The designated features of the relevant underpinning SSSIs will be assessed for any additional impacts on the qualifying features that have not already been addressed within the SPA and Ramsar sites that have been screened in.

## **CJEU Joined Cases C-293/17 and C-294/17 Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu**

4.3.8 These Dutch cases concerned authorisations schemes for agricultural activities in Habitats sites which cause nitrogen deposition and where levels already exceeded the critical load. These are not directly connected with or necessary for the management of a Habitats site and “highlights” of the ruling include:

*1. Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that the grazing of cattle and the application of fertilisers on the surface of land or below its surface in the vicinity of Natura 2000 sites may be classified as a 'project' within the meaning of that provision, even if those activities, in so far as they are not a physical intervention in the natural surroundings, do not constitute a 'project' within the meaning of Article 1(2)(a) of Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment.*

2. *Article 6(3) of Directive 92/43 must be interpreted as meaning that a recurring activity, such as the application of fertilisers on the surface of land or below its surface, authorised under national law before the entry into force of that directive, may be regarded as one and the same project for the purposes of that provision, exempted from a new authorisation procedure, in so far as it constitutes a single operation characterised by a common purpose, continuity and, inter alia, the location and the conditions in which it is carried out being the same. If a single project was authorised before the system of protection laid down by that provision became applicable to the site in question, the carrying out of that project may nevertheless fall within the scope of Article 6(2) of that directive.*

...

6. *Article 6(3) of Directive 92/43 must be interpreted as meaning that an ‘appropriate assessment’ within the meaning of that provision may not take into account the existence of ‘conservation measures’ within the meaning of paragraph 1 of that article, ‘preventive measures’ within the meaning of paragraph 2 of that article, measures specifically adopted for a programme such as that at issue in the main proceedings or ‘autonomous’ measures, in so far as those measures are not part of that programme, if the expected benefits of those measures are not certain at the time of that assessment.*

7. *Article 6(3) of Directive 92/43 must be interpreted as meaning that measures introduced by national legislation, such as that at issue in the main proceedings, including procedures for the surveillance and monitoring of farms whose activities cause nitrogen deposition and the possibility of imposing penalties, up to and including the closure of those farms, are sufficient for the purposes of complying.*

4.3.9 This ruling is relevant to projects which trigger appropriate assessment before any consents are issued so should be considered when identifying other plans and projects for an in- combination assessment.

## **(R (on the Application of Preston) v Cumbria County Council [2019] EWCA 1362)**

4.3.10 This case relates to a High Court verdict which quashed a County Council’s decision to vary a planning permission for a water company to construct a sewage outfall on a Special Area of Conservation (SAC). Therefore, planning authorities and other competent authorities cannot, in appropriate assessments, simply rely on the competence of other regulators to avoid conducting their own assessments. They must instead themselves satisfy their own HRA duties. The judgement concluded:

Regulation 63(1) provides that the trigger for making an appropriate assessment is that the relevant plan or project ‘is likely to have a significant effect on a Habitats site. Regulation 63(3) envisages consultation with the appropriate nature conservation body taking place at the stage of the appropriate assessment and accordingly after

the initial view that there is likely to be significant effect has been formed. The conclusion as to whether the integrity of the relevant site will be adversely affected is to be made 'in the light of the conclusions of the assessment'.

(Regulation 63(5)) and it is at that stage that regard is to be had to the manner in which the project is to be carried out and to the conditions or restrictions which the authority is minded to impose.

(Regulation 63(6)) The effect of restrictions imposed by another regulatory body is seen as an aspect of the manner in which a project is to be carried out and so falling for consideration under Regulation 63(6) at the end of the assessment process rather than as removing the need for an appropriate assessment.

## 4.4 Applying the Integrity Test

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- 4.4.1 Following the Appropriate Assessment and the consideration of all mitigation measures, the competent authority needs to make a judgement on whether any of the policies will have an Adverse Effect on Integrity on any Habitats site, either alone or in combination with other plans and projects. This test incorporates the precautionary principle.

## 4.5 In Combination Effects with other Plans and Projects

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- 4.5.1 The Appropriate Assessment should also include a comprehensive identification of all the potential effects of the Local Plan likely to be significant and insignificant, taking into account the combination of the effects of the Local Plan with those of other plans or projects. A series of individually modest impacts may, in combination, produce a significant impact. Cumulative impacts may only occur over time, so plans or projects which are completed, approved but uncompleted, or proposed should all be considered. The assessment should not be restricted to similar types of plans and projects.
- 4.5.2 In order to identify potential in combination effects other plans and projects which may affect the Habitats sites need to be identified. The list of county and district level plans which provide for development in Castle Point Borough, as well as Nationally Strategic Infrastructure Projects (NSIPs), are identified and are set out in section 5 below.
- 4.5.3 The plans assessed will ultimately depend upon the impact pathways brought forward to AA.

## 4.6 Embedding Mitigation into the Local Plan

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- 4.6.1 Castle Point Borough Council, as the competent authority, should consider the manner in which the Local Plan is to be implemented and any mitigation measures which could be relied upon when deciding whether it would have an Adverse Effect on Integrity, including when and how they can be embedded into the Local Plan. It needs to ensure that mitigation is embedded into the Plan through amendments to policies where necessary. It is not sufficient to rely on a general policy aimed at protecting Habitats sites. Instead, explicit caveats need to be included where there may be conflicts between a general policy to protect Habitats sites from development and another policy.
- 4.6.2 Each impact is assessed, e.g. air quality, water quality, disturbance, with a summary of any additional mitigation measures required to avoid Adverse Effect On site Integrity (AEOI) and any recommendations will be set out to embed mitigation into the Local Plan.

## 4.7 Re-applying the Integrity Test

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- 4.7.1 At this stage the integrity test will be re-applied. Where there may still be adverse effects on the ecological integrity of Habitats sites, in view of the Site's conservation objectives, additional mitigation measures should be considered.
- 4.7.2 The AA will provide tables showing each potential impact pathway where it considers individual policies, how they might be mitigated and whether embedded mitigation is sufficient to avoid Adverse Effect On site Integrity.

## 4.8 Monitoring

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- 4.8.1 Recommendations for monitoring may recommended, e.g. Air Quality.

## 4.9 Consulting Natural England

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- 4.9.1 In accordance with the requirements of the Habitats Regulations, Natural England will be consulted on the Appropriate Assessment document.

## 5. Initial schedule of other plans and strategies to be incorporated into the assessment of in-combination effects

### 5.1 Assessment of Impacts in Combination with Other Plans and Projects

5.1.1 The relevant other plans to be considered in combination with Castle Point Local Plan are listed in Table 7 below:

**Table 7. Other plans or projects considered for in combination effects**

Title of plan or Project	Competent authority/ statutory body/plan owner	Location of report
The South East Inshore Marine Plan June 2021	HM Government/ Marine Management Organisation	<a href="https://assets.publishing.service.gov.uk/media/60f6f6dde90e0764ccfbd836/FINAL_South_East_Marine_Plan__1_.pdf">https://assets.publishing.service.gov.uk/media/60f6f6dde90e0764ccfbd836/FINAL_South_East_Marine_Plan__1_.pdf</a>
The Thames Vision 2050	Port of London Authority	<a href="https://pla.co.uk/thames-vision-2050">https://pla.co.uk/thames-vision-2050</a>
Basildon Borough Draft Local Plan	Basildon Borough Council	<a href="https://www.basildon.gov.uk/article/9107/Local-Plan-Latest-news-and-updates">https://www.basildon.gov.uk/article/9107/Local-Plan-Latest-news-and-updates</a>
Braintree District Local Plan	Braintree District Council	<a href="https://www.braintree.gov.uk/planning-building-control/local-plan-2033">https://www.braintree.gov.uk/planning-building-control/local-plan-2033</a>
Brentwood Local Plan 2016-2033	Brentwood District Council	<a href="https://www.brentwood.gov.uk/adopted-local-plan">https://www.brentwood.gov.uk/adopted-local-plan</a>
Chelmsford Local Plan, Adopted 27 May 2020	Chelmsford City Council	<a href="https://www.chelmsford.gov.uk/planning-and-building-control/planning-policy-and-local-plan/adopted-local-plan/">https://www.chelmsford.gov.uk/planning-and-building-control/planning-policy-and-local-plan/adopted-local-plan/</a>
Colchester Borough Council Core Strategy	Colchester Borough Council	
Maldon District Council Local Development Scheme 2023 – 2027	Maldon District Council	<a href="https://www.maldon.gov.uk/info/7050/planning_policy/">https://www.maldon.gov.uk/info/7050/planning_policy/</a>

Title of plan or Project	Competent authority/ statutory body/plan owner	Location of report
		9897/local_development_plan_review_2021
Southend on Sea Development Management DPD	Southend on Sea City Council	<a href="https://southend.oc2.uk/document/28">https://southend.oc2.uk/document/28</a>
Rochford New Local Plan	Rochford District Council	<a href="https://www.rochford.gov.uk/new-local-plan">https://www.rochford.gov.uk/new-local-plan</a>
Tendring District Local Plan	Tendring DC	<a href="https://www.tendringdc.gov.uk/content/localplan">https://www.tendringdc.gov.uk/content/localplan</a>
Thurrock new Local Plan. Thurrock Local Development Scheme	Thurrock Council	<a href="https://www.thurrock.gov.uk/new-local-plan-for-thurrock/thurrock-local-plan">https://www.thurrock.gov.uk/new-local-plan-for-thurrock/thurrock-local-plan</a> . <a href="https://www.thurrock.gov.uk/sites/default/files/assets/documents/localdevelopmentscheme-202309-v01.pdf">https://www.thurrock.gov.uk/sites/default/files/assets/documents/localdevelopmentscheme-202309-v01.pdf</a>
North Essex Authorities Shared Strategic Plan Part 1	Braintree DC, Colchester BC and Tendring DC	<a href="https://legacy.tendringdc.gov.uk/sites/default/files/documents/planning/Planning_Policy/Section_1/Tendring%20District%20Local%20Plan%202013-2033%20and%20Beyond%20-%20Section%201_AC.pdf">https://legacy.tendringdc.gov.uk/sites/default/files/documents/planning/Planning_Policy/Section_1/Tendring%20District%20Local%20Plan%202013-2033%20and%20Beyond%20-%20Section%201_AC.pdf</a>
Gravesham Local Plan First Review (2014)	Gravesham Borough Council	<a href="https://www.gravesham.gov.uk/local-plan-policy/local-plan">https://www.gravesham.gov.uk/local-plan-policy/local-plan</a>
Bearing Fruits 2031 The Swale Borough Local Plan, Adopted July 2017	Swale Borough Council	<a href="https://services.swale.gov.uk/media/files/localplan/adoptedlocalplanfinalwebversion.pdf">https://services.swale.gov.uk/media/files/localplan/adoptedlocalplanfinalwebversion.pdf</a>



Title of plan or Project	Competent authority/ statutory body/plan owner	Location of report
Neighbourhood plans	Relevant District/ Borough Councils	
Essex County Council Local Transport Plan for Essex, 2011	Essex County Council	<a href="https://www.essexhighways.org/highway-schemes-and-developments/local-transport-plan">https://www.essexhighways.org/highway-schemes-and-developments/local-transport-plan</a>
Kent Minerals and Waste Local Plan 2013-30 (adopted 2020)	Kent County Council	<a href="https://www.kent.gov.uk/__data/assets/pdf_file/0004/112585/Kent-Minerals-and-Waste-Local-Plan-2013-2030.pdf">https://www.kent.gov.uk/__data/assets/pdf_file/0004/112585/Kent-Minerals-and-Waste-Local-Plan-2013-2030.pdf</a>
The Thames Estuary 2100 Plan	Government/ Environment Agency	<a href="https://www.gov.uk/government/collections/thames-estuary-2100-te2100">https://www.gov.uk/government/collections/thames-estuary-2100-te2100</a>
South Essex Outline Water Cycle Study Technical Report Final September 2011	Castle Point, Rochford, Basildon and Essex councils	<a href="https://www.castlepoint.gov.uk/general-evidence-documents/">https://www.castlepoint.gov.uk/general-evidence-documents/</a>
Essex and Suffolk Water Draft Resource Management Plan 2024	Essex and Suffolk Water	<a href="https://www.eswater.co.uk/globalassets/wrmp/esw/wrmp_customer_summary_esw_v9.pdf">https://www.eswater.co.uk/globalassets/wrmp/esw/wrmp_customer_summary_esw_v9.pdf</a>
Anglian River Basin District River Basin Management Plan: Updated 2022	Government/ Environment Agency	<a href="https://www.gov.uk/guidance/anglian-river-basin-district-river-basin-management-plan-updated-2022">https://www.gov.uk/guidance/anglian-river-basin-district-river-basin-management-plan-updated-2022</a>

Title of plan or Project	Competent authority/ statutory body/plan owner	Location of report
Essex and South Suffolk Shoreline Management Plan 2	Government/ Environment Agency	<a href="https://www.gov.uk/government/publications/the-essex-and-south-suffolk-shoreline-management-plan-2">https://www.gov.uk/government/publications/the-essex-and-south-suffolk-shoreline-management-plan-2</a>
Minerals Local Plan review 2025 to 2040	Essex County Council	<a href="https://www.essex.gov.uk/planning-land-and-recycling/planning-and-development/minerals-and-waste-planning-policy/existing">https://www.essex.gov.uk/planning-land-and-recycling/planning-and-development/minerals-and-waste-planning-policy/existing</a>
Essex CC and Southend-on-Sea BC Replacement Waste Local Plan (2017)	Essex County Council	<a href="https://www.essex.gov.uk/sites/default/files/migration_data/files/assets.ctfassets.net/knkzaf64jx5x/5MMZ5nNFmOClpF56igb0Jc/e6f7ab4cba4ed1198c67b87be7b375e7/waste-local-plan-2017-compressed.pdf">https://www.essex.gov.uk/sites/default/files/migration_data/files/assets.ctfassets.net/knkzaf64jx5x/5MMZ5nNFmOClpF56igb0Jc/e6f7ab4cba4ed1198c67b87be7b375e7/waste-local-plan-2017-compressed.pdf</a>
Shoeburyness Coastal Management Scheme Non-Technical Study	Southend-on-Sea Borough Council	<a href="https://www.southend.gov.uk/downloads/file/5919/shoeburyness-coastal-management-scheme---non-technical-summary">https://www.southend.gov.uk/downloads/file/5919/shoeburyness-coastal-management-scheme---non-technical-summary</a>
London Southend Airport Joint Area Action Plan (JAAP), December 2014	Rochford District Council and Southend on sea Borough Council	<a href="https://democracy.southend.gov.uk/Data/Place%20Scrutiny%20Committee/201412111700/Agenda/att24954.pdf">https://democracy.southend.gov.uk/Data/Place%20Scrutiny%20Committee/201412111700/Agenda/att24954.pdf</a>
Port of Tilbury extension NSIP	Secretary of State	<a href="https://national-infrastructure-consenting.planninginspectrate.gov.uk/projects/TR030003">https://national-infrastructure-consenting.planninginspectrate.gov.uk/projects/TR030003</a>
Lower Thames Crossing NSIP	Secretary of State	<a href="https://national-infrastructure-">https://national-infrastructure-</a>

Title of plan or Project	Competent authority/ statutory body/plan owner	Location of report
		<a href="https://consenting.planninginspectorate.gov.uk/projects/TR010032">consenting.planninginspectorate.gov.uk/projects/TR010032</a>
Thurrock Flexible Power Generation NSIP	Secretary of State	<a href="https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010092">https://national-infrastructure-consenting.planninginspectorate.gov.uk/projects/EN010092</a>
Tilbury Energy Centre (TEC) NSIP	Secretary of State	<a href="https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR030003/TR030003-000767-PoTLL_CEA%20LTC%20and%20Tilbury%20Energy%20Centre%20Paper%20for%20D3%20R4%20Final.pdf">https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/projects/TR030003/TR030003-000767-PoTLL_CEA%20LTC%20and%20Tilbury%20Energy%20Centre%20Paper%20for%20D3%20R4%20Final.pdf</a>
Thames Enterprise Park (Redevelopment of Former Coryton Oil Refinery) Masterplan and outline application	Thurrock Council	<a href="https://www.thurrock.gov.uk/thames-enterprise-park-development/overview">https://www.thurrock.gov.uk/thames-enterprise-park-development/overview</a>
Norwich to Tilbury (National Grid) NSIP	Secretary of State	<a href="https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/infrastructure-projects/norwich-to-tilbury/about">https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/infrastructure-projects/norwich-to-tilbury/about</a>

## 6. Appendix

### Appendix 1. List Of Habitats Sites, Conservation Objectives and Vulnerabilities

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Benfleet and Southend Marshes</b></p> <p>Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. The site is comprised of an extensive series of saltmarshes, mudflats, and grassland which support a diverse flora and fauna, including internationally important numbers of wintering waterfowl.</p>				
<p><b>Benfleet and Southend Marshes SPA</b></p> <p>EU Code: UK9009171</p>	2283.94	<p><b>Qualifying features:</b></p> <ul style="list-style-type: none"> <li>• Dark-bellied Brent goose; <i>Branta bernicla bernicla</i> (Non-breeding)</li> <li>• Ringed plover; <i>Charadrius hiaticula</i> (Non-breeding)</li> <li>• Grey plover; <i>Pluvialis squatarola</i> (Non-breeding)</li> <li>• Red knot; <i>Calidris canutus</i> (Non-breeding)</li> <li>• Dunlin; <i>Calidris alpina alpina</i> (Non-breeding)</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying</li> </ul>	<p><b>Coastal squeeze:</b> Coastal defences exist along much of the coastline here. Sea level rise is also occurring. It is therefore certain that if circumstances do not change, much of the supporting habitats of the SPA birds will be lost/degraded through processes such as: coastal squeeze; sedimentation rates' inability to keep pace with sea level rise; and reduced exposure (the extent and duration) of mudflats and sandflats.</p> <p><b>Public Access/Disturbance:</b></p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<ul style="list-style-type: none"> <li>Waterbird assemblage</li> </ul> <p>Further information can be found via Natural England’s Supplementary Advice.</p>	<p>features</p> <ul style="list-style-type: none"> <li>The supporting processes on which the habitats of the qualifying features rely</li> <li>The population of each of the qualifying features, and</li> <li>The distribution of the qualifying features within the site</li> </ul>	<p>Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive.</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>There is inadequate information to provide appropriate management.</p> <p><b>Invasive species:</b>  Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur.</p> <p><b>Changes in species distribution:</b>  There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013). These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines</p> <p><b>Fisheries- commercial marine and estuarine:</b>  The extent and impacts of fisheries on private grounds, particularly in the Swale Estuary, needs to be better understood. There are particular concerns regarding the dredging of shellfish within the SPAs which are a food source for the protected birds. Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>fisheries in European Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent &amp; Essex IFCA.</p> <p><b>Invasive species:</b>  Freshwater non-native invasive species such as pennywort, crassula, parrots feather etc. can engulf ditches, leading to loss of habitat for diving ducks. Although there are some mechanisms in place to ensure ditch management, more baseline information is needed, particularly on those species for which ditch management is not the solution. <i>Spartina anglica</i> may be increasing at the expense of other saltmarsh habitats with adverse implications for SPA bird roost areas in Benfleet &amp; Southend Marshes.</p> <p><b>Vehicles- Illicit:</b>  The illicit use of motor vehicles (often bikes) occurs across the area. This can cause disturbance to SPA birds. This activity was identified as a medium risk during</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>the 2009 EMS risk review project and is still occurring. Whilst various mechanisms are in place to prevent the use of vehicles they are clearly not entirely effective.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b> Nitrogen deposition exceeds site-relevant critical loads.</p>
<p><b>Benfleet and Southend Marshes Ramsar site</b></p> <p>RIS Code: UK11006</p>	<p>2251.31</p>	<p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance; species with peak counts in winter; 32867 waterfowl (5 year peak mean 1998/99-2002/2003).</p> <p><b>Ramsar criterion 6</b></p> <p>Species/populations occurring at levels of international importance:</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> <li>• Branta bernicla bernicla; Dark-bellied brent goose</li> </ul> <p>Species with peak counts in winter:</p>	<p>None available.</p>	<p>None available.</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<ul style="list-style-type: none"> <li>Charadrius hiaticula; Ringed plover</li> <li>Pluvialis squatarola; Grey plover</li> </ul> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>Calidris alpina alpina; Dunlin</li> </ul>		
<p><b>Blackwater Estuary (Mid-Essex Coast Phase 4)</b></p> <p>The Blackwater Estuary is the largest estuary in Essex north of the Thames and, is one of the largest estuarine complexes in East Anglia. Its mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering waterfowl. Shingle and shell banks and offshore islands are also a feature of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. This rich mosaic of habitats supports an outstanding assemblage of nationally scarce plants and a nationally important assemblage of rare invertebrates. There are 16 British Red Data Book species and 94 notable and local species.</p>				
<p><b>Blackwater Estuary SPA (Mid-Essex)</b></p>	<p>4395.15</p>	<p><b>Qualifying features:</b></p> <ul style="list-style-type: none"> <li>Dark-bellied brent goose; Branta bernicla bernicla (Non-breeding)</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild</p>	<p><b>Coastal Squeeze:</b></p> <p>Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Coast Phase 4)</b></p> <p>EU Code: UK9009245</p>		<ul style="list-style-type: none"> <li>• Common pochard; <i>Aythya ferina</i> (Breeding)</li> <li>• Hen harrier; <i>Circus cyaneus</i> (Non-breeding)</li> <li>• Ringed plover; <i>Charadrius hiaticula</i> (Breeding)</li> <li>• Grey plover; <i>Pluvialis squatarola</i> (Non-breeding)</li> <li>• Dunlin; <i>Calidris alpina alpina</i> (Non-breeding)</li> <li>• Black-tailed godwit; <i>Limosa limosa islandica</i> (Non-breeding)</li> <li>• Little tern; <i>Sterna albifrons</i> (Breeding)</li> <li>• Waterbird assemblage</li> </ul> <p>Further information can be found via Natural England’s Supplementary Advice.</p>	<p>Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting processes on which the habitats of the qualifying features rely</li> <li>• The population of each of the qualifying features, and,</li> <li>• The distribution of the qualifying features within the site.</li> </ul>	<p>response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. ‘Managed realignment’ schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.</p> <p><b>Public access /disturbance:</b></p> <p>Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>powerboating, may produce physical disturbance to habitats.</p> <p><b>Planning permission: general</b>            Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.</p> <p><b>Changes in species distributions:</b></p> <p>Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change.</p> <p><b>Invasive species:</b></p> <p>An increase in Pacific oyster <i>Crassostrea gigas</i> settlement and colonisation within the European</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.</p> <p><b>Fishing:</b></p> <p>Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species dependent on the communities they support.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b></p> <p>Atmospheric nitrogen deposition</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.
<p><b>Blackwater Estuary Ramsar site (Mid-Essex Coast Phase 4)</b></p> <p>RIS Code: UK11007</p>	4395.15	<p><b>Ramsar criterion 1</b></p> <p>Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the Mid-Essex Coast complex, includes a total of 3,237 ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.</p> <p><b>Ramsar criterion 2</b></p> <p>The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In</p>	None available.	None available.

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>descending order of rarity these are:</p> <p>Endangered:</p> <ul style="list-style-type: none"> <li>• a water beetle <i>Paracymus aeneus</i></li> <li>• Vulnerable:</li> <li>• Damselfly; <i>Lestes dryas</i>,</li> <li>• Flies; <i>Aedes flavescens</i>, <i>Erioptera bivittata</i>, <i>Hybomitra expollicata</i></li> <li>• Spiders; <i>Heliophanus auratus</i> and <i>Trichopterna cito</i>;</li> </ul> <p>Rare:</p> <ul style="list-style-type: none"> <li>• Beetles; <i>Baris scolopacea</i>, <i>Philonthus punctus</i>, <i>Graptodytes bilineatus</i> and <i>Malachius vulneratus</i>,</li> <li>• Flies; <i>Campsicemus magius</i> and <i>Myopites eximia</i>, the moths <i>Idea ochrata</i> and <i>Malacosoma castrensis</i> and</li> <li>• Spiders; <i>Euophrys</i>.</li> </ul> <p><b>Ramsar criterion 3</b></p>		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>This site supports full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.</p> <p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance; species with peak counts in winter; 105061 waterfowl (5 year peak mean 1998/99-2002/2003)</p> <p><b>Ramsar criterion 6</b></p> <p>Species/populations occurring at levels of international importance:</p> <ul style="list-style-type: none"> <li>• Species with peak counts in winter:</li> <li>• Grey plover; <i>Pluvialis squatarola</i></li> <li>• Dunlin; <i>Calidris alpina alpina</i></li> <li>• Black-tailed godwit; <i>Limosa limosa islandica</i></li> <li>• Species/populations identified subsequent to designation for possible future consideration under criterion 6.</li> </ul>		



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>• Common shelduck; <i>Tadorna tadorna</i></li> <li>• European golden plover; <i>Pluvialis apricaria apricaria</i></li> <li>• Common redshank ; <i>Tringa totanus tetanus</i></li> </ul>		
<p><b>Crouch &amp; Roach Estuaries (Mid-Essex Coast Phase 3)</b></p> <p>The Rivers Crouch and Roach are situated in South Essex. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brick earth and loams with patches of sand and gravel. The intertidal zone along the Rivers Crouch and Roach is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud unlike other estuaries in the county, which, nonetheless, is used by significant numbers of birds. One species is present in internationally important numbers, and three other species of wader and wildfowl occur in nationally important numbers. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants</p>				
<p><b>Crouch &amp; Roach Estuaries SPA (Mid-Essex)</b></p>	<p>1735.58</p>	<p>Qualifying Features:</p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose; <i>Branta bernicla bernicla</i> (Non-breeding)</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining</p>	<p><b>Coastal Squeeze:</b></p> <p>Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Coast Phase 3)</b></p> <p>EU Code: UK9009244</p>		<ul style="list-style-type: none"> <li>Waterbird assemblage</li> </ul> <p>Further information can be found via Natural England’s Supplementary Advice.</p>	<p>or restoring:</p> <ul style="list-style-type: none"> <li>The extent and distribution of the habitats of the qualifying features</li> <li>The structure and function of the habitats of the qualifying features</li> <li>The supporting processes on which the habitats of the qualifying features rely</li> <li>The population of each of the qualifying features, and,</li> <li>The distribution of the qualifying features within the site.</li> </ul>	<p>result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. ‘Managed realignment’ schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.</p> <p><b>Public access /disturbance:</b></p> <p>Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>physical disturbance to habitats.</p> <p><b>Planning permission- general:</b></p> <p>Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.</p> <p><b>Changes in species distributions:</b></p> <p>Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change.</p> <p><b>Invasive species:</b></p> <p>An increase in Pacific oyster <i>Crassostrea gigas</i> settlement and colonisation within the European</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.</p> <p><b>Fishing:</b></p> <p>Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species dependent on the communities they support.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b></p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.</p>
<p><b>Crouch &amp; Roach Estuaries Ramsar site (Mid-Essex Coast Phase 3)</b></p> <p>RIS Code: UK11058</p>	<p>1735.58</p>	<p><b>Ramsar criterion 2</b></p> <p>Supports an appreciable assemblage of rare, vulnerable or endangered species or subspecies of plant and animal including 13 nationally scarce plant species:</p> <ul style="list-style-type: none"> <li>• Slender Hare’s Ear Bupleurum tenuissimum,</li> <li>• Divided Sedge Carex divisa,</li> <li>• Sea Barley Hordeum marinum,</li> <li>• Golden-Samphire Inula</li> </ul>	<p>None available.</p>	<p>None available.</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>crithmoides,</p> <ul style="list-style-type: none"> <li>• Lax Flowered Sea-Lavender Limonium humile,</li> <li>• Curved Hard-Grass Parapholis incurva,</li> <li>• Borrer's Saltmarsh grass Puccinellia fasciculata,</li> <li>• Stiff Saltmarsh Grass Puccinellia rupestris,</li> <li>• Spiral Tasselweed Ruppia cirrhosa,</li> <li>• One-Flowered Glasswort Salicornia pusilla,</li> <li>• Small Cord-Grass Spartina maritima,</li> <li>• Shrubby Seablite Suaeda vera</li> <li>• Sea Clover Trifolium squamosum.</li> </ul> <p>Several important invertebrate species are also present on the site, including</p> <ul style="list-style-type: none"> <li>• Scarce Emerald Damselfly Lestes dryas,</li> </ul>		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<ul style="list-style-type: none"> <li>• Shorefly Parydroptera discomyzina,</li> <li>• Rare Soldier Fly Stratiomys singularior,</li> <li>• Large Horsefly Hybomitra expollicata,</li> <li>• Beetles Graptodytes bilineatus and Malachius vulneratus,</li> <li>• Ground Lackey Moths Malacosoma castrensis and Eucosoma catoprana.</li> </ul> <p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance; species with peak counts in winter; 16970 waterfowl (5 year peak mean 1998/99-2002/2003)</p> <p><b>Ramsar criterion 6</b></p> <p>Species/populations occurring at levels of international importance:</p> <ul style="list-style-type: none"> <li>• Species with peak counts in winter:</li> <li>• Dark-bellied brent goose; Branta bernicla bernicla</li> </ul>		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Dengie</b></p> <p>Dengie is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie peninsula, between the Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It hosts internationally and nationally important wintering populations of wildfowl and waders, and in summer supports a range of breeding coastal birds including rarities. The formation of cockleshell spits and beaches is of geomorphological interest</p>				
<p><b>Dengie SPA (Mid-Essex Coast Phase 1)</b></p> <p>EU Code: UK9009242</p>	<p>3127.23</p>	<p><b>Qualifying features:</b></p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose; <i>Branta bernicla bernicla</i> (Non-breeding)</li> <li>• Grey plover; <i>Pluvialis squatarola</i> (Non-breeding)</li> <li>• Hen harrier; <i>Circus cyaneus</i> (Non-breeding)</li> <li>• Knot; <i>Calidris canutus</i> (Non-breeding)</li> <li>• Waterbird assemblage (Non-breeding)</li> </ul> <p>Further information can be found via Natural England’s Supplementary Advice.</p>	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• the extent and distribution of the habitats of the qualifying features</li> <li>• the structure and function of the habitats of the qualifying features</li> <li>• the supporting processes on which the</li> </ul>	<p><b>Coastal Squeeze:</b></p> <p>Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. ‘Managed realignment’ schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			<p>habitats of the qualifying features rely</p> <ul style="list-style-type: none"> <li>the populations of qualifying features</li> <li>the distribution of qualifying features within the site</li> </ul>	<p>mean high tide level, currently protected behind seawalls.</p> <p><b>Public access /disturbance:</b></p> <p>Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats.</p> <p><b>Planning permission: general</b></p> <p>Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.</p> <p><b>Changes in species distributions:</b></p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change.</p> <p><b>Invasive species:</b></p> <p>An increase in Pacific oyster <i>Crassostrea gigas</i> settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.</p> <p><b>Fishing:</b></p> <p>Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species dependent on the communities they support.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b></p> <p>Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Dengie Ramsar Site (Mid-Essex Coast Phase 1)</b></p> <p>EU Code: UK9009242</p>	<p>3127.23</p>	<p><b>Ramsar criterion 1</b></p> <p>Qualifies by virtue of the extent and diversity of saltmarsh habitat present. Dengie, and the four other sites in the Mid-Essex Coast Ramsar site complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.</p> <p><b>Ramsar criterion 2</b></p> <p>Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants:</p> <ul style="list-style-type: none"> <li>• Sea Kale <i>Crambe maritima</i>,</li> <li>• Sea Barley <i>Hordeum marinum</i>,</li> <li>• Golden Samphire <i>Inula crithmoides</i>,</li> <li>• Lax Flowered Sea Lavender <i>Limonium humile</i>,</li> <li>• Glassworts <i>Sarcocornia perennis</i> and <i>Salicornia pusilla</i>,</li> <li>• Small Cord-Grass <i>Spartina</i></li> </ul>	<p>None available.</p>	<p>None available.</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>maritima,</p> <ul style="list-style-type: none"> <li>• Shrubby Sea-Blite Suaeda vera,</li> <li>• Eelgrasses Zostera angustifolia, Z. marina and Z. noltei.</li> </ul> <p>The invertebrate fauna includes the following Red Data Book species:</p> <ul style="list-style-type: none"> <li>• Weevil Baris scolopacea,</li> <li>• Horsefly Atylotus latistriatus and</li> <li>• Jumping Spider Euophrys browningi.</li> </ul> <p><b>Ramsar criterion 3</b></p> <p>This site supports full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.</p> <p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance; species with peak counts in winter; 43828 waterfowl (5 year peak mean 1998/99-2002/2003)</p> <p><b>Ramsar criterion 6</b></p> <p>Species/populations occurring at</p>		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>levels of international importance:</p> <ul style="list-style-type: none"> <li>• Species with peak counts in winter:</li> <li>• Common redshank; <i>Tringa totanus tetanus</i></li> </ul> <p>Species/populations identified subsequent to designation for possible future consideration under criterion 6.</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose; <i>Branta bernicla bernicla</i></li> <li>• Eurasian oystercatcher; <i>Haematopus ostralegus ostralegus</i></li> <li>• Grey plover; <i>Pluvialis squatarol</i></li> <li>• Bar-tailed godwit; <i>Limosa lapponica lapponica</i></li> <li>• Red knot; <i>Calidris canutus</i></li> </ul>		
<p><b>Essex Estuaries</b></p> <p>The Mid-Essex Coast comprises an extensive complex of estuaries and intertidal sand and silt flats, including several islands, shingle and shell beaches and extensive areas of saltmarsh. The SAC follows the boundaries of five SSSIs: the Colne Estuary, the Blackwater</p>				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Estuary, Dengie, the River Crouch Marshes and Foulness.				
<p><b>Essex Estuaries SAC</b></p> <p>EU Code: UK0013690</p>	46109.95	<p>Qualifying features:</p> <ul style="list-style-type: none"> <li>• Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks</li> <li>• Estuaries</li> <li>• Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats.</li> <li>• Salicornia and other annuals colonizing mud and sand; Glasswort and other annuals colonising mud and sand</li> <li>• Spartina swards (<i>Spartinion maritimae</i>); Cord-grass swards</li> <li>• Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>)</li> <li>• Mediterranean and thermo-Atlantic halophilous scrubs (<i>Sarcocornetea fruticosi</i>)</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats</li> <li>• The structure and function (including typical species) of qualifying natural habitats, and</li> <li>• The supporting processes on which qualifying natural habitats rely</li> </ul>	<p><b>Coastal Squeeze:</b></p> <p>Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. ‘Managed realignment’ schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.</p> <p><b>Public access /disturbance:</b></p> <p>Breeding and overwintering</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats.</p> <p><b>Planning permission: general</b></p> <p>Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.</p> <p><b>Changes in species distributions:</b></p> <p>Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>continental scale, possibly linked to climate change.</p> <p><b>Invasive species:</b></p> <p>An increase in Pacific oyster <i>Crassostrea gigas</i> settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.</p> <p><b>Fishing:</b></p> <p>Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>damaging to inshore marine habitats and the bird species dependent on the communities they support.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b></p> <p>Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.</p>
<p><b>Foulness</b></p> <p>Foulness is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mudflats and sandflats which support nationally rare and nationally scarce plants, and nationally and internationally important populations of breeding, migratory and wintering waterfowl</p>				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Foulness SPA (Mid-Essex Coast Phase 5)</b></p> <p>EU Code: UK9009246</p>	<p>10968.9</p>	<p>Qualifying features:</p> <ul style="list-style-type: none"> <li>• Hen harrier; <i>Circus cyaneus</i> (Non-breeding)</li> <li>• Dark-bellied brent goose; <i>Branta bernicla bernicla</i>(Non-breeding)</li> <li>• Eurasian oystercatcher; <i>Haematopus ostralegus ostralegus</i> (Non-breeding)</li> <li>• Grey plover; <i>Pluvialis squatarol</i> (Non-breeding)</li> <li>• Bar-tailed godwit; <i>Limosa lapponica lapponica</i> (Non-breeding)</li> <li>• Red knot; <i>Calidris canutus</i> (Non-breeding)</li> <li>• Pied avocet; <i>Recurvirostra avosetta</i> (Breeding)</li> <li>• Ringed plover; <i>Charadrius hiaticula</i>; (Breeding)</li> <li>• Common redshank; <i>Tringa totanus</i> (Non-breeding)</li> <li>• Sandwich tern; <i>Sterna</i></li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting processes on which the habitats of the qualifying features rely</li> <li>• The population of each of the qualifying features, and,</li> <li>• The distribution of the qualifying features within the site.</li> </ul>	<p><b>Coastal Squeeze:</b></p> <p>Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. ‘Managed realignment’ schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.</p> <p><b>Public access /disturbance:</b></p> <p>Breeding and overwintering waterbirds are susceptible to human disturbance from a range of</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>sandvicensis (Breeding)</p> <ul style="list-style-type: none"> <li>• Common tern; <i>Sterna hirundo</i> (Breeding)</li> <li>• Little tern; <i>Sterna albifrons</i> (Breeding)</li> <li>• Waterbird assemblage</li> </ul> <p>Further information can be found via Natural England’s Supplementary Advice.</p>		<p>land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats.</p> <p><b>Planning permission: general</b></p> <p>Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.</p> <p><b>Changes in species distributions:</b></p> <p>Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>climate change.</p> <p><b>Invasive species:</b></p> <p>An increase in Pacific oyster <i>Crassostrea gigas</i> settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.</p> <p><b>Fishing:</b></p> <p>Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>habitats and the bird species dependent on the communities they support.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b></p> <p>Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.</p>
<p><b>Foulness Ramsar site (Mid Essex Coast Phase 5)</b></p> <p>RISCode: UK11026</p>	10968.9	<p><b>Ramsar criterion 2</b></p> <p>The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates.</p> <p><b>Ramsar criterion 3</b></p>	None available	None available

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>The site contains extensive saltmarsh habitat, with areas supporting full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.</p> <p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance; species with peak counts in winter; 82148 waterfowl (5 year peak mean 1998/99-2002/2003)</p> <p><b>Ramsar criterion 6</b></p> <p>Species/populations occurring at levels of international importance:</p> <ul style="list-style-type: none"> <li>• Species with peak counts in spring/autumn:</li> <li>• Dark-bellied brent goose; Branta bernicla bernicla</li> <li>• Grey plover; Pluvialis squatarola</li> <li>• Red knot; Calidris canutus</li> <li>• Species with peak counts in winter:</li> <li>• Bar-tailed godwit; Limosa</li> </ul>		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		lapponica lapponica		
<p><b>Outer Thames Estuary</b></p> <p>The Outer Thames Estuary SPA is located on the east coast of England between the counties of Norfolk (on the north side) and Kent (on the south side) and extends into the North Sea. The site comprises areas of shallow and deeper water, high tidal current streams and a range of mobile mud, sand, silt and gravely sediments extending into the marine environment, incorporating areas of sand banks often exposed at low tide. Intertidal mud and sand flats are found further towards the coast and within creeks and inlets inland down the Blyth estuary and the Crouch and Roach estuaries. The diversity of marine habitats and associated species is reflected in existing statutory protected area designations, some of which overlap or about the SPA.</p>				
<p><b>Outer Thames Estuary SPA</b></p> <p>EU Code: UK9020309</p>	392451.66	<p>Qualifying features:</p> <ul style="list-style-type: none"> <li>• Red-throated diver; <i>Gavia stellata</i> (Non-breeding)</li> <li>• Common tern; <i>Sterna hirundo</i> (Breeding)</li> <li>• Little tern; <i>Sternula albifrons</i> (Breeding)</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting</li> </ul>	<p><b>Fisheries- Commercial marine and estuarine:</b></p> <p>Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European Marine Sites (EMS) require assessment and (where appropriate) management. This assessment will be undertaken by the Eastern IFCA and the Kent &amp; Essex IFCA, and the Marine Management Organisation.</p> <p>For activities categorised as ‘green’, these assessments should take account of any in-combination</p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			<p>processes on which the habitats of the qualifying features rely</p> <ul style="list-style-type: none"> <li>• The population of each of the qualifying features, and,</li> <li>• The distribution of the qualifying features within the site</li> </ul>	<p>effects of amber activities, and/or appropriate plans or projects, in the site. The gear types being assessed are towed demersal gear and dredges, and suction dredges for cockles as well as static/passive fishing gear methods such as set gillnets and drift netting represent potentially the most serious direct risk from fishing activity to the birds themselves. Disturbance and displacement effects may arise from boat movements associated with fishing activities. Removal of fish and larger molluscs can have a significant impact on the structure and functioning of benthic communities.</p> <p>Entanglement in static fishing nets is an important cause of death for red-throated divers in the UK waters. Netting is widespread across the sandbanks but is seasonal and occurs primarily when the Red-throated diver population is not at its peak. The scale of by-catch within the site has been assessed by the Kent &amp; Essex</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				IFCA, and was not found to be problematic and so can be deemed to be low-risk.
<p><b>Thames Estuary &amp; Marshes</b></p> <p>A complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates</p>				
<p><b>Thames Estuary &amp; Marshes SPA</b></p> <p>EU Code: UK9012021</p>	<p>4838.94</p>	<p>Qualifying features:</p> <ul style="list-style-type: none"> <li>• Hen harrier; <i>Circus cyaneus</i> (Non-breeding)</li> <li>• Pied avocet; <i>Recurvirostra avosetta</i> (Non-breeding)</li> <li>• Ringed plover; <i>Charadrius hiaticula</i> (Non-breeding)</li> <li>• Grey plover; <i>Pluvialis squatarola</i> (Non-breeding)</li> <li>• Red knot; <i>Calidris canutus</i> (Non-breeding)</li> <li>• Dunlin; <i>Calidris alpina alpina</i> (Non-breeding)</li> <li>• Black-tailed godwit; <i>Limosa limosa islandica</i> (Non-breeding)</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting processes on which the</li> </ul>	<p><b>Coastal squeeze:</b> Coastal defences exist along much of the coastline here. Sea level rise is also occurring. It is therefore certain that if circumstances do not change, much of the supporting habitats of the SPA birds will be lost/degraded through processes such as: coastal squeeze; sedimentation rates' inability to keep pace with sea level rise; and reduced exposure (the extent and duration) of mudflats and sandflats.</p> <p><b>Public Access/Disturbance:</b> Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities,</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<ul style="list-style-type: none"> <li>• Common redshank; <i>Tringa totanus</i> (Non-breeding)</li> <li>• Waterbird assemblage</li> </ul> <p>Further information can be found via Natural England’s Supplementary Advice.</p>	<p>habitats of the qualifying features rely</p> <ul style="list-style-type: none"> <li>• The population of each of the qualifying features, and,</li> <li>• The distribution of the qualifying features within the site.</li> </ul>	<p>including: boating and watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management.</p> <p><b>Invasive species:</b></p>



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur.</p> <p><b>Changes in species distribution:</b>  There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013). These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines</p> <p><b>Fisheries- commercial marine and estuarine:</b>                      The extent and impacts of fisheries on private grounds, particularly in the Swale Estuary, needs to be better understood. There are particular concerns regarding the dredging of shellfish within the SPAs which are a food source for the protected birds. Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European Marine Sites require assessment and (where appropriate) management. This</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>assessment will be undertaken by Kent &amp; Essex IFCA.</p> <p><b>Invasive species:</b>  Freshwater non-native invasive species such as pennywort, crassula, parrots feather etc. can engulf ditches, leading to loss of habitat for diving ducks. Although there are some mechanisms in place to ensure ditch management, more baseline information is needed, particularly on those species for which ditch management is not the solution. <i>Spartina anglica</i> may be increasing at the expense of other saltmarsh habitats with adverse implications for SPA bird roost areas in Benfleet &amp; Southend Marshes.</p> <p><b>Vehicles- Illicit:</b>  The illicit use of motor vehicles (often bikes) occurs across the area. This can cause disturbance to SPA birds. This activity was identified as a medium risk during the 2009 EMS risk review project and is still occurring. Whilst various</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>mechanisms are in place to prevent the use of vehicles they are clearly not entirely effective.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b>  Nitrogen deposition exceeds site-relevant critical loads.</p>
<p><b>Thames Estuary &amp; Marshes Ramsar site</b></p> <p>RIS Code:  UK11069</p>	<p>5588.5</p>	<p><b>Ramsar criterion 2</b></p> <p>The site supports one endangered plant species and at least 14 nationally scarce plants of wetland habitats. The site also supports more than 20 British Red Data Book invertebrates.</p> <p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance; species with peak counts in winter; 45118 waterfowl (5 year peak mean 1998/99-2002/2003).</p> <p><b>Ramsar criterion 6</b></p> <p>Qualifying Species/populations (as identified at designation):</p>	<p>None available</p>	<p>None available</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> <li>• Ringed plover; <i>Charadrius hiaticula</i></li> <li>• Black-tailed godwit; <i>Limosa limosa islandica</i></li> </ul> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>• Grey plover; <i>Pluvialis squatarola</i> (Non-breeding)</li> <li>• Red knot; <i>Calidris canutus</i> (Non-breeding)</li> <li>• Dunlin; <i>Calidris alpina alpina</i> (Non-breeding)</li> <li>• Common redshank; <i>Tringa totanus tetanus</i></li> </ul>		

### Devils Dyke

The Devil's Dyke holds an extensive area of species-rich chalk grassland of a type characteristic to chalklands of south, central and eastern England. The Dyke is an ancient linear earthwork comprising a deep ditch and high bank. It was originally colonised by plants from adjacent grassland (much of which is now arable) and remains as one of the few areas still supporting these vegetation communities. The species-rich grassland is dominated by upright brome *Bromopsis erecta* and a range of typical chalk herbs are present including salad burnet *Sanguisorba minor*, dropwort *Filipendula vulgaris* and rock-rose *Helianthemum nummularium*. Some uncommon plants such as purple milk-vetch *Astragalus danicus*, bastard toadflax *Thesium humifusum* and the pasque flower *Pulsatilla vulgaris* are also present. It is the only known UK semi-natural dry grassland site for lizard orchid *Himantoglossum hircinum*.



Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<p><b>Devils Dyke SAC</b></p> <p>EU Code: UK0030037</p>	<p>8.02</p>	<p><b>Qualifying features:</b></p> <p>H6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia) (important orchid sites). Dry grasslands and scrublands on chalk or limestone, including important orchid sites)</p>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats</li> <li>• The structure and function (including typical species) of qualifying natural habitats, and</li> <li>• The supporting processes on which qualifying natural habitats rely</li> </ul>	<p><b>Inappropriate scrub control:</b> There is some scrub encroachment which is beginning to become damaging on some parts of the site and is likely to cause the notified grassland to deteriorate. Grassland vegetation management is currently managed by hand cutting as grazing cannot be carried out due to equestrian practices which have taken place for centuries. The current HLS agreement does not provide sufficient funding to allow appropriate management of the sward because of the steepness of the site.</p> <p><b>Air Pollution- impact of atmospheric nitrogen deposition:</b> Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site. This requires further investigation.</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
<h2>Medway Estuary and Marshes</h2>				
<p>Located in north Kent, the Medway Estuary and Marshes SPA covers an area of 46.84 km<sup>2</sup>, including both marine and terrestrial areas. The river Medway forms a single tidal system with the river Swale, joining the Thames Estuary between the Isle of Grain and Sheerness. There is a diverse mix of intertidal habitats, including saltmarshes, mudflats, shell beaches and eelgrass beds. These habitats support a diverse range of water birds throughout the year, including breeding waders and terns in the summer and important numbers of geese, ducks, grebes and waders in winter.</p>				
<p><b>Medway Estuary and Marshes SPA</b></p> <p>EU Code: UK9012031</p>	<p>4,748.8</p>	<p><b>Qualifying features:</b></p> <ul style="list-style-type: none"> <li>• A046a Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding)</li> <li>• A048 Tadorna tadorna; Common shelduck (Non-breeding)</li> <li>• A054 Anas acuta; Northern pintail (Non-breeding)</li> <li>• A132 Recurvirostra avosetta; Pied avocet (Breeding)</li> <li>• A132 Recurvirostra avosetta; Pied avocet (Non-breeding)</li> <li>• A137 Charadrius hiaticula; Ringed plover (Non-breeding)</li> <li>• A141 Pluvialis squatarola; Grey</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting processes on which the habitats of the qualifying</li> </ul>	<p><b>Coastal squeeze:</b> Coastal defences exist along much of the coastline here. Sea level rise is also occurring. It is therefore certain that if circumstances do not change, much of the supporting habitats of the SPA birds will be lost/degraded through processes such as: coastal squeeze; sedimentation rates' inability to keep pace with sea level rise; and reduced exposure (the extent and duration) of mudflats and sandflats.</p> <p><b>Public Access/Disturbance:</b> Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and watersports; walking; bait-digging; fishing, and</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		<p>plover (Non-breeding)</p> <ul style="list-style-type: none"> <li>• A143 Calidris canutus; Red knot (Non-breeding)</li> <li>• A149 Calidris alpina alpina; Dunlin (Non-breeding)</li> <li>• A162 Tringa totanus; Common redshank (Non-breeding)</li> <li>• A195 Sterna albifrons; Little tern (Breeding)</li> <li>• Waterbird assemblage</li> <li>• Breeding bird assemblage</li> </ul>	<p>features rely</p> <ul style="list-style-type: none"> <li>• The population of each of the qualifying features, and,</li> <li>• The distribution of the qualifying features within the site.</li> </ul>	<p>wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management.</p> <p><b>Invasive species:</b> Non-native invasive species such as sea squirt and pacific oyster are</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur.</p> <p><b>Changes in species distribution:</b>  There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013). These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>outside the UK. A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines</p> <p><b>Fisheries- commercial marine and estuarine:</b>  The extent and impacts of fisheries on private grounds, particularly in the Swale Estuary, needs to be better understood. There are particular concerns regarding the dredging of shellfish within the SPAs which are a food source for the protected birds. Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent &amp; Essex IFCA.</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p><b>Invasive species:</b>  Freshwater non-native invasive species such as pennywort, crassula, parrots feather etc. can engulf ditches, leading to loss of habitat for diving ducks. Although there are some mechanisms in place to ensure ditch management, more baseline information is needed, particularly on those species for which ditch management is not the solution. <i>Spartina anglica</i> may be increasing at the expense of other saltmarsh habitats with adverse implications for SPA bird roost areas in Benfleet &amp; Southend Marshes.</p> <p><b>Vehicles- Illicit:</b>  The illicit use of motor vehicles (often bikes) occurs across the area. This can cause disturbance to SPA birds. This activity was identified as a medium risk during the 2009 EMS risk review project and is still occurring. Whilst various mechanisms are in place to prevent the use of vehicles they are clearly</p>

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				<p>not entirely effective.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b> Nitrogen deposition exceeds site-relevant critical loads.</p>
<p><b>North Downs Woodlands</b></p> <p>This site consists of mature beech <i>Fagus sylvatica</i> forests and yew <i>Taxus baccata</i> woods on steep slopes. The stands lie within a mosaic of scrub, other woodland types and areas of unimproved grassland on thin chalk soils. The beech and yew woodland is on thin chalk soils and where the ground flora is not shaded dog's mercury <i>Mercurialis perennis</i> predominates. Associated with it is stinking iris <i>Iris foetidissima</i> and several very scarce species such as lady orchid <i>Orchis purpurea</i> and stinking hellebore <i>Helleborus foetidus</i>. The chalk grassland, on warm south-facing slopes, is dominated by upright brome <i>Bromopsis erecta</i> and sheep's-fescue <i>Festuca ovina</i> but supports many other plants which are characteristic of unimproved downland, including the nationally rare ground pine <i>Ajuga chamaepitys</i>.</p>				
<p><b>North Downs Woodland SAC</b></p> <p>EU Code: UK0030225</p>	<p>287.58</p>	<p><b>Qualifying features:</b></p> <ul style="list-style-type: none"> <li>• H6210. Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>); Dry grasslands and scrublands on chalk or limestone</li> <li>• H9130. <i>Asperulo-Fagetum</i> beech forests; Beech forests on neutral to rich soils</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the qualifying natural</li> </ul>	<p><b>Public Access and Disturbance:</b> Off-road vehicles as well as all-terrain bikes are having an impact on parts of the woodland. Vehicle damage is associated with vehicles coming off the Public Rights of Way (PRoW) into the woodland. All-terrain bikes favour Yew woodland where there is no understorey and the creation of tracks by bikes is eroding soil around the roots of</p>

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		<ul style="list-style-type: none"> <li>H91J0. Taxus baccata woods of the British Isles; Yew-dominated woodland*</li> </ul>	<p>habitats</p> <ul style="list-style-type: none"> <li>The structure and function (including typical species) of the qualifying natural habitats, and,</li> <li>The supporting processes on which the qualifying natural habitats rely</li> </ul>	<p>Yews.</p> <p><b>Forestry and woodland management:</b> Beech regeneration is insufficient to retain canopy cover in the long term. In addition, Beech saplings are susceptible to squirrel damage.</p> <p><b>Invasive species:</b> Invasive Sycamore has the potential to regenerate in woodland gaps reducing overall extent of SAC feature. This is more of an issue in Beech stands than in Yew woodland where Yew tends to eventually succeed in dominating the canopy.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b> Nitrogen deposition exceeds site relevant critical loads.</p>

**Peter's Pit**

Peter's Pit is an old chalk quarry with adjoining soil-stripped fields on the North Downs, with scattered ponds situated amongst grassland, scrub and woodland. The ponds have widely fluctuating water levels and support large breeding populations of great crested newt Triturus cristatus. The site has an undulating terrain in which many rain fed ponds, of various sizes, have developed. Those which dry up early in the season are of less interest, but five ponds are sufficiently large to support very substantial populations of amphibians,



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<p>particularly the great crested newt. The value of the site for newts is enhanced by the presence, around the edges and between the ponds, of areas of scrub with loose rock which serve as day and winter refuges. Aquatic vegetation provides shelter in the pond environment.</p>				
<p><b>Peters Pit SAC</b>  EU: UK0030237</p>	<p>28.30</p>	<p><b>Qualifying features:</b>  Great crested newt Triturus cristatus</p>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of qualifying species</li> <li>• The structure and function of the habitats of qualifying species</li> <li>• The supporting processes on which the habitats of qualifying species rely</li> <li>• The populations of qualifying species, and,</li> <li>• The distribution of</li> </ul>	<p>No current issues affecting the Natura 2000 feature(s) have been identified on this site.</p>

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qualifying species within the site.				
<p><b>Queendown Warren</b></p> <p>The grassland of this site is on the south-facing slope of a dry chalk valley. It is largely dominated by upright brome <i>Bromopsis erecta</i> and sheep's-fescue <i>Festuca ovina</i> with numerous plants characteristic of grazed but otherwise undisturbed chalk grassland. Among the more interesting species are chalk milkwort <i>Polygala calcarea</i>, squinancywort <i>Asperula cynanchica</i>, horseshoe vetch <i>Hippocrepis comosa</i> and the nationally rare meadow clary <i>Salvia pratensis</i>. The site contains an important assemblage of rare and scarce orchids, including early spider-orchid <i>Ophrys sphegodes</i>, burnt orchid <i>Orchis ustulata</i> and man orchid <i>Aceras anthropophorum</i>. It is rich entomologically and two characteristic species, the adonis blue butterfly <i>Lysandra bellargus</i> and the rufous grasshopper <i>Gomphocerippus rufus</i> occur here.</p>				
<p><b>Queendown Warren SAC</b></p> <p>EU Code: UK0012833</p>	<p>14.28</p>	<p><b>Qualifying features:</b></p> <p>Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>) (important orchid sites). (Dry grasslands and scrublands on chalk or limestone, including important orchid sites)</p>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats</li> <li>• The structure and function (including typical species) of qualifying natural</li> </ul>	<p><b>Species decline:</b></p> <p>Numbers of Early Spider-orchid have declined from 10 years ago. Trials are underway to assess the impact of rabbit grazing on the orchid population. There is also a concern with potential effects of air pollution, climate change, lack of genetic diversity or lack of pollinating insects.</p> <p><b>Habitat fragmentation:</b></p> <p>The small size and relative isolation of the site raises concern for the long-term genetic viability of some</p>

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			habitats, and <ul style="list-style-type: none"> <li>The supporting processes on which qualifying natural habitats rely</li> </ul>	of the orchid populations.  <b>Air Pollution- risk of atmospheric nitrogen deposition:</b> Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects, but the sensitive features are currently considered to be in favourable condition on the site. This requires further investigation.
<p><b>The Swale SPA and Ramsar</b></p> <p>A complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. Rare wetland birds breed in important numbers. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates.</p>				
<p><b>The Swale SPA</b></p> <p>EU Code: UK9012011</p>	<p>6515</p>	<p><b>Qualifying features:</b></p> <ul style="list-style-type: none"> <li>A046a Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding)</li> <li>A149 Calidris alpina alpina;</li> </ul>	<p>Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining</p>	<p><b>Coastal squeeze:</b></p> <p>Coastal defences exist along much of the coastline here. Sea level rise is also occurring. It is therefore certain that if circumstances do not change, much of the supporting</p>

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		<p>Dunlin (Non-breeding)</p> <ul style="list-style-type: none"> <li>• Breeding bird assemblage</li> <li>• Waterbird assemblage</li> </ul>	<p>or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting processes on which the habitats of the qualifying features rely</li> <li>• The population of each of the qualifying features, and,</li> <li>• The distribution of the qualifying features within the site.</li> </ul>	<p>habitats of the SPA birds will be lost/degraded through processes such as: coastal squeeze; sedimentation rates' inability to keep pace with sea level rise; and reduced exposure (the extent and duration) of mudflats and sandflats.</p> <p><b>Public Access/Disturbance:</b>                      Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially</p>

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				<p>disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management.</p> <p><b>Invasive species:</b>  Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first</p>

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				<p>occur.</p> <p>Changes in species distribution:  There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013). These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines</p> <p><b>Fisheries- commercial marine and estuarine:</b>  The extent and impacts of fisheries on private grounds, particularly in</p>

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				<p>the Swale Estuary, needs to be better understood. There are particular concerns regarding the dredging of shellfish within the SPAs which are a food source for the protected birds. Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent &amp; Essex IFCA.</p> <p><b>Invasive species:</b>  Freshwater non-native invasive species such as pennywort, crassula, parrots feather etc. can engulf ditches, leading to loss of habitat for diving ducks. Although there are some mechanisms in place to ensure ditch management, more baseline information is needed, particularly on those species for which ditch management is not the solution. Spartina anglica may be increasing at the expense of other saltmarsh</p>

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				<p>habitats with adverse implications for SPA bird roost areas in Benfleet &amp; Southend Marshes.</p> <p><b>Vehicles- Illicit:</b> The illicit use of motor vehicles (often bikes) occurs across the area. This can cause disturbance to SPA birds. This activity was identified as a medium risk during the 2009 EMS risk review project and is still occurring. Whilst various mechanisms are in place to prevent the use of vehicles they are clearly not entirely effective.</p> <p><b>Air Pollution- risk of atmospheric nitrogen deposition:</b> Nitrogen deposition exceeds site-relevant critical loads.</p>
<p><b>The Swale Ramsar</b></p>	<p>6515</p>	<p><b>Qualifying features:</b> <b>Ramsar criterion 2</b></p> <p>The site supports a number of species of rare plants and animals. The site holds several nationally scarce plants, including sea barley <i>Hordeum marinum</i>, curved hard-grass</p>	<p>None available.</p>	<p>On-site erosion has been identified as a factor affecting the sites integrity.</p>



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		<p>Parapholis incurva, annual beard-grass Polypogon monspeliensis, Borrer's saltmarsh-grass Puccinellia fasciculata, slender hare`s-ear Bupleurum tenuissimum, sea clover Trifolium squamosum, saltmarsh goose-foot Chenopodium chenopodioides, golden samphire Inula crithmoides, perennial glasswort Sarcocornia perennis and one-flowered glasswort Salicornia pusilla.</p> <p>A total of at least twelve species of wetland invertebrates have been recorded on the site. These include a ground beetle Polistichus connexus, a fly Cephalops perspicuus, a dancefly Poecilobothrus ducalis, a fly Anagnota collini, a weevil Baris scolopacea, a water beetle Berosus spinosus, a beetle Malachius vulneratus, a rove beetle Philonthus punctus, the ground lackey moth Malacosoma castrensis, a horsefly Atylotus latistriatus, a fly Campsicnemus magius, a soldier beetle, Cantharis fusca, and a crane fly Limonia danica. A significant number of non-wetland British Red Data Book species also occur.</p>		

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		<p><b>Ramsar criterion 5</b></p> <p>Assemblages of international importance:</p> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>• 47637 waterfowl (5 year peak mean 1998/99-2002/2003)</li> </ul> <p><b>Ramsar criterion 6</b></p> <p>Qualifying Species/populations (as identified at designation):</p> <p>Species with peak counts in spring/autumn:</p> <ul style="list-style-type: none"> <li>• Grey plover, <i>Pluvialis squatarola</i>,</li> <li>• Common redshank, <i>Tringa totanus totanus</i>,</li> </ul> <p>Species with peak counts in winter:</p> <ul style="list-style-type: none"> <li>• Dark-bellied brent goose, <i>Branta bernicla bernicla</i>,</li> <li>• Common shelduck, <i>Tadorna tadorna</i></li> <li>• Northern pintail, <i>Anas acuta</i></li> </ul>		

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		<ul style="list-style-type: none"> <li>• Ringed plover, <i>Charadrius hiaticula</i>,</li> <li>• Red knot, <i>Calidris canutus islandica</i>,</li> <li>• Dunlin, <i>Calidris alpina alpina</i>,</li> </ul>		



## **Place Services**

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**Essex County Council**