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HRA of Tendring District Local Plan Section 2

Prepared by LUC
June 2021

Project Title: HRA of Tendring District Local Plan Section 2

Client: Tendring District Council

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1 Introduction

1.1 LUC was originally commissioned in October 2016 by Tendring District Council ('the Council') to carry out a Habitats Regulations Assessment (HRA) of Section 2 of the Tendring District Preferred Options Local Plan.

1.2 The Tendring Local Plan includes both the Strategic Section 1 for Local Plans and the Section 2 Local Plan. Section 1 sets out the strategic vision for growth across the North Essex Authorities of Braintree District Council, Colchester Borough Council, and Tendring District Council. Section 2 sets out the Local Plan specific to Tendring only. This HRA assesses only the Section 2 Local Plan, albeit with consideration of in-combination effects with other plans and projects, including the Strategic Section 1. The HRA of the Strategic Section 1 for Local Plans is assessed and reported separately.

1.3 LUC previously undertook the HRA of the '*Tendring District Draft Local Plan Part 2*', following which many of the recommendations made in the HRA were incorporated into the Plan. Since then, Tendring District Council has submitted its Local Plan Publication Draft.

1.4 The purpose of the HRA of the Local Plan screening stage was to determine whether the Tendring Local Plan Section 2 (the submitted Local Plan[1]) could result in likely significant effects on any designated European biodiversity site, either alone or in-combination with other plans and projects. Those aspects of the Local Plan Section 2, for which likely significant effects could not be ruled out, were assessed at the Appropriate Assessment stage to identify whether, in light of avoidance and mitigation measures, the plan will result in adverse effects on the integrity of the European Sites, in accordance with the requirements of the Habitat Regulations. Where necessary, additional safeguards or modifications to the plan were recommended.

1.5 This final version of the HRA assesses the Section 2 Local Plan following confirmation of the proposed main modifications to the Plan.

The requirement to undertake Habitats Regulations Assessment of Development Plans

1.6 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007[2]; the currently applicable version is the Habitats Regulations 2017, as amended[3]. When preparing the development plans, Tendring District Council is therefore required by law to carry out an HRA. Tendring District Council can commission consultants to undertake HRA work on its behalf and this (the work documented in this report) is then reported to and considered by Tendring District Council as the 'competent authority'. Tendring District Council will consider this work and would usually[4] only progress a Plan if it considers that the Plan will not adversely affect the integrity[5] of any 'European site', as defined below. The requirement for authorities to comply with the Habitats

[1] Under Regulation 19 of The Town and Country Planning (Local Planning) (England) Regulations 2012

2 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (2007) SI No. 2007/1843. TSO (The Stationery Office), London.

[3] The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).

[4] The exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated; see paragraph **Error! Reference source not found.**.

[5] The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated. (Source: UK Government Planning Practice Guidance)

Regulations when preparing a Plan is also noted in the Government's online Planning Practice Guidance6 (PPG).

1.7 HRA refers to the assessment of the potential effects of a development plan on one or more sites afforded the highest level of protection in the UK: SPAs and SACs. These were classified under European Union (EU) legislation but, since 1 January 2021, are protected in the UK by the Habitats Regulations 2017[2] (as amended). Although the EU Directives from which the UK's Habitats Regulations originally derived are no longer binding, the Regulations still make reference to the lists of habitats and species that the sites were designated for, which are listed in annexes to the EU Directives:

- SACs are designated for particular habitat types (specified in Annex 1 of the EU Habitats Directive[7]) and species (Annex II).
- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive[8]), and for regularly occurring migratory species not listed in Annex I.

1.8 The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites[9] and Ramsar sites (international designated under the Ramsar Convention). However, a Government Policy Paper[10] on changes to the Habitats Regulations 2017 post-Brexit states that:

- Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new 'national site network'.
- The national site network includes existing SACs and SPAs; and new SACs and SPAs designated under these Regulations.
- Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the national site network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats.

1.9 Although Ramsar sites do not form part of the new national site network, the Government Policy Paper[11] confirms that all Ramsar sites remain protected in the same way as SACs and SPAs. In LUC's view and unless the Government provides any guidance to the contrary, potential effects on Ramsar sites should continue to form part of the HRA of plans and projects since the requirement for HRA of plans and projects that might adversely affect Ramsar sites forms an essential part of the protection confirmed by the Government Policy Paper. Furthermore, the NPPF[12] and practice guidance[13] currently still state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs.

1.10 The requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves; therefore, for clarity, this report uses the term 'European sites' rather than 'national site network'.

1.11 The overall purpose of the HRA is to conclude whether or not a proposal or policy, or whole development plan would adversely affect the integrity of the site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly,

[6] https://www.gov.uk/guidance/appropriate-assessment

[7] Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive')

[8] Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive')

[9] The network of protected areas identified by the EU: https://ec.europa.eu/environment/nature/natura2000/index_en.htm

[10] https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017

[11] https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017

[12] NPPF para 176, available from https://www.gov.uk/guidance/national-planning-policy-framework

[13] The HRA Handbook, Section A3. David Tyldesley & Associates, a subscription based online guidance document: https://www.dtapublications.co.uk/handbook/European

HRA is based on the precautionary principle. Where uncertainty or doubt remains, an adverse effect should be assumed.

Background to the Local Plan

1.12 Tendring District adopted a Local Plan in 2007, which will continue to be used to inform planning applications until a new plan is adopted. A new Local Plan is required, due to changes to the National Planning Policy, which have rendered the Adopted Local Plan 2007 to be out of date and not in accordance with national policy.

Stages of the Habitats Regulations Assessment

1.13 **Table 1.1** below summarises the stages involved in carrying out HRA, based on various guidance documents[14,15,16].

Table 1.1: Stages of HRA Report

Stage	Task	Outcome
Stage 1: Screening (the 'Significance Test')	Description of the development plan and confirmation that it is not directly connected with or necessary to the management of European sites. Identification of potentially affected European sites and their conservation objectives[17]. Review of other plans and projects. Assessment of likely significant effects of the development plan alone or in combination with other plans and projects, prior to consideration of avoidance or reduction ('mitigation') measures[18].	Where effects are unlikely, prepare a 'finding of no significant effect report'. Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.
Stage 2: Appropriate Assessment (the 'Integrity Test')	Information gathering (development plan and data on European sites[19]). Impact prediction. Evaluation of development plan impacts in view of conservation objectives of European sites. Where impacts are considered to directly or indirectly affect	Appropriate assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how these effects will be avoided through, firstly, avoidance, and secondly, mitigation including the mechanisms and

[14] Assessment of plans and projects significantly affecting European Sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission Environment DG, November 2001.

[15] Planning for the Protection of European Sites. Guidance for Regional Spatial Strategies and Local Development Documents. Department for Communities and Local Government (DCLG), August 2006.

[16] The Appropriate Assessment of Spatial Plans in England. A guide to why, when and how to do it. RSPB. August 2007.

[17] Conservation objectives are published by Natural England for SACs and SPAs:

[18] In line with the CJEU judgment in Case C-323/17 People Over Wind v Coillte Teoranta, mitigation must only be taken into consideration at this stage and not during Stage 1: HRA Screening.

[19] In addition to SAC and SPA citations and conservation objectives, key information sources for understanding factors contributing to the integrity of the sites include (where available) conservation objectives supplementary advice and Site Improvement Plans prepared by Natural England: http://publications.naturalengland.org.uk/category/5458594975711232

Stage	Task	Outcome
	qualifying features of European sites, identify how these effects will be avoided or reduced ('mitigation').	timescale for these mitigation measures. If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.
Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation	Identify and demonstrate 'imperative reasons of overriding public interest' (IROPI). Demonstrate no alternatives exist. Identify potential compensatory measures.	This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

1.14 In assessing the effects of the Tendring District Local Plan Section 2 in accordance with Regulation 105 of the Habitats Regulations (as amended), there are potentially two tests to be applied by the competent authority: a 'Significance Test', followed, if necessary, by an Appropriate Assessment which will inform the 'Integrity Test'. The relevant sequence of questions is as follows:

- Step 1: Under Reg. 105(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not –
- Step 2: Under Reg. 105(1)(a) consider whether the plan is likely to have a significant effect on the site, either alone or in combination with other plans or projects (the 'Significance Test'). [These two steps are undertaken as part of Stage 1: Screening shown in Table 1.1 above.] If Yes –
- Step 3: Under Reg. 105(1), make an Appropriate Assessment of the implications for the site in view of its current conservation objectives (the 'Integrity Test'). In so doing, it is mandatory under Reg. 105(2) to consult Natural England, and optional under Reg. 105(3) to take the opinion of the general public. [This step is undertaken during Stage 2: Appropriate Assessment shown in Table 1.1.]
- Step 4: In accordance with Reg.105(4), but subject to Reg.107, give effect to the land use plan only after having ascertained that the plan will not adversely affect the integrity of the European site.

1.15 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the avoidance of likely significant effects at Stage 1, and through Appropriate Assessment at Stage 2 by the inclusion of mitigation measures designed to avoid, reduce or abate effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called 'imperative reasons of overriding public interest' (IROPI) are likely to be justified only very occasionally and would involve engagement with the Government.

1.16 The HRA should be undertaken by the 'competent authority' - in this case Tendring District Council, and LUC has been commissioned to do this on its behalf. The HRA also requires close working with Natural England as the statutory nature conservation body in order to obtain the necessary information and agree the process, outcomes and any mitigation proposals.

HRA work carried out previously

1.17 HRA of the Tendring Replacement Local Plan was undertaken in 2006. This work concluded that there was potential for likely significant effects to occur as a result of the implementation of the

plan due to the Districts proximity to European sites and levels of development. However, following the incorporation of preventative measure no significant adverse effects on the integrity of the European sites were concluded.

1.18 In addition to this, HRA of the District's Draft Core Strategy and Development Policies within the Proposed Submission Document was carried out and subject to consultation in 2010. The HRA concluded no likely significant effects to occur as a result of the implementation of the Core Strategy and Development Policies Plan.

Relevant Case Law Changes

1.19 This HRA has been prepared in accordance with recent case law findings, including most notably the recent 'People over Wind' and 'Holohan' rulings from the Court of Justice for the European Union (CJEU).

1.20 The recent 'People over Wind, Peter Sweetman v Coillte Teoranta' judgment ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures should be assessed as part of an Appropriate Assessment, and should not be taken into account at the screening stage. The precise wording of the ruling is as follows:

"Article 6(3) ……must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site."

1.21 In light of the above, the HRA screening stage for the Local Plan has not relied upon avoidance or mitigation measures to draw conclusions as to whether the Local Plan would result in likely significant effects on European sites, with any such measures being considered at the Appropriate Assessment stage as appropriate. This is discussed in more detail in **Section 3** below.

1.22 This HRA also fully considers the recent Holohan v An Bord Pleanala (9 Nov 2018) CJEU judgement which stated that:

"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 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.

Article 6(3) of Directive 92/43 must be interpreted as meaning that 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.

Article 6(3) of Directive 92/43 must be interpreted as meaning that, 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."

1.23 In undertaking this HRA, LUC has fully considered the potential for effects on species and habitats, including those not listed as qualifying features, to result in secondary effects upon the qualifying features of European sites, including the potential for complex interactions and

dependencies. In addition, the potential for offsite impacts, such as through impacts to functionally linked land, and or species and habitats located beyond the boundaries of European site, but which may be important in supporting the ecological processes of the qualifying features, has also been fully considered in this HRA.

1.24 In addition to this, the HRA takes into consideration the *'Wealden'* judgement and the *'Dutch Nitrogen Case'* judgement from the Court of Justice for the European Union.

1.25 *Wealden District Council v Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority* (2017) ruled that it was not appropriate to scope out the need for a detailed assessment for an individual plan or project based on AADT figures detailed in the Design Manual for Roads and Bridges or the critical loads used by DEFRA or Environmental Agency without considering the in-combination impacts with other plans and projects.

1.26 In light of this judgement, the HRA therefore considers traffic growth based on the effects of development provided for by the Plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

1.27 The *'Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu (Dutch Nitrogen)' judgement stated that "May the positive effects of the autonomous decrease in the nitrogen deposition … be taken into account in the appropriate assessment…, it is important that the autonomous decrease in the nitrogen deposition be monitored and, if it transpires that the decrease is less favourable than had been assumed in the appropriate assessment, that adjustments, if required, be made".*

1.28 The judgement states that according to previous case law *"…it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm to the integrity of the site concerned, by guaranteeing beyond all reasonable doubt that the plan or project at issue will not adversely affect the integrity of that site, that such a measure may be taken into consideration in the 'appropriate assessment' within the meaning of Article 6(3) of the Habitats Directive".*

1.29 The HRA therefore only considers the existence of conservation and/or preventative measures if the expected benefits of those measures are certain at the time of the assessment. The HRA will also ensure that if a threshold approach is applied it will consider the risk of significant effects being produced even if below the threshold values to ensure that there is no adverse effect on integrity of the European sites.

Main Modifications Considered in this HRA

1.30 The Main Modifications, agreed post-examination, and which are of key relevance to this updated HRA report are summarised below:

- MM8.3, Policy HP5: Open Space, Sports and Recreational Facilities – Updated to include the following wording; '*Where residential developments have the potential to give rise to adverse impacts on internationally important habitat sites (Ramsar, SPA and SAC) through increased recreational disturbance, the Council may require, as part of any mitigation programme, the provision of larger areas of high quality natural and semi-natural open space to absorb day-to-day recreational activities such as routine dog walking to reduce the frequency of visits made to nearby designated sites. In order to serve this function, such an open space must be of a suitable size and include circular walks of sufficient length for daily dog walking, dogs-off-lead areas and waste bins*'.

- MM26.1, Policy PP10: Camping and Touring Caravan Sites and MM27.4, Policy PP11: Holiday Parks – Both updated to include the following wording; '*Applications will only be permitted*

where they are in accordance with the Biodiversity Policy PPL4 in this Local Plan. Prior to submission of proposals for new or extended sites in the vicinity of designated sites (which should be taken to mean holiday parks within 2km of such sites), applicants should seek the advice of Natural England, as to the likely requirements for Appropriate Assessment and the tests of the Habitats Regulations'.

- MM33.1, Paragraph 7.4.3: Updated to read as follows; '*It is necessary to apply the 'precautionary principle' to new development, as a matter of law, and assess new projects or plans for any impacts upon any of the above sites – both alone and in combination. Proposals and plans with the potential to have a significant impact upon such sites will need to be supported by a Habitats Regulation Assessment (HRA) to provide the information necessary for the decision makers to establish the likelihood and nature of impacts before a decision is taken. If significant impacts are identified, an 'Appropriate Assessment' may be necessary to assess whether the proposals would adversely affect the integrity of a site, having regard to its conversation objectives. The Council will only grant planning permission where there would be no adverse effects on biodiversity (including any mitigation), unless there is consider to be an overriding public interest (such as the port expansion at Bathside Bay, Harwich) – in which case a compensatory habitat must be provided. The Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) Strategy Document was adopted in 2019. The Essex Coast RAMS aims to deliver the mitigation necessary to avoid adverse effects on integrity from the in-combination impacts of residential development in Essex. The Essex Coast RAMS identifies a detailed programme of strategic avoidance and mitigation measures which are to be funded by developer contributions from all residential development within the Zones of Influence*'.

- MM33.2, Policy PPL4: Biodiversity and Geodiversity: Updated to include the following wording; '*Sites designated for their international, European and national importance to nature conservation: including Ramsar sites; Special Protection Areas (SPAs); Special Areas of Conservation (SACs); Marine Conservation Zones (MCZs); Natural Nature Reserves (NNRs); and Sites of Special Scientific Interest (SSSIs) will be protected from development likely to have an adverse effect on their integrity.*

  Where proposals for development are likely to significant impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts. An Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) has been completed in compliance with the habitats Directive and Habitats Regulations. Contributions will be secured from residential development, within the Zones of Influence, towards mitigation measures identified in RAMS'.

Structure of this report

1.31 This chapter (**Chapter 1**) has described the background to the preparation of the Tendring District Local Plan Section 2 and the requirement to undertake HRA. The remainder of the report is structured as follows:

- **Chapter 2** summarises the main components of the Tendring District Local Plan Section 2.
- **Chapter 3** describes the method used for the HRA Screening.
- **Chapter 4** provides the findings of the HRA Screening.
- **Chapter 5** sets out the HRA Screening conclusions and recommended next steps.

- **Chapter 6** provides the findings of the Appropriate Assessment stage, and where necessary, sets out the modifications and mitigation measures required to ensure no adverse effect on integrity.

1.32 The main report is accompanied by a series of appendices:

- **Appendix 1** sets out the qualifying features and key threats and vulnerabilities of the European sites.
- **Appendix 2** provides the Screening Assessment matrix.
- **Appendix 3** describes other plans and projects that were reviewed for their potential for in-combination effects with the Tendring District Local Plan Section 2.
- **Appendix 4** includes relevant figures to provide context to the conclusions reached.

2 Tendring District Local Plan Section 2

2.1 The Tendring District Local Plan is split into two parts with Section 1 comprising a shared Strategic Local Plan for Tendring, Braintree and Colchester, and Section 2 comprising policies relating to Tendring District alone. This assessment provides the HRA of the Tendring District Local Plan Section 2 only, although the potential for in-combination effects with the Strategic Section 1 Local Plan has also been assessed.

2.2 Section 2 of the Local Plan is divided into 11 sections:

- Section 1: Introduction.
- Section 2: Vision and Objectives.
- Section 3: Sustainable Places.
- Section 4: Healthy Places.
- Section 5: Living Places.
- Section 6: Prosperous Places.
- Section 7: Protected Places.
- Section 8: Connected Places.
- Section 9: Delivering Places.
- Section 10: Delivering Infrastructure.
- Section 11: Monitoring and Review.
- Section 12: Policies Maps.

2.3 Sections 1 and 2 provide introductory, contextual information, visions and objectives for the Local Plan, whilst Sections 11-121 contain no policies. These policies will not therefore result in likely significant effects and have not been considered further.

Content of the Tendring District Local Plan Section 2

Section 3: Sustainable Places

2.4 This section of the report identifies strategic objectives for sustainability. These objectives focus on managing growth, settlement development boundaries and sustainable design to ensure everyday needs of people are satisfied locally or in areas where minimal travel is required and where modes of transport are available.

Section 4: Healthy Places

2.5 Section 4 comprises 4 policies, which focus on providing facilities for growing communities that will improve health, wellbeing and quality of life through provision of community facilities, green infrastructure, open space, sports and recreational facilities.

Section 5: Living Places

2.6 Section 5 of the Local plan sets out strategic objectives for housing delivery. It comprises 11 policies, which make provision for new development and guidance with respect to housing type, design and layout. Table LP 2: Local Housing Plan Allocations, identifies the locations and numbers of housing as follows:

- Non-allocated Sites of 10 or more hones with planning permission (4,932)
- Sites of 9 or less homes/windfall (1,260)
- Hartley Gardens, Clacton (1,700 dwellings)
- Oakwood Park, Clacton (900)
- Rouses Farm, Clacton (950)
- Former Tendring 100 Waterworks Site, Clacton (90)
- Land west of Low Road, Dovercourt (300)
- Land at Weeley Council Offices (24)
- Tendring Colchester Borders Garden Community (3,500 – 4,500)
- Land south of Council Offices, Weeley (280)
- Land adjoining Harwich and Parkeston Football Club, Dovercourt (48)
- Station Yard/Avon Works, Walton (40)
- Land at the Farm Kirby Road (47)

Section 6: Prosperous Places

2.7 Section 6 of the Local Plan sets out strategic objectives for employment delivery. This section comprises 14 policies, which protect existing, and make provision for the following employments sites.

2.8 Policy PP 7: Employment Allocations, identifies a total of 32ha of new employment in use classes B2 (general industry), at the following locations:

- Extension to Gorse Lane Industrial Estate, Telford Road, Clacton (6.8ha)
- Land at Stanton Europark, Parkeston (3.3ha)
- Land at Harwich Valley, East of Pond Hall Farm, Dovercourt (6.3ha)
- Land off Clacton Road/Dead Lane, Mistley (2ha)
- Crown Business Centre, Old Ipswich Road, Ardleigh/Colchester (2.3ha)
- Land south west of Horsley Cross (11.2ha)

Section 7: Protected Places

2.9 This section includes 15 policies relating to the protection of natural environments, including overarching policy PPL 4: Biodiversity and Geodiversity, and those relating to coastal protection, water conservation, drainage and sewerage and strategic green gaps.

2.10 The remainder of the policies in this section address the historic environment, development in conservation areas, renewable energy and safeguarding of Ardleigh reservoir, a civil technical site, and a hazardous operations site.

Section 8: Connected Places

2.11 This section promotes sustainable transport. It comprises three policies, which set criteria for sustainable transport and accessibility, improvement of transport networks and improving the telecommunications network.

Section 9: Delivering Places

2.12 This Section sets out the Local Plan's strategic objective for delivering employment, commercial and housing and details information for specific site allocations.

Section 10: Delivering Infrastructure

2.13 This chapter explains how the policies and proposals within this Local Plan will be implemented, how the Council will monitor their effectiveness in bringing positive changes to the District, how the Council may use its enforcement powers to deal with unauthorised development and how the Council may choose to review the Local Plan to respond to changes in the economy and deal with longer-term development requirements.

3 HRA Methodology

3.1 The HRA of the Tendring District Local Plan Section 2 comprises two stages:

- Screening.
- Appropriate Assessment.

3.2 HRA Screening has been undertaken in line with current available guidance and to meet the requirements of the Habitats Regulations. The tasks that have been undertaken during the Screening Stage of the HRA are described in detail below. This is followed by a summary of the Appropriate Assessment stage.

Scope of the HRA Screening

3.3 This HRA Screening only assesses Section 2 of the Tendring District Local Plan (i.e. the component that is specific to Tendring District) and does not include an assessment of the strategic Section 1 for Local Plans.

3.4 The Strategic Section 1 for Local Plans which encompasses the North Essex Authorities of Braintree, Colchester and Tendring is subject to separate HRA Screening, although the potential for likely significant effects in-combination with the Strategic Section 1 for local plans has been assessed herein.

Identification of European sites which may be affected by the Local Plan

3.5 In order to initiate the search of European sites that could potentially be affected by a Local Plan, it is established practice in HRAs to consider European sites within the local planning authority area covered by the Local Plan, and also within a buffer distance of 10km to 20km of the boundary of the Local Plan area.

3.6 A distance of 20km was used to identify European sites likely to be affected by impacts relating to development in Tendring District. This distance was applied to Braintree HRA and was deemed sufficient to ensure all European sites which could potentially be affected by development are identified and included in the assessment.

3.7 The following European sites were identified:

- Essex Estuaries SAC.
- Hamford Water SAC, SPA and Ramsar site.
- Stour and Orwell Estuaries SPA and Ramsar site.
- Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site.
- Outer Thames Estuary SPA.
- Abberton Reservoir SPA and Ramsar site.

- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site.
- Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar site.
- Deben Estuary SPA and Ramsar site.
- Alde-Ore-Estuary SPA and Ramsar site.
- Alde, Ore and Butley Estuaries SAC.
- Orfordness – Shingle Street SAC.
- Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site.
- Sandlings SPA
- Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site.
- Staverton Park and the Thicks, Wantisden SAC.

3.8 The location of the above European Sites is shown in **Figure 3.1** in **Appendix 4**.

Potential impacts of the Local Plan on European sites

3.9 **Table 3.1** below sets out a range of potential impacts that development in general and related activities may have on European sites.

Table 3.1: Potential impacts and activities adversely affecting European sites

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
Physical loss • Removal (including offsite effects, e.g. foraging habitat) • Smothering • Habitat degradation	Development (e.g. housing, employment, infrastructure, tourism) Infilling (e.g. of mines, water bodies) Alterations or works to disused quarries Structural alterations to buildings (bat roosts) Afforestation Tipping Cessation of or inappropriate management for nature conservation Mine collapse
Physical damage • Sedimentation / silting • Prevention of natural processes • Habitat degradation • Erosion • Trampling • Fragmentation • Severance / barrier effect • Edge effects • Fire	Flood defences Dredging Mineral extraction Recreation (e.g. motor cycling, cycling, walking, horse riding, water sports, caving) Development (e.g. infrastructure, tourism, adjacent housing etc.) Vandalism Arson Cessation of or inappropriate management for nature conservation
Non-physical disturbance • Noise • Vibration • Visual presence • Human presence • Light pollution	Development (e.g. housing, industrial) Recreation (e.g. dog walking, water sports) Industrial activity Mineral extraction Navigation Vehicular traffic Artificial lighting (e.g. street lighting)
Water table/availability	Water abstraction

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
• Drying • Flooding / storm water • Water level and stability • Water flow (e.g. reduction in velocity of surface water • Barrier effect (on migratory species)	Drainage interception (e.g. reservoir, dam, infrastructure and other development) Increased discharge (e.g. drainage, runoff)
Toxic contamination • Water pollution • Soil contamination • Air pollution	Agrochemical application and runoff Navigation Oil / chemical spills Tipping Landfill Vehicular traffic Industrial waste / emissions
Non-toxic contamination • Nutrient enrichment (e.g. of soils and water) • Algal blooms • Changes in salinity • Changes in thermal regime • Changes in turbidity • Air pollution (dust)	Agricultural runoff Sewage discharge Water abstraction Industrial activity Flood defences Navigation Construction
Biological disturbance • Direct mortality • Out-competition by non-native species • Selective extraction of species • Introduction of disease • Rapid population fluctuations • Natural succession	Development (e.g. housing areas with domestic and public gardens) Predation by domestic pets Introduction of non-native species (e.g. from gardens) Fishing Hunting Agriculture Changes in management practices (e.g. grazing regimes, access controls, cutting/clearing)

3.10 Refer to **Appendix 1**

3.11 European Site Information for further information relation to site specific impacts for each European site, as highlighted in Natural England's Site Improvement Plans (SIPs).

Ecological attributes of the European sites

3.12 The designated features and conservation objectives of the European sites, together with current pressures on and potential threats, was established using the Standard Data Forms for SACs and SPAs and the Information Sheets for Ramsar Wetlands published on the JNCC website[20] as well as Natural England's Site Improvement Plans[21] and the most recent conservation objectives published on the Natural England website (most were published in 2014)[22].

3.13 An understanding of the designated features of each European site and the factors contributing to its integrity has informed the assessment of the potential likely significant effects of the Local Plan.

[20] www.jncc.defra.gov.uk

[21] http://publications.naturalengland.org.uk/category/5458594975711232

[22] http://publications.naturalengland.org.uk/category/6490068894089216

Assessment of 'likely significant effects' of the Tendring Local Plan Section 2

3.14 As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017 an assessment of the 'likely significant effects' of the Local Plan has been undertaken. A risk-based approach involving the application of the precautionary principle was adopted in the assessment, such that 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 policy or site allocation would have a significant effect on the integrity of a European site.

Interpretation of 'likely significant effect'

3.15 Relevant case law helps to interpret when effects should be considered as being likely to result in a significant effect, when carrying out a HRA of a plan.

3.16 In the Waddenzee case[23], the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 in the Habitats Regulations), including that:

- An effect should be considered 'likely', "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site" (para 44).
- An effect should be considered 'significant', "if it undermines the conservation objectives" (para 48).
- Where a plan or project has an effect on a site "but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned" (para 47).

3.17 An opinion delivered to the Court of Justice of the European Union[24] commented that:

"The requirement that an effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."

3.18 This opinion (the 'Sweetman' case) therefore allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered 'trivial' or *de minimus*; referring to such cases as those "*which have no appreciable effect on the site*". In practice such effects could be screened out as having no likely significant effect; they would be 'insignificant'.

Mitigation provided by the Local Plan

3.19 Some of the potential likely significant effects of the Tendring Local Plan Section 2 could be mitigated through the implementation of other proposals in the Local plan Section 2 itself, such as those relating to the provision of recreational open space within new developments (which would help avoid, reduce, and mitigate increased pressure from recreational activities at European sites). Nevertheless, a recent CJEU ruling (People over Wind, Peter Sweetman v Coillte Teoranta (Case C-323/17) judgement) ruled that Article 6(3) of the Habitats Directive should be interpreted as meaning that mitigation measures, specifically measures which avoid or reduce adverse effects, should be assessed as part of an Appropriate Assessment, and should not be taken into account at the screening stage. The precise wording of the ruling is as follows:

[23] ECJ Case C-127/02 "Waddenzee" Jan 2004.

[24] Advocate General's Opinion to CJEU in Case C-258/11 Sweetman and others v An Bord Pleanala 22nd Nov 2012.

"*Article 6(3) ……must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site*."

3.20 Prior to this judgment, UK case law had established that avoidance or reduction measures that form part of a proposal could be taken into account at the Screening stage, on the basis of objective information. This HRA has taken account of this recent ruling and therefore not relied on mitigation measures at the screening stage. Where such measures are proposed to avoid the harmful effects of the plan, they have been considered at the Appropriate Assessment stage to ensure compliance with recent case law.

3.21 The extent to which mitigation may be achieved through the Local plan Section 2 was considered during the appropriate assessment process and has influenced the appropriate assessment conclusions (see **Chapter 7**).

3.22 Policies which may serve a mitigatory role include:

- SPL 3: Sustainable Design.
- HP 3: Green infrastructure.
- HP 4: Safeguarded Local Greenspace.
- HP 5: Open Space, Sports and Recreation Facilities.
- PPL 1: Development and flood risk.
- PPL 2: Coastal protection belt.
- PPL 3: The rural landscape.
- PPL 4: Biodiversity and geodiversity.
- PPL 5: Water conservation, drainage and sewerage.
- PPL 6: Strategic green gaps.

3.23 Policies which promote development, but which contain specific mitigation measures to avoid Likely Significant Effects on European Sites include:

- SAMU1: Development at EDME Maltings, Mistley.
- SAE1: Carless Extension. Harwich.

In-combination effects

3.24 Regulation 102 of the Amended Habitats Regulations 2010 requires an Appropriate Assessment where "a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the *management of the site".* Therefore, as well as considering the likely effects of the Local plan Section 2 alone on European sites, it is necessary to consider whether there may be significant effects from the Local Plan in combination with other plans or projects.

3.25 In accordance with recent guidance on HRA[25], the potential for in-combination effects need only be considered for effects of the Local plan Section 2 identified as unlikely to have a significant

[25] DTA: The Habitats Regulations Assessment Handbook: http://www.dtapublications.co.uk/handbook/browse

effect alone, but which could combine with the effects of other plans and projects to produce a significant effect.

3.26 The first stage in identifying potential 'in-combination' effects involves identifying which other plans and projects in addition to the new Local Plan may affect the European sites that will be the focus of the HRA. There are a large number of plan and strategy documents which could be considered. We have focussed our attention on county and district level plans which provide for development in Tendring District and districts within which the scoped-in European sites are located, and reviewed the findings of any associated HRA work for these plans, where available. The National Infrastructure Planning website was also reviewed to identify projects consideration for their potential in-combination effects on the European sites scoped into this HRA.

3.27 It should be noted that this HRA Screening assesses Section 2 of the Tendring District Local plan (i.e. not the Strategic Section 1 plan shared with Braintree and Colchester). The plans and projects which we considered for their potential in-combination effects were as follows:

- The Strategic Local Plan (North Essex Authorities) – which forms Section 1 of the Tendring District Local plan.
- Colchester Core Strategy Review,
- Braintree District Local Plan.
- Babergh District Core Strategy & Policies (2011 - 2031) Local Plan.
- Suffolk Coastal District Preferred Options Site Allocations and Area Specific Policies.
- Maldon District Local Development Plan 2014-2029.
- Essex Minerals Local Plan.
- Essex Waste Local Plan.
- Essex Local Transport Plan.

3.28 The review of potential in-combination effects with the above plans is set out in **Appendix 3**.

Appropriate Assessment

3.29 The Appropriate Assessment stage of HRA focuses on those policies and related impacts judged likely to have a significant effect at the Screening stage, and seeks to conclude whether, in light of mitigation and avoidance measures proposed, they would result in an adverse effect on the on the integrity of the qualifying features of a European site(s), or where insufficient certainty regarding this remains. The integrity of a site depends on the site being able to sustain its 'qualifying features' across the whole of the site and ensure their continued viability.

4 Screening Assessment

4.1 As described in Chapter 3, a screening assessment was carried out in order to identify the likely significant effects of the Tendring Local plan Section 2 on the European sites within 20km. The full screening matrix, which sets out the decision making process used for this assessment can be found in **Appendix 2** and the findings are summarised below.

Screening assumptions and information used in reaching conclusions about likely significant effects

4.2 During the Screening Stage of the HRA, each policy was screened individually, which is consistent with current guidance. For some types of impacts, screening for likely significant effects has been determined on a proximity basis, using GIS data to determine the proximity of potential development locations to the European sites that are the subject of the assessment. However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts will travel. Therefore, during the screening stage a number of assumptions have been applied in relation to assessing the likely significant effects on European sites that may result from the Local Plan, as described below.

Physical damage/loss

4.3 Any development resulting from the Local Plan would take place within Tendring District; therefore only European sites within the District boundary could be affected through physical damage or loss of habitat from within the site boundaries. Essex Estuaries SAC, Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar lie within the District and therefore have the potential to be affected by physical damage and/or loss from development.

4.4 Habitat loss from development in areas outside of the European site boundaries may also result in likely significant effects where that habitat contributes towards maintaining the interest feature for which the European site is designated. This includes land which may provide offsite foraging and roosting habitat for birds. Natural England has advised that their recognised foraging distance for the majority of wetland bird species is 2km from the designated site. However, the foraging distance for golden plover and lapwing is recognised as being up to 15km. As a result, the following sites have been screened in:

- Stour and Orwell Estuaries SPA and Ramsar.
- Hamford Water SPA and Ramsar.
- Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar.
- Blackwater Estuary SPA and Ramsar.
- Abberton Reservoir SPA and Ramsar.

4.5 The following European sites were ruled out from impacts associated with damage/loss of habitat because their qualifying features are not susceptible to offsite habitat loss, and/or are unlikely to be affected due to the distance between allocations and lack of functional connectivity: Essex Estuaries SAC, Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar, Deben Estuary SPA and Ramsar, Alde–Ore Estuary SPA and Ramsar, Foulness (Mid-Essex Coast Phase 5) SPA and

Ramsar, Sandlings SPA, and Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar were screened out.

4.6 Other sites screened out of the assessment in relation to physical damage/loss included the Outer Thames Estuary SPA, Alde, Ore and Butley Estuaries SAC, Orfordness - Shingle Street SAC and Staverton Park and The Thicks, Wantisden SAC, which are situated outside of the District boundary, do not support qualifying species susceptible to offsite habitat loss, and lack a source-pathway-receptor route by which impacts could affect the qualifying species.

4.7 **Likely significant effects from the Local Plan as a result of physical loss of, or damage to, habitat need to be considered in relation to Essex Estuaries SAC, Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar, Blackwater Estuary SPA and Ramsar and Abberton Reservoir SPA and Ramsar.**

Non-physical disturbance (noise, vibration and light)

4.8 Noise and vibration effects, e.g. during the construction of new housing or employment development, are most likely to disturb bird species and are thus a key consideration with respect to European sites where birds are the qualifying features. Artificial lighting at night (e.g. from street lamps, flood lighting and security lights) has the potential to affect species where it occurs in close proximity to key habitat areas, such as key roosting sites of SPA birds.

4.9 It has been assumed that the effects of noise, vibration and light are most likely to be significant within a distance of 500 metres. There is also evidence of 300 metres being used as a distance up to which certain bird species can be disturbed by the effects of noise[26]; however, it has been assumed (on a precautionary basis) that the effects of noise, vibration and light pollution are most likely to cause an adverse effect if development takes place within 500 metres of a European site with qualifying features sensitive to these disturbances.

4.10 European sites situated within the District that support qualifying species that are vulnerable to non-physical disturbance include Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar. Although, Essex Estuaries SAC is located within the District, its qualifying features are not susceptible to non-physical disturbance and were therefore screened from the assessment.

4.11 All other European sites do not lie within or adjacent to the District boundary and were screened out from the assessment. This included Outer Thames Estuary SPA, Abberton Reservoir SPA and Ramsar and Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar, Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar, Deben Estuary SPA and Ramsar, Alde–Ore Estuary SPA and Ramsar, Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar, Sandlings SPA, Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site and Staverton Park and The Thicks, Wantisden SAC.

4.12 **Therefore, the potential for likely significant effects of noise, vibration and light need to be considered only in relation to Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary (Mid-Essex Coast Phase 2) SPA.**

Non-toxic contamination

4.13 Habitats can be subject to non-toxic contamination, such as nutrient enrichment, changes in salinity and smothering from dust, due to industrial action, agriculture, construction and water abstraction and discharge. European sites with potential to be affected by non-toxic contamination are sites that lie within close proximity, or are hydrologically connected, to proposed development within the Plan. The following sites are situated within close proximity to development and therefore have the potential to be affected by non-toxic contamination; Essex

[26] British Wildlife Magazine. October 2007.

Estuaries SAC; Hamford Water SAC, SPA and Ramsar; Stour and Orwell Estuaries SPA and Ramsar; Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar

4.14 In addition to this, due to the intervening distance and/or a lack of hydrological connectivity, the following sites were screened out from the assessment of non-toxic contamination; Outer Thames Estuary SPA; Abberton Reservoir SPA and Ramsar; Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar; Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar; Deben Estuary SPA and Ramsar; Alde–Ore Estuary SPA and Ramsar; Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar; Sandlings SPA; Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site; and Staverton Park and The Thicks, Wantisden SAC.

4.15 **Therefore, the potential for likely significant effects of non-toxic contamination need to be considered in relation to Essex Estuaries SAC and Hamford Water SAC.**

Air pollution

4.16 Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by deterioration in habitat as a result of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen levels that can then affect plant health, productivity and species composition.

4.17 In terms of vehicle traffic, nitrogen oxides (NO_x, i.e. NO and NO_2) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water.

4.18 Based on the Highways Agency Design Manual for Road and Bridges (DMRB) Manual Volume 11, Section 3, Part 114 (which was produced to provide advice regarding the design, assessment and operation of trunk roads (including motorways)), it is assumed that air pollution from roads is unlikely to be significant beyond 200m from the road itself. Where increases in traffic volumes are forecast, this 200m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.

4.19 The DMRB Guidance for the assessment of local air quality in relation to highways developments provides criteria that should be applied at the Screening Stage of an assessment of a plan or project, to ascertain whether there are likely to be significant impacts associated with routes or corridors. Based on the DMRB guidance, affected roads which should be assessed are those where:

- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- Daily average speed will change by 10 km/hr or more; or
- Peak hour speed will change by 20 km/hr or more; or
- Road alignment will change by 5 m or more.

4.20 Where significant increases in traffic is likely on roads within 200m of European sites, traffic forecast data (based on the planned level of growth) may be needed to determine if increases in vehicle traffic are likely to be significant.

4.21 It has been assumed that only those roads forming part of the primary road network (motorways and 'A' roads) are likely to experience any significant increases in vehicle traffic as a result of development (i.e. greater than 1,000 AADT). As such, where a site is within 200m of only minor roads, no significant effect from traffic-related air pollution is considered to be the likely outcome.

4.22 The key commuting corridor for new housing and employment development will be the A120, A12, A133 and A137. European sites within 20km of Tendring District that are within 200m of

strategic roads are limited to the Stour and Orwell Estuaries SPA and Ramsar site, which are situated within 200m of the A137 and A120. All other sites are situated over 200m from a strategic road and were therefore screened out.

4.23 **Therefore, likely significant effects relating to increased air pollution need to be considered in relation to Stour and Orwell Estuaries SPA and Ramsar site.**

Impacts of recreation

4.24 Recreation activities and human presence can result in significant effects on European sites as a result of erosion and trampling, associated impacts such as fire and vandalism or disturbance to sensitive features, such as birds through both terrestrial and water based forms of recreation. The Tendring District Local plan Section 2 will result in considerable housing growth, and associated population increase within the District. Where increases in population are likely to result in significant increases in recreation at a European site, either alone or in-combination, the potential for Likely Significant Effects requires assessment.

4.25 Qualifying bird species, for which many of the European sites are designated, are particularly susceptible to recreational disturbances from walking, dog walking, angling, illegal use of off-road vehicles and motorbikes, wildfowling, and water sports. An increase in recreational pressure from development therefore has the potential to disturb bird populations of SPA and Ramsar sites as a result of both terrestrial and water-based recreation.

4.26 In addition, recreation can physically damage habitat as a result of trampling and also through erosion associated with boat wash and terrestrial activities such as use of vehicles.

Recreational Zones of Influence

4.27 Each European site will typically have a 'Zone of Influence' (ZOI) within which increases in population would be expected to result in Likely Significant Effects. ZOIs are usually established following targeted visitor surveys and the findings are therefore typically specific to each European site (and often to specific areas within a European site). The findings are likely to be influenced by a number of complex and interacting factors and therefore it is not always appropriate to apply a generic or non-specific ZOI to a European Site.

4.28 The Essex Authorities have recognised the importance of establishing robust ZOIs in informing the HRA of the Strategic Section 1 for the Essex Authorities Local Plans, and the HRA Screening assessments of the relevant Section 2 Local Plans, including the assessment detailed herein. As a result, the North Essex Authorities completed targeted visitor surveys in 2012/2013 at Abberton Reservoir SPA and Ramsar, Blackwater Estuary SPA and Ramsar, Essex Estuary SAC, Colne Estuary SPA and Ramsar, and Stour and Orwell Estuaries SPA and Ramsar. The recommended ZOIs based on these visitor surveys[27] are shown below:

- Abberton Reservoir SPA and Ramsar – 13km.
- Blackwater Estuary SPA and Ramsar (Old Hall Marshes) – 8km.
- Blackwater Estuary SPA and Ramsar (The Strood) – 8km.
- Colne Estuary SPA (Cudmore Grove) – 24km.
- Essex Estuaries SAC (Cudmore Grove) – 24km.
- Stour and Orwell Estuaries SPA and Ramsar (The Walls, and Stour Woods) – 8km.

4.29 With regards to the Stour and Orwell, further discussions took place between Natural England and Colchester BC regarding the distances used in applying an appropriate ZOI as part of the HRA of the North Essex Joint Strategic Plan Section 1. Visitor monitoring undertaken by Colchester BC on behalf of the North Essex Authorities (including Braintree and Tendring), and subsequent

[27] Colchester Borough Council (2013), Habitat Regulations Assessment Survey and Monitoring Programme - Spring 2013

discussion with Natural England, identified discrepancies relating to the findings of average distance travelled by visitors to the Stour and Orwell Estuaries SPA and Ramsar. A visitor monitoring study of the Stour and Orwell Estuaries SPA and Ramsar site has recently been completed by Footprint Ecology, although it is yet to be published. It is understood that the study recommends the application of a 13km Zone of Influence for this site, based on the findings. Therefore, in line with a precautionary approach, this greater distance of 13km has been applied as a ZOI in this HRA Screening Assessment. The appropriateness of this will continue to be reviewed and applied in light of new information and the progression of discussions with Natural England.

4.30 Following the establishment of initial ZOIs listed above, further visitor surveys were completed in winter 2018 by Place Services of Essex County Council to inform the emerging Essex Coast RAMS[28]. This focused on additional sites within Essex and included new survey locations at the Blackwater Estuary and Colne Estuary. The findings of these surveys were used to review and refine the initial ZOIs specified above and resulted in reductions in the ZOIs for Colne Estuary and Essex Estuary from 24km to 9.7km. In summary, the recreational ZOIs applied in this Screening Assessment are provided below:

- Essex Estuary SAC – 9.7km.
- Colne Estuary SPA – 9.7km.
- Blackwater Estuary SPA and Ramsar – 8km.
- Abberton Reservoir SPA and Ramsar – 15km.
- Stour and Orwell Estuaries – 13km.
- Hamford Water SAC, SPA and Ramsar – 8km.

4.31 The Blackwater Estuary is located further than 8km from the closest site allocation within Tendring and can therefore be screened out. Abberton Reservoir is located within 13km of the closest site allocation and has therefore been screened in. Other European Sites located outside Tendring were assessed on a site by site basis and ZOIs based on those established in the emerging RAMS. Sites with ZOIs incorporating parts of Tendring were restricted to Dengie SPA and Ramsar, and the Outer Thames Estuary SPA. However, Dengie SPA and Ramsar is separated from Tendring by the Estuary and therefore the travel distance is considerably further than its 20km ZOI. Therefore, in light of the above, remaining sites located outside of Tendring District have been screened out of the assessment in relation to recreational pressures.

4.32 The Outer Thames Estuary SPA is designated for supporting wintering red-throated diver and foraging habitat for breeding common and little tern species. The site comprises an area of 3,924km^2 of open sea reaching over 40km away from the coast, and therefore activities arising as a result of the Tendring Local Plan, including recreational watersports, would not be expected to be capable of resulting in any measurable effect on the populations of SPA birds. Nevertheless, these species are sensitive to the effects of disturbance by watercraft, and therefore have been included for consideration as part of the HRA screening stage.

4.33 **Therefore, likely significant effects relating to increased recreational pressure need to be considered in relation to Abberton Reservoir SPA, Essex Estuaries SAC, Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar, Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar, and Outer Thames Estuary SPA.**

Water quantity and quality

4.34 An increase in demand for water abstraction and treatment resulting from the growth proposed in the Local Plan could result in changes in hydrology at European sites. Depending on the

[28] Essex County Council, Place Services (2018) Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (RAMS). Habitats Regulations Assessment Technical report 2018

qualifying features and particular vulnerabilities of the European sites, there could be a likely significant effect, for example due to changes in environmental or biotic conditions, water chemistry and the extent and distribution of preferred habitat conditions.

4.35 Essex Estuaries SAC, Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar site, Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site lie within Tendring District and are directly linked to waterbodies that run through the District. An increased demand for water supply and treatment therefore has the potential to significantly affect these European sites through changes in water quantity and quality.

4.36 The Outer Thames Estuary SPA is located within 2km of the District coastline. However, due to the size and location of the European site within the North Sea significant effects as a result of development within the District are unlikely and it was therefore screened out from the assessment.

4.37 Abberton Reservoir SPA and Ramsar lies outside of the District boundary and supplies major towns in Essex, such as Chelmsford, Brentwood, Witham and Southend-on-Sea outside of Tendring, as well as to London boroughs of Havering, Redbridge and Barking & Dagenham. There is no hydrological connectivity between Tendring and Abberton Reservoir and as a result can be screened from the assessment.

4.38 In addition to this, the Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar site, Deben Estuary SPA and Ramsar, Alde–Ore Estuary SPA and Ramsar site, Alde, Ore and Butley Estuaries SAC, Orfordness – Shingle Street SAC, Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site, and Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site were also screened from the assessment, due to the lack of hydrological connectivity with the North Sea and separation from the District from Stour Orwell Estuary and Colne Estuary.

4.39 Alongside this, due to the qualifying features present at Sandlings SPA and Staverton Park and The Thicks, Wantisden SAC and the distance of these European sites from the District, likely significant effects with respect to water quantity and quality were not considered possible as a result of the Tendring District Local plan.

4.40 **Therefore, likely significant effects relating to water quality and quantity need to be considered in relation to Essex Estuaries SAC, Hamford Water SAC, SPA and Ramsar, Stour and Orwell Estuaries SPA and Ramsar site, Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site.**

Summary of Screening assumptions

4.41 **Table 4.1** below summarises the Screening assumptions that are being applied to the HRA of the Tendring District Local Plan. Where certain types of effects are screened out in **Table 4.1** they did not need to be considered further so are not referred to in the Screening matrix in **Appendix 3**.

Table 4.1: Summary of Screening Assumptions

	Physical damage/ loss of habitat	Non-physical disturbance	Non-toxic Contam-ination	Air pollution	Impacts of recreation	Water quantity and quality
Essex Estuaries SAC	Screened out	Screened out	Screened in	Screened out	Screened in	Screened in

	Physical damage/ loss of habitat	Non-physical disturbance	Non-toxic Contam-ination	Air pollution	Impacts of recreation	Water quantity and quality
Hamford Water SAC	Screened in	Screened in	Screened in	Screened out	Screened in	Screened in
Hamford Water SPA and Ramsar	Screened in	Screened in	Screened in	Screened out	Screened in	Screened in
Stour and Orwell Estuaries SPA and Ramsar	Screened in	Screened in	Screened in	Screened in	Screened in	Screened in
Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar	Screened in	Screened in	Screened in	Screened out	Screened in	Screened in
Outer Thames Estuary SPA	Screened out	Screened out	Screened out	Screened out	Screened in	Screened out
Abberton Reservoir SPA and Ramsar	Screened in	Screened out	Screened out	Screened out	Screened in	Screened out
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar	Screened in	Screened out	Screened out	Screened out	Screened out	Screened out
Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out

	Physical damage/ loss of habitat	Non-physical disturbance	Non-toxic Contam-ination	Air pollution	Impacts of recreation	Water quantity and quality
Deben Estuary SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Alde–Ore Estuary SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Alde, Ore and Butley Estuaries SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Orfordness – Shingle Street SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Sandlings SPA	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Staverton Park and The Thicks, Wantisden SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out

Policies with Avoidance and Mitigation Measures

4.42 As described above, particular policies in the Tendring District Local Plan Section 2 could provide mitigation for the potential effects of development on European sites. This has been reflected in the assessment matrix in **Appendix 2** and has been taken into account in the appropriate assessment conclusions below. There are also specific provisions within a number of the policies that could provide mitigation and these are also referred to in **Appendix 2.** Policies which provide mitigation, or include specific mitigation intended to avoid Likely Significant Effects on European Sites are summarised below:

- **SPL 3: Sustainable design:** This policy specifies that the design and layout of development must maintain or enhances important existing site features of landscape, ecological, heritage or amenity value.

- **HP 3: Green infrastructure:** This policy sets out the requirements for provision, protection and enhancement of green infrastructure. This policy can be particularly beneficial in contributing towards avoiding and mitigating visitor pressures on European sites.

- **HP 4: Safeguard Local Greenspace:** This policy sets out the requirements for development to protect and maintain the Districts open space including natural and semi-natural greenspace, and which could provide a mitigatory role in providing alternative accessible natural greenspace which can relieve pressures on coastal European sites.

- **HP 5: Open space, sports and recreation facilities:** This policy sets out the requirements for development to meet the minimum open space standards in line with Natural England's 'Accessible Natural Greenspace Standards' and therefore promotes the provision of natural greenspace which can help to avoiding and mitigating visitor pressures on European sites.

- **PPL 1: Development and flood risk:** This policy directs development away from areas at risk of flooding and specifies that appropriate infrastructure is required before development can be approved. Therefore this policy provides assurances that development likely to affect the hydrology of European sites as a result of flooding would not be permitted.

- **PPL 2: Coastal protection belt:** This policy prevents development on the coastline, which has the potential to protect European sites situated along the coast.

- **PPL 3: The rural landscape:** This policy protects rural habitats, including estuaries, rivers, undeveloped coast, hedgerows, trees and woodlands. This has the potential to provide mitigation for qualifying features of the European sites.

- **PPL 4: Biodiversity and geodiversity:** This policy specifically states that European sites will be protected from development likely to have an adverse effect on their integrity, and sets out the requirements for developments to demonstrate this through an Appropriate Assessment. It therefore provides strong assurances that adverse effects on the integrity of European sites will be avoided.

- **PPL 5: Water conservation, drainage and sewerage:** This policy specifies that all new development must make adequate provision for drainage and sewerage and should include Sustainable Drainage Systems (SuDS) as a means of reducing flood risk, improving water quality, enhancing the Green Infrastructure network and providing amenity and biodiversity benefits. It also specifies that development must demonstrate that adequate provision exists, or can be made available, for sewage disposal to a public sewer and water recycling centre. It therefore provides safeguards which will help to ensure that hydrological impacts on European sites are minimised.

- **PPL 6: Strategic green gaps:** This policy provide potential mitigation to European sites by preventing the development of settlements in areas previously undeveloped, which are likely to be used as alternative spaces for recreation away from European sites.

- **SAMU1: Development at EDME Maltings, Mistley**: This policy was identified as having potential to result in significant effects on the adjacent Stour and Orwell Estuary SPA and Ramsar site. Following recommendations made as part of the HRA of the Regulation 18 draft Local Plan Section 2, the policy wording was updated to specify that proposals must assess any impact on nature conservation, including on the Stour and Orwell Estuaries SPA and Ramsar site, should be undertaken. Development will only be permitted where a project level assessment has demonstrated in accordance with the Habitat Regulations, that any proposal will not adversely affect the integrity of the Stour and Orwell Estuaries SPA and Ramsar site, either alone or in-combination. If significant effects are considered likely, an appropriate mitigation strategy should be submitted or compensatory habitat provided.

- **SAE1: Carless Extension, Harwich**: This policy was identified as having potential to result in significant effects on the adjacent Stour and Orwell Estuary SPA and Ramsar site. Following recommendations made as part of the HRA of the Regulation 18 draft Local Plan Section 2, the policy wording was updated to specify that proposals must assess any impact on nature conservation, including on the Stour and Orwell Estuaries SPA and Ramsar site, should be undertaken. Development will only be permitted where a project level assessment has demonstrated in accordance with the Habitat Regulations, that any proposal will not adversely affect the integrity of the Stour and Orwell Estuaries SPA and Ramsar site, either alone or in-combination. If significant effects are considered likely, an appropriate mitigation strategy should be submitted or compensatory habitat provided.

HRA Screening assessment

4.43 As described in Chapter 3, a Screening Assessment was carried out in order to identify the potential for likely significant effects (LSE's) of the Tendring District Local Plan Section 2 on the European sites screened in above, either alone, or in-combination with other plans and projects. The results of the Screening assessment are detailed on a policy-by-policy and site-by-site, basis below and incorporate an assessment of LSE's in-combination with other plans and projects identified in **Appendix 3**.

In-combination effects

4.44 As described in **Chapter 3**, a review was undertaken of other plans and projects with potential to lead to likely significant effects on European sites when considered in combination with the Tendring District Local Plan Section 2. These potential in-combination effects have been fully considered in reaching the conclusions detailed below.

4.45 The Shared Strategic Plan (North Essex Authorities Strategic Section 1 for Local Plans), which forms part of the Tendring District Local Plan provides for 43,765 net additional homes in total for the three authorities, which is a significant amount of additional development for the area. This has been subject to HRA Screening and it has been confirmed that it is not possible to rule out likely significant effects in combination with the Tendring District Local Plan.

4.46 A review of the HRAs of neighbouring local plans excluding Braintree and Colchester District concluded no likely significant effects in-combination with Babergh District Council, Suffolk Coastal District and Maldon District.

4.47 No projects were identified by National Infrastructure Planning[29] with potential to result in likely significant effects in-combination with Tendring District Local Plan Section 2.

[29] https://infrastructure.planninginspectorate.gov.uk/projects/

Initial Screening of Local Plan Section 2 policies

Significant effects likely or uncertain

4.48 Whilst no policies are certain to result in a significant effect, for many there is uncertainty and therefore, in line with the precautionary approach being applied in the HRA, until significant effects can be ruled out, they are treated as giving rise to 'likely significant effects'.

4.49 The Screening assessment identified a lack of certainty as to whether the following policies would result in likely significant effects on European sites:

- LP 1 Housing supply.
- PP 7 Employment allocations.
- PP 8 Tourism.
- PP 10 Camping and touring caravan sites.
- PP 11 Holiday parks.
- LP 9 Traveller sites.
- Specific employment and housing allocation policies

4.50 The above policies could result in increased population growth and/or development which could have significant effects on European sites in relation to loss of habitat, non-toxic contamination, non-physical disturbance, disturbance from increased recreational pressure, air pollution associated with industry and increased vehicle traffic, and changes in water quality and quantity affecting the quality and/or extent of qualifying features.

Significant effects unlikely

4.51 The remaining policies have been screened out because they would not result in development, either setting out criteria relating to development proposed under other policies, seek to protect the natural environment, or could result in some minor development of a nature and location where they would not be expected to contribute to potential effects on European sites.

Essex Estuaries SAC

Physical loss and/or damage

4.52 Examination of proposed employment and housing allocations identified no development proposed within the boundary of the SAC and as a result there will be no impacts as a result of physical loss and/or damage. In addition to this, the SAC does not support transient qualifying features susceptible to offsite habitat loss.

4.53 **No likely significant effects are therefore predicted in relation to physical loss and/or damage to habitat, either alone or in-combination.**

Non-toxic contamination

4.54 The SAC supports features, such as *Salicornia*, which are considered vulnerable to impacts from non-toxic contamination, including dust from construction works and changes in water quantity and quality. Potential non-toxic contamination impacts associated with changes in water quality and quantity are considered separately under the relevant sections below, whilst remaining impact types, including dust contamination are assessed herein.

4.55 Examination of proposed housing and employment allocations identified no development proposed within or adjacent to the SAC. A single development, Land South of Robinson Road, Brightlingsea is proposed 260m from the SAC. However, as the development is small and given the distance of the allocation from the European site, it is unlikely that non-toxic contamination will have a significant adverse effect on the European site.

4.56 **No likely significant effects to the Essex Estuaries SAC are therefore predicted in relation to non-physical disturbance either alone or in-combination with other Local Plans.**

Recreation

4.57 The SAC encompasses the Colne Estuary which lies between the southern parts of Colchester Borough and Tendring District. The SAC is subject to a range of land and water-based activities, including walking, fishing and water sports such as jet skiing. Negative effects associated with these activities are primarily related to disturbance associated with the qualifying bird species of the Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site, which is concurrent with the SAC over much of this area. However, the coastal and estuarine habitats of the SAC may also be affected by factors associated with human access such as off-road vehicle use, erosion, fire, trampling and vandalism. The nature of the habitat types present is such that their susceptibility to recreational disturbance is limited, at least to some extent, by their inaccessible nature. In addition, the presence of permissive footpaths and well-structured public access is likely to direct people away from sensitive habitat types within the SAC, such as Atlantic salt meadows.

4.58 Natural England has advised that this site is vulnerable to the effect of water sports such as jet-skiing which can create additional wash which contributes to erosion of the salt marsh.

4.59 The SAC comprises a series of sites, including Colne Estuary National Nature Reserve (NNR), Colne Point Nature Reserve and Colne Estuary SSSI, which are managed by Natural England and the Essex Wildlife Trust. Management measures in place at the NNR and Nature Reserve, which are likely to minimise disturbance and damage to the SAC, include the use of restricted access to permit holders at Brightlingsea Marshes, Essex Wildlife Trust members only at Colne Point Nature Reserve, and prohibited access to dogs at Colne Point Nature Reserve. These measures are likely to contribute towards reducing the impacts of recreational disturbance but it is unclear whether these measures are actively enforced.

4.60 In 2012, visitor surveys were undertaken by Colchester Borough on behalf of Tendring District and Braintree District to survey and monitor visitors in and around the North Essex Authorities. At Essex Estuaries, SAC two separate visitor surveys were undertaken in November 2011 and 2012 at Brightlingsea Marshes and Cudmore Country Park. Colchester BC as part of their Section 2 HRA Screening assessment recommended a ZOI of 24km for this site in light of the study findings and conclusions. This ZOI was later reduced to 9.7km following updated surveys in winter 2018. Nevertheless, this distance encompasses much of Tendring and therefore population increases associated with housing growth has the potential to increase visitor pressures at the Essex Estuaries SAC.

4.61 Despite the limited susceptibility of several of the SAC habitats to recreational pressure, there is a lack of certainty as to whether the Tendring District Local Plan Section 2 plan would result in LSEs associated with recreation from Tendring alone, and in-combination with impacts from the Colchester Section 2 Local Plan, and the Strategic Section 1 for Local Plans.

4.62 **In line with a precautionary approach, further assessment is required at the Appropriate Assessment stage to determine whether increased recreational pressures associated with the Tendring District Local Plan Section 2 would be likely to adversely affect the integrity of the SAC either alone or in-combination**.

Water quantity and quality

4.63 The SAC supports tidal and estuarine habitats, including mudflats, sandflats, Atlantic salt meadows and estuarine habitat. These habitats are dependent on water and are therefore likely to be vulnerable to changes in water quantity and quality. An increase in demand for water supply and water treatment from development within the Local Plan therefore has the potential to significantly affect qualifying features of the SAC, for example by increasing the concentration of nutrient content of water can result in algal blooms which can smother qualifying habitat features.

4.64 The Haven Gateway Water Cycle Study (HGWCS) undertaken in 2009 by the Haven Gateway Partnership examined potential issues arising from increased demand for water supply and wastewater discharge as a result of development in a number of local authorities, including the North Essex Authorities. In regards to water quantity the 2009 study found that the sub-region water supply zone supported a number of water abstraction licences of which some were not fully utilised with a surplus of 66.5Ml/d identified when the licensed abstraction volume (CAMS) was compared against the average volume abstracted. The Lower Colne forms part of the SAC; however the study confirmed that there were no known issues in relation to water capacity and supply at the abstraction site at this location.

4.65 The most recent Tendring Water Cycle Study was completed in 2017 and concluded that "*Based on the growth assessed, the WCS has concluded that, allowing for the planned resource management of Affinity Water's supply areas in the District, the water supply companies would have adequate water supply to cater for growth over the plan period*". As a result, the Tendring Section 2 Local Plan will not result in LSE on the SAC as a result of water capacity.

4.66 Increased housing specified in the Publication Local Plan Section 2 is likely to increase the demands on wastewater treatment in the District. The 2017 HGWCS confirms that "*Five WRCs (Clacton-Holland Have, Colchester, Jaywick New, Manningtree and Wrabness-Wheatsheaf Close) do not have sufficient capacity to accept all future development proposed within the plan period. Therefore solutions are required in order to accommodate the growth to ensure that the increased wastewater flow discharged does not impact on the current quality of the receiving watercourses, their associated ecological sites and also to ensure that the watercourses can still meet with legislative requirements*".

4.67 There is potential for in-combination effects to occur in relation to Tendring and Colchester Borders Garden Community (SP8) which is included in the Strategic Section 1 for Local Plans and Tendring District Local Plan. The proposed Garden Community will lie within the District of Tendring and Borough of Colchester, and as a result has the potential to result in LSE in relation to Essex Estuaries SAC.

4.68 **In light of the above, further assessment is required at the Appropriate Assessment stage, including consultation with the Environment Agency and water treatment companies, together with a detailed review of potential mitigation and safeguard measures, to determine whether the Tendring District Local Plan Section 2 would be likely to result in adverse effects on site integrity as a result of changes in water quality**.

Hamford Water SAC

Physical loss and/or damage

4.69 Examination of proposed employment and housing allocations identified no development proposed within the boundary of the SAC. However, Natural England has advised that grassland habitats located outside of the SAC may contribute to maintaining the population of the Fisher's estuarine moth. As a result, loss of habitat within allocations close to the SAC may result in likely significant effects on the SAC qualifying feature.

4.70 **Likely significant effects on the Hamford Water SAC cannot be ruled out and this requires further consideration at the Appropriate Assessment stage to determine whether physical loss and/or damage to habitat, will result in adverse effects on the integrity of the SAC, either alone or in-combination.**

Non-physical disturbance

4.71 The Fisher's estuarine moth is susceptible to the effects of light disturbance and therefore increased lighting in the vicinity of habitats upon which the moth depends has the potential to result in likely significant effects. Nevertheless, a review of the site allocations indicates a minimum distance of 500m distance between the SAC and the nearest site allocations. As a

result, **no likely significant effect is predicted on the Hamford Water SAC in relation to non-physical disturbance, either alone or in-combination**.

Non-toxic contamination

4.72 The SAC supports features, which are considered vulnerable to impacts from non-toxic contamination including smothering of habitat from dust produced by construction works and changes in water quality and quantity which can result in nutrient enrichment and algal blooms.

4.73 Potential non-toxic contamination impacts associated with changes in water quality and quantity are considered separately under the relevant section below, whilst remaining impact types, including dust contamination are assessed herein.

4.74 Examination of proposed employment and housing allocations identified no development within or adjacent to the SAC with the closest site situated over 500m away. **Therefore, no likely significant effects to the Hamford Water SAC are therefore predicted in relation to non-physical disturbance, either alone or in-combination.**

Recreation

4.75 The SAC supports the Fisher's estuarine moth, which is reliant on coastal grassland habitat, and in particular areas of lowland neutral grassland which support the food plant hog's fennel *Peucedanum officinale*. Key vulnerabilities of this species from recreational impacts include damage and degradation of habitat from walking/dog walking and associated nutrient enrichment, in addition to erosion from boat wash and illegal use of motor vehicles.

4.76 Visitor surveys were undertaken at Kirkby Quay and The Naze in 2010 to 2012 by Colchester BC to inform this HRA Screening and those for the other North Essex Authorities Local Plans and the Strategic Section 1 for Local Plans. Due to the lack of access to the SAC, both survey locations were situated to the south of the SAC with parking facilities only available at The Naze. Overall, low numbers of visitors were recorded during the surveys with a total of 35 groups at Kirkby Quay and 231 groups at the Naze over the 3 year survey period. The majority of these visitors were found to travel from the local area with all visitors travelling to Kirkby Quay and 80% of visitors travelling to The Naze between 0-8km. Based on distances provided by this study, an 8km ZOI was established for this site. Housing growth likely to contribute to increased recreational pressure comprises those housing allocations located within 8km.

4.77 Much of the SAC, such as Skipper's Island, is largely inaccessible to the public, comprising isolated islands or areas fenced and managed by the Essex Wildlife Trust to restrict access to public and permissive footpaths only. In addition, the distribution of footpaths is largely restricted to the south and north edge of the SAC. Furthermore, a review of relevant component SSSIs indicates that areas of lowland grassland of importance for Fisher's estuarine moth are currently in favourable condition and the extent of hog's fennel, the key larval food plant, in increasing.

4.78 Nevertheless, despite the currently low levels of recreational pressure at this site, the frequency of visitors is likely to increase as a result of the proposed England Coastal Path. In addition, Natural England has advised that the grassland habitats of importance in maintaining the Fisher's estuarine moth occur in close proximity to existing footpaths, particularly in the vicinity of the sea wall. As a result, at this stage there is uncertainty as to whether the Local Plan Section 2 would result in likely significant effects.

4.79 **Increased recreational pressures on the site associated with the housing growth proposed within Tendring District Local Plan Section 2, is considered likely to result in significant effects on the SAC qualifying feature, and further assessment is required at the Appropriate Assessment stage to determine whether the Plan will result in adverse effects on site integrity.**

Water quantity and quality

4.80 The SAC supports the qualifying Fisher's estuarine moth, which is reliant on low lying coastal grassland habitat for food and egg-laying. Changes in water quantity and quality, in particular resulting from flooding from rising sea levels and deteriorating sea defences, are likely to significantly affect populations of this species.

4.81 Impacts from changes in water quantity and quality as a result of development are likely to be low with no abstraction sites and no WRC identified in the HGWCS due to exceed capacity or be within 20% of exceeding consented levels that discharge within or near to SAC. Changes in water quality at the SAC are therefore likely to be as a result of rising sea levels and deteriorating sea defences rather than from proposed development within the District.

4.82 A review of the HGWCS identified no abstraction sites at or near to Hamford Water with the nearest sites situated over 5km away at Stour Estuary and Tidal Deben and Orwell. This is the most recent study available in relation to Tendring District.

4.83 The distance between the European sites and the abstraction site are considered sufficient for no likely significant effects to occur. In addition to this, no WRCs discharging into the Hamford Water were identified with issues relating to increased demand for treatment of sewage effluent.

4.84 **No likely significant effects to the Hamford Estuaries SAC are therefore predicted in relation to water quantity and quality.**

Hamford Water SPA and Ramsar site

Physical loss and/or damage

4.85 The Hamford Water SPA and Ramsar are situated along the eastern coast of Tendring District. No development is proposed within the boundaries of the SPA and Ramsar site and it will therefore not be affected by onsite physical loss and damage.

4.86 The site supports transient species that use offsite habitat such as golden plover and dark-bellied brent goose, which may rely on offsite pastures and arable fields for foraging. As a result, there is potential for physical loss and damage to occur to offsite habitats of importance to qualifying bird species. It is not expected that development will result in fragmentation or severance of habitats given the proposed allocations are within or adjacent to existing settlements. However, the loss of arable and pasture may reduce the extent of foraging and loafing habitat upon which qualifying birds depend. Preferred examples of offsite foraging habitat for qualifying bird species would typically be expected to include larger fields located close to the estuary, and prone to flooding, where levels of existing disturbance are low, and which support a degree of openness and connectivity to the estuary.

4.87 Key housing and employment allocations within Tendring are typically located several kilometres from Hamford Water SPA and Ramsar site and therefore, alone, are unlikely to be important in maintaining populations of qualifying birds. However, larger housing and employment allocations located closer to the SPA, such as at Dovercourt, Walton-on-the-Naze, and Thorpe Le-soken may be of increased likelihood of being important for SPA and Ramsar bird species.

4.88 There is currently a lack of evidence to determine the importance of offsite functional land for qualifying birds. As a result, further assessment of the site allocations within the Tendring District Local Plan Section 2 is recommended at the Appropriate Assessment stage, to determine the potential for adverse effects on integrity. The assessment would seek to determine the suitability of offsite habitat based on a number of parameters, for example including size, proximity to the SPA, habitat type, and the presence or absence of negative factors, such as edge effects and existing levels of disturbance.

4.89 In summary, the loss of offsite habitat as a result of housing and employment allocations within Tendring, has the potential to result in likely significant effects on the qualifying SPA/Ramsar bird species as a result of loss of foraging habitat upon which such bird species may depend.

4.90 **Likely significant effects cannot be ruled out and therefore the potential for the loss of offsite habitat to adversely affect site integrity, either alone or in-combination, will require further consideration at the Appropriate Assessment stage**.

Non-toxic contamination

4.91 The SPA supports birds which are dependent upon salt marsh and inter tidal habitats, which are considered vulnerable to impacts from non-toxic contamination, including dust from construction works and changes in water quality and quantity which can lead to algal blooms reducing the extent and quality of feeding habitat. Potential non-toxic contamination impacts associated with changes in water quality and quantity (e.g. nutrient enrichment) are assessed separately under the relevant section below.

4.92 Examination of proposed site allocations identified no development within or adjacent to the SPA/Ramsar with the closest site situated over 500m away. **Therefore, no likely significant effects to the Hamford Water SPA and Ramsar are therefore predicted in relation to non-physical disturbance, either alone or in-combination.**

Non-physical disturbance

4.93 No development is proposed within 500m of the SPA and Ramsar site with the nearest development c.700m at Land West of Low Road, Dovercourt. As a result, there is no potential for non-physical disturbance to result in LSEs.

4.94 **No likely significant effects on Hamford Water SPA and Ramsar site are predicted in relation to non-physical disturbance.**

Recreation

4.95 Hamford Water SPA and Ramsar support breeding little terns and a range of overwintering bird species. Key vulnerabilities of these species include direct disturbance to the birds and damage to features of importance, such as feeding and roosting sites from activities, such as walking/dog walking, yachts and accompanying water sports, as well as unauthorised access on foot, from boats and by quad bike/motorbike.

4.96 As described above for Hamford Water SAC, visitor surveys were undertaken at Kirkby Quay and The Naze between 2010 and 2012 to inform HRA Surveying and Monitoring work at Hamford Water. Due to the lack of access to the SPA, both survey locations were situated to the south of the SAC with parking facilities only available at The Naze. Overall, low numbers of visitors were recorded during the surveys with a total of 6 groups at Kirkby Quay and 36 groups at the Naze during the three year survey period. The majority of these visitors were found to travel from the local area with all visitors travelling to Kirkby Quay and 80% of visitors travelling to The Naze between 0-8km. Based on distances provided by this study for Kirkby Quay and The Naze, an 8km buffer was used to identify housing allocations with potential to increase recreational use at the Hamford Water SAC. Housing allocations located within 8km included at Walton-on-the-Naze, Thorpe-le-Soken, Weeley and Clacton-on-Sea. These allocations are therefore likely to have increased potential to have a significant effect on the SPA and Ramsar site.

4.97 Previous HRA of Tendring's District Draft Core Strategy did not identify likely significant effects in relation to recreational pressure. However, concerns were raised by Natural England that recreation, in particular water-based activities, are a threat to the SPA and Ramsar and have indicated this as one of the causes for unfavourable conditions at the European sites. This includes damage to inter-tidal habitat at moorings in Walton-on-the-Naze.

4.98 Further assessment is required at the Appropriate Assessment to determine whether the Tendring Local Plan Section 2will result in adverse effects on integrity. Mitigation and appropriate policy safeguards are likely to be required to provide certainty that mitigation can prevent impacts to integrity.

4.99 **Allocations at Walton-on-the-Naze, Thorpe-le-Soken, and Dovercourt, have the potential to result in likely significant effects on the Hamford Water SPA and Ramsar as**

a result of recreational pressure, and therefore require further assessment at the Appropriate Assessment stage to determine whether the Tendring District Local Plan Section 2 will result in adverse effects on integrity, either alone or in-combination.

Water quantity and quality

4.100 The SPA and Ramsar site supports qualifying bird species, which are reliant on a range of water-dependent habitats, such as grazing marshes and mudflats. Increased demand for water and water treatment from development within the Local Plan has the potential to affect important feeding and roosting habitats used by SPA and Ramsar birds.

4.101 A review of the HGWCS identified no abstraction sites at or near to Hamford Water with the nearest sites situated over 5km away at Stour Estuary and Tidal Deben and Orwell. This is the most recent study available in relation to Tendring District.

4.102 The distance between the European sites and the abstraction site are considered sufficient for no likely significant effects to occur. In addition to this, no WRCs discharging into the Hamford Water were identified with issues relating to increased demand for treatment of sewage effluent.

4.103 **No likely significant effects to the Hamford Estuaries SPA and Ramsar site are therefore predicted in relation to water quantity and quality.**

Stour and Orwell Estuaries SPA and Ramsar site

Physical loss and damage

4.104 The Stour and Orwell Estuaries SPA and Ramsar sites are located along the northern coastline of Tendring District boundary. No development is proposed within the boundaries of the SPA and Ramsar site. However PP6 protects Mistley Port and Marine for employment development. A review of site boundaries in light of aerial photography indicates that the these sites do not support habitats likely to be of importance for populations of SPA and Ramsar birds, being comprised almost entirely of existing hard standing and buildings associated with their existing industrial usage. Nevertheless, these sites are located immediately adjacent to the SPA and Ramsar and construction of new development at these sites has the potential to encroach into the SPA/Ramsar boundary and damage habitats. Dredging, which may be required to facilitate or maintain employment development at Mistley has the potential to damage or destroy habitats upon which represent qualifying features of the Ramsar designation, or those upon which the SPA birds depend, with subsequent Likely Significant Effects on these European Sites.

4.105 The SPA and Ramsar site support transient bird species that also rely upon habitats located outside of the site boundaries. This includes species such as lapwing, dark-bellied brent goose and curlew, which may rely on offsite pastures and arable fields for feeding. As a result, there is potential for the proposed site allocations to result in physical loss and damage to offsite habitats of importance to qualifying bird species. It is not expected that development will result in fragmentation or severance of habitats given the allocations are proposed within or adjacent to existing settlements. However the loss of arable and pasture may reduce the extent of foraging habitat upon which qualifying birds depend. Preferred examples of offsite foraging habitat for qualifying bird species would typically be expected to include larger fields located close to the estuary, and prone to flooding, where levels of existing disturbance are low, and which support a high degree of openness and connectivity to the estuary.

4.106 A review of aerial photography identified employment allocations and housing allocations at Harwich with potential to support suitable habitat for qualifying birds. Habitats present included grassland and agriculture land. All other housing and employment allocations are small and located within the existing settlement, or comprise unsuitable habitat, such as scrub or hard standing.

4.107 As a result, there is currently a lack of evidence to determine the likelihood of employment development at Mistley Port and Marine damaging or destroying habitat within the SPA and Ramsar, or for loss of offsite functional land with respect to the employment allocations and housing allocations at Harwich. Further assessment of the site allocations within Tendring is

recommended as part of the Appropriate Assessment stage to determine the potential for adverse effects on integrity either alone or in-combination. The assessment would seek to determine the suitability of offsite habitats based on a number of parameters, for example including size, proximity to the SPA, and the presence or absence of negative factors.

4.108 **In summary, the loss of offsite habitat as a result of allocations within the Tendring District Local Plan Section 2, has the potential to result in likely significant effects on the qualifying bird species of the Stour and Orwell Estuaries SPA and Ramsar as a result of the loss of offsite foraging habitat. Further consideration is required at the Appropriate Assessment stage to determine whether the loss of offsite habitat would adversely affect site integrity, either alone or in-combination**.

Non-toxic contamination

4.109 The SPA and Ramsar sites support salt marsh and inter tidal habitats which qualifying bird population are dependent upon, and which are considered vulnerable to impacts from non-toxic contamination, including dust from construction works and changes in water quality and quantity which can lead to algal blooms reducing the extent and quality of feeding habitat. Potential for non-toxic contamination associated with changes in water quality and quantity (e.g. nutrient enrichment) is assessed separately under the specific section below.

4.110 Examination of site allocations identified the location of employment allocations at Harwich (SAE1) and Mistley (SAMU1) which lie adjacent to the SPA and Ramsar. As a result, there is potential for construction and operation works to generate dust which could smother and degrade habitats upon which qualifying bird species depend. As a result, **Likely significant effects on the Stour and Orwell Estuaries SPA and Ramsar site cannot be ruled out as a result of non-toxic contamination and this requires further assessment at the Appropriate Assessment stage to determine whether the Plan would result in adverse effects on integrity, either alone or in-combination**.

Non-physical disturbance

4.111 A total of five employment sites are located in close proximity or adjacent to the Stour and Orwell Estuaries SPA and Ramsar Site (SAE1 and SAMU1) and therefore have an increased risk of resulting in non-physical disturbance to the SPA/Ramsar through activities such as lighting, noise, human presence, and changes to the landscape within birds the visual fields.

4.112 The potential for likely significant effects to occur is limited to some extent by the current levels of non-physical disturbance associated with existing employment activity at each of these locations. Nevertheless, whilst bird populations at these locations are likely to be habituated to on-going regular levels of noise at least to some extent, the introduction of new or irregular activities (e.g. new construction operations) in the absence of appropriate mitigation has the potential to result in likely significant effects through bird disturbance. Therefore, **Likely significant effects on the Stour and Orwell Estuaries SPA and Ramsar site cannot be ruled out as a result of non-physical disturbance and this requires further assessment at the Appropriate Assessment stage to determine whether the Plan would result in adverse effects on integrity, either alone or in-combination.**

Air pollution

4.113 Small areas of the Stour and Orwell Estuaries SPA and Ramsar site are situated within 200m of a strategic road, including the A137 and A120. The total proportion of the SPA within 200m is <1% of the site. As described in the Screening assumptions, motorways and A roads within 200m of a sensitive receptor have potential to adversely affect the habitat composition and soil chemistry of the site through deposition of airborne pollutants, particularly Nitrogen. Increased air pollution in proximity to the SPA and Ramsar site may result in the degradation of habitat types upon which the qualifying features depend. Coastal dune habitat used by breeding little terns was highlighted by Natural England's SIP as a key habitat vulnerable to nitrogen deposition.

4.114 Habitats present within 200m of the A137 and A120 include mudflats and saltmarsh. Mudflats, which comprised the majority of habitat within 200m, are not considered vulnerable to the effects of air pollution at these locations due to twice daily flushing by tidal waters. In addition, the effect of air pollution would not expect to noticeably affect the feeding resource of benthic invertebrates upon which SPA birds depend.

4.115 The APIS website indicates that the current nitrogen deposition levels at the site are below critical load ranges of 20-30 N/ha/year. Small areas of salt marsh occur within 200m of the roads comprising c3ha in total, the majority of which is located to the north of the A120 at Harwich Port. The corresponding SSSI unit 9 is reported as being in favourable condition in this area and given the existing and established presence of extensive industrial development at this location, and the small area of saltmarsh within 200m of the road, **no likely significant effects are predicted as a result of air pollution on the Stour and Orwell Estuaries SPA and Ramsar site either alone or in-combination**.

Recreation

4.116 The SPA and Ramsar site supports large numbers of waterbird assemblages, as well as breeding and overwintering birds, which are subject to direct disturbance and damage to features of importance, such as feeding and roosting sites, from a range of land and water-based activities. These include walking, water sports, fishing, wildfowling and military overflight training. In addition to this, there is potential for damage to qualifying plant species populations of the Ramsar site to occur as a result of trampling.

4.117 Based on discussions between Natural England and Footprint Ecology, who are in the process of producing a detailed study on visitors to the Stour and Orwell Estuary, a zone of Influence of 13km has been applied to identify housing with potential to impact the SPA and Ramsar as a result of recreational pressure. Although visitor survey work undertaken by Colchester Borough Council indicates that a large proportion of visitors to the Stour and Orwell Estuary travel between 0-8km a precautionary approach based on 13km was taken. Housing allocations identified within 13km included all proposed allocations with the exception of sites south of the B1027 in Clacton-on-Sea. Allocations within 15km may have a significant effect particularly with respect to parts of the SPA and Ramsar to the south of the Stour Estuary.

4.118 Areas at the Orwell Estuary are not as easily accessible from Tendring, particularly during winter when the ferry is not operational and the potential for disturbance to wetland birds is greatest, and therefore recreational impacts to this area as a result of housing allocations within Tendring are unlikely. As the distance used at this stage is being finalised via discussions with relevant parties, including Colchester BC and Natural England, a review of distances will be undertaken at the Appropriate Assessment stage to ensure conclusions are robust.

4.119 Further assessment is required at the Appropriate Assessment stage to determine whether the Tendring District Local Plan Section 2 will result in adverse effects on integrity. Mitigation in the form of a Recreational Avoidance and Mitigation Strategy (RAMS) and appropriate policy safeguards will be required to provide certainty that mitigation can prevent impacts to integrity.

4.120 **Housing allocations across much of Tendring have the potential to result in likely significant effects on the Stour and Orwell Estuaries SPA and Ramsar as a result of recreational pressure, and therefore further assessment is required at the Appropriate Assessment stage to determine whether Section 2 of the Tendring District Local Plan will result in adverse effects on integrity, either alone or in-combination**.

Water quantity and quality

4.121 The SPA and Ramsar site support qualifying bird species, which are reliant on coastal and estuarine habitat. These habitats are water-dependent and are therefore susceptible to changes in water quantity and quality and have the potential to affect the integrity of the European sites.

4.122 The HGWCS undertaken in 2009 by the Haven Gateway Partnership examined potential issues arising from increased demand for water supply and wastewater discharge as a result of

development in a number of local authorities, including the North Essex Authorities. In regards to water quantity the 2009 study found that the sub-region water supply zone supported a number of water abstraction licences of which some were not fully utilised with a surplus of 66.5Ml/d identified when the licensed abstraction volume (CAMS) was compared against the average volume abstracted.

4.123 The HGWCS was updated in 2017 and concluded that "*Based on the growth assessed, the WCS has concluded that, allowing for the planned resource management of Affinity Water's supply areas in the District, the water supply companies would have adequate water supply to cater for growth over the plan period*". As a result, the Tendring Section 2 Local Plan will not result in LSE on the SPA and Ramsar as a result of water capacity.

4.124 Increased housing specified in the Publication Local Plan Section 2 is likely to increase the demands on wastewater treatment in the District. The 2017 HGWCS confirms that "*Five WRCs (Clacton-Holland Have, Colchester, Jaywick New, Manningtree and Wrabness-Wheatsheaf Close) do not have sufficient capacity to accept all future development proposed within the plan period. Therefore solutions are required in order to accommodate the growth to ensure that the increased wastewater flow discharged does not impact on the current quality of the receiving watercourses, their associated ecological sites and also to ensure that the watercourses can still meet with legislative requirements*". Both the Manningtree and Wrabness-Wheatsheaf Close WRCs discharge into the Stour and Orwell Estuaries SPA and Ramsar sites.

4.125 There is potential for in-combination effects to occur in relation to Tendring and Colchester Borders Garden Community (SP8) which is included in the Strategic Section 1 for Local Plans and Tendring District Local Plan. The proposed Garden Community will lie within the District of Tendring and Borough of Colchester, and as a result has the potential to result in LSE in relation to Stour and Orwell Estuaries SPA and Ramsar.

4.126 **The increased demand for water treatment in Harwich and Dovercourt water catchment, and the proximity of employment allocations at Harwich and Mistley, has the potential to result in likely significant effects on the SPA/Ramsar as a result of changes in water quality either alone or in-combination, and therefore further consideration is required at the Appropriate Assessment stage.**

Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site

Physical loss and damage

4.127 The Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar boundaries are concurrent with the Essex Estuaries SAC within this part of Essex, located along the southwest edge of tendring. No development is proposed within the boundaries of the SPA and Ramsar site and it will therefore not be affected by onsite physical loss and damage.

4.128 The SPA and Ramsar site supports transient species that use offsite habitat. This includes species such as golden plover and dark-bellied Brent goose, which rely on offsite pastures and arable fields. Natural England has advised that whilst the majority of qualifying coastal bird species typically forage within 2km of a designated site, golden plover and lapwing will forage up to 15km. As a result, there is potential for the Tendring District Local Plan Section 2 to result in physical loss and damage to offsite habitat of importance to SPA and Ramsar bird species.

4.129 It is not expected that development will result in fragmentation or severance of habitats given the allocations are proposed within or adjacent to existing settlements. However, the loss of arable and pasture may reduce the extent of foraging and loafing habitat upon which qualifying bird species depend.

4.130 Preferred examples of offsite foraging habitat for qualifying bird species would typically be expected to include larger fields located close to the estuary, and prone to flooding, where levels of existing disturbance are low, and which support a degree of openness and connectivity to the estuary.

4.131 Housing and employment allocations within Tendring are typically located several kilometres from the Colne SPA and Ramsar site and therefore unlikely to be important for qualifying birds. The housing allocation proposed at Brightlingsea is located c.260m from the SPA and Ramsar but the site is considered of low suitability for qualifying bird species. A review of aerial photography indicates that it supports rough grassland close to adjacent tree lines and housing, and it has a prevalence of informal footpaths, which suggest that the site is subjected to high levels of recreational disturbance from adjacent housing.

4.132 Two large mixed use allocations located to the west of Clacton-on-Sea are c.3km from the SPA and Ramsar, and whilst this distance is likely to significantly reduce the potential for these sites to be important for SPA and Ramsar birds, given the openness and the size of these areas, without more detailed assessment, it is uncertain whether their loss would result in likely significant effects on the SPA and Ramsar birds.

4.133 Therefore, there is currently a lack of evidence to determine the importance of offsite functional land. As a result, further assessment of site allocations within 15km of the Colne SPA and Ramsar is recommended as part of the Appropriate Assessment stage to determine the potential for adverse effects on integrity, either alone or in-combination. The assessment should seek to determine the suitability of offsite habitats based on a number of parameters, for example including size, habitat type, proximity to the SPA, and the presence or absence of negative factors such as edge effects and existing levels of disturbance.

4.134 **The loss of offsite habitat as a result of allocations within the Tendring District Local Plan Section 2 has the potential to result in likely significant effects on qualifying SPA/Ramsar bird species as a result of the loss of foraging habitat upon which such bird species may depend, and will therefore require further consideration at the Appropriate Assessment stage.**

Non-toxic contamination

4.135 The SPA and Ramsar support birds which depend on the extent and quality of saltmarsh and intertidal habitats. These habitats are considered vulnerable to impacts from non-toxic contamination, including dust from construction works and changes in water quality and quantity which can lead to algal blooms. Impacts associated with changes in water quality and quantity are considered separately under the relevant sections below, whilst remaining impact types, including dust contamination are assessed herein.

4.136 Examination of proposed housing and employment allocations identified no development proposed within or adjacent to the SPA/Ramsar. A single development, Land South of Robinson Road, Brightlingsea is proposed 260m from the SPA/Ramsar. However, as the development is small and adjacent to existing residential development the potential for non-toxic contamination events are considered unlikely. Furthermore, given the distance of the allocation from the European site, it is unlikely that dust emitted from the development would reach the SPA/Ramsar in any notable quantity.

4.137 **No likely significant effects to the Colne Estuary SPA and Ramsar are therefore predicted in relation to non-toxic contamination either alone or in-combination**.

Non-physical disturbance

4.138 A single housing allocation at Brightlingsea, which will support 100 houses, is located 260m from the SPA and Ramsar site. The mudflats and estuarine habitat within 500m of the proposed development are suitable for a number of qualifying bird species, which are vulnerable to impacts from non-physical disturbance. Although there is potential for adverse effects to occur, the impacts are considered to be unlikely due to the relatively small scale of development and the occurrence of intervening habitats and built environment which would act to limit impacts such as noise. Furthermore, any construction traffic would access the site from the north and away from the SPA/Ramsar. In light of the absence of a clear source-pathway-receptor between the development site and the SPA, and the distance involved, no perceptible or significant level of

disturbance to the SPA/Ramsar qualifying features would be expected as a result of the housing allocation.

4.139 **No likely significant effects for Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar are predicted in relation to non-physical disturbance, either alone or in-combination.**

Recreation

4.140 The SPA and Ramsar site are subject to the same land and water-based activities as Essex Estuaries SAC. Qualifying species of the SPA and Ramsar site are vulnerable to these activities, as a result of direct disturbance and damage to features of importance to these species, such as feeding and roosting sites.

4.141 Damage from trampling is also considered a potential threat to qualifying plant species of the Ramsar site. However the likelihood of this occurring is limited to some extent by a lack of accessibility to key habitats, such as saltmarsh as a result of difficult terrain and frequent flooding. The provision of permissive footpaths adjacent to pastures and agricultural fields was identified using OS mapping and aerial photography, and it is likely that these footpaths would focus disturbance to small areas of the European site.

4.142 Measures have been implemented by Natural England and the Essex Wildlife Trust who manage the Colne Estuary NNR and Colne Point Nature Reserve, which lie within the SPA and Ramsar site, to restrict access to permit holders only at Brightlingsea Marshes and Essex Wildlife Trust members only at Colne Point Nature Reserve. Dog walking is also prohibited at Colne Point Nature Reserve, which supports an important breeding site for little terns. These measures are likely to contribute towards reducing the impacts of recreational disturbance on the SPA/Ramsar but it is unclear whether these measures are actively enforced and to what extent they are effective.

4.143 In 2012, visitors surveys were undertaken by Colchester BC on behalf of Tendring District and Braintree District to survey and monitor visitors in and around the North Essex Authorities. At Essex Estuaries, two separate visitor surveys were undertaken in November 2011 and 2012 at Brightlingsea Marshes and Cudmore Country Park. Colchester BC as part of their Section 2 HRA Screening assessment recommended a ZOI of 24km for this site in light of the study findings and conclusions. This ZOI was later reduced to 9.7km following updated surveys of the Colne Estuary in winter 2018. Nevertheless, the distance encompasses much of Tendring and therefore population increases associated with housing allocations within the Tending District Local Plan Section 2, has the potential to increase visitor pressures at the Colne Estuary SPA and Ramsar site.

4.144 Housing allocations in closest proximity include those at Brightlingsea, Clacton-on-Sea and Weeley. These allocations are likely to have increased potential to have a significant effect to parts of the SPA and Ramsar site to the east of the Colne Estuary. Areas to the west of the Colne Estuary are not easily accessible from Tendring, particularly during winter when the ferry is not operational and the potential for disturbance to wetland birds is greatest. Therefore recreational impacts to this area as a result of housing allocations within Tendring are unlikely.

4.145 Despite the existing mitigation and control measures already in place, there is a lack of certainty as to whether these measures are sufficient to negate LSEs associated with recreation. Therefore, in line with a precautionary approach, **further assessment is required at the Appropriate Assessment stage to determine whether increased recreational pressures associated with the Tendring District Local Plan Section 2 would be likely to adversely affect the integrity of the SPA and Ramsar**.

Water quantity and quality

4.146 The Colne SPA and Ramsar site support breeding little tern, overwintering water birds, estuarine habitats including saltmarsh, and scarce plants and invertebrates. These qualifying features are dependent on water and are therefore likely to be vulnerable to changes in water quantity and

quality. An increase in demand for water and water treatment from development within Tendring may therefore have potential to result in significant effects on the SPA and Ramsar site.

4.147 The HGWCS undertaken in 2009 by the Haven Gateway Partnership examined potential issues arising from increased demand for water supply and wastewater discharge as a result of development in a number of local authorities, including the North Essex Authorities. In regards to water quantity the 2009 study found that the sub-region water supply zone supported a number of water abstraction licences of which some were not fully utilised with a surplus of 66.5Ml/d identified when the licensed abstraction volume (CAMS) was compared against the average volume abstracted. The Lower Colne forms part of the SAC; however the study confirmed that there were no known issues in relation to water capacity and supply at the abstraction site at this location.

4.148 The most recent 'Tendring Water Cycle Study' was completed in 2017 and concluded that "*Based on the growth assessed, the WCS has concluded that, allowing for the planned resource management of Affinity Water's supply areas in the District, the water supply companies would have adequate water supply to cater for growth over the plan period*". As a result, the Tendring Section 2 Local Plan will not result in LSE on the SAC as a result of water capacity.

4.149 Increased housing specified in the Publication Local Plan Section 2 is likely to increase the demands on wastewater treatment in the District. The 2017 HGWCS confirms that "*Five WRCs (Clacton-Holland Have, Colchester, Jaywick New, Manningtree and Wrabness-Wheatsheaf Close) do not have sufficient capacity to accept all future development proposed within the plan period. Therefore solutions are required in order to accommodate the growth to ensure that the increased wastewater flow discharged does not impact on the current quality of the receiving watercourses, their associated ecological sites and also to ensure that the watercourses can still meet with legislative requirements*".

4.150 There is potential for in-combination effects to occur in relation to Tendring and Colchester Borders Garden Community (SP8) which is included in the Strategic Section 1 for Local Plans and Tendring District Local Plan. The proposed Garden Community will lie within the District of Tendring and Borough of Colchester, and as a result has the potential to result in LSE in relation to the Colne Estuary SPA and Ramsar sites.

4.151 **Further assessment is required at the Appropriate Assessment stage, including consultation with the Environment Agency and water treatment companies, together with a detailed review of potential mitigation and safeguard measures, to determine whether the Tendring District Local Plan Section 2 would be likely to result in adverse effects on the integrity of the Colne Estuary SPA and Ramsar site as a result of changes in water quality**.

Abberton Reservoir SPA and Ramsar site

Physical loss / damage

4.152 Abberton Reservoir is located approximately 5km to the west of Tendring, within Colchester Borough. No development is proposed within the boundaries of the SPA and Ramsar site and will therefore not be affected by onsite physical loss and damage. However, the site supports transient bird species that use offsite habitat. Discussions with Natural England have indicated that the majority of bird species are not reliant on habitats beyond 2km from the SPA. However, the site supports wintering golden plover and lapwing is also listed as being part of the designated bird assemblage. These species can rely on habitats which extend considerably further from the SPA. Natural England has advised that suitable habitat within 15km of the SPA will need consideration as to whether it is important in maintaining the SPA populations for these species.

4.153 The proposed Tendring and Colchester Borders Garden Community (policy SP8) is located approximately 6km to the northeast of Abberton Reservoir SPA/Ramsar and as a result, there is

potential for the Local Plan Section 2 to result in physical loss and damage to offsite habitat of importance to golden plover and lapwing.

4.154 It is not expected that development will result in fragmentation or severance of habitats given the allocations are proposed within or adjacent to existing settlements, however the loss of arable and pasture may reduce the extent of foraging and loafing habitat upon which qualifying bird species depend.

4.155 Preferred examples of offsite foraging habitat for golden plover and lapwing would typically be expected to include larger fields supporting short-grazed grasslands located closer to the estuary, and prone to flooding, where levels of existing disturbance are low, and which support a degree of openness and landscape habitat connectivity to the estuary.

4.156 Therefore, there is currently a lack of evidence to determine the importance of offsite functional land. As a result, further assessment of site allocations within 15km of the Abberton Reservoir SPA and Ramsar is recommended as part of the Appropriate Assessment stage to determine the potential for adverse effects on integrity, either alone or in-combination. The assessment should seek to determine the suitability of offsite habitats based on a number of parameters, for example including size, habitat type, proximity to the SPA, and the presence or absence of negative factors such as edge effects and existing levels of disturbance.

4.157 **The loss of offsite habitat as a result of allocations within the Local Plan, has the potential to result in likely significant effects on Abberton Reservoir SPA/Ramsar as a result of the loss of foraging habitat upon which golden plover and lapwing may depend, and therefore further consideration at the Appropriate Assessment stage is required.**

Recreation

4.158 The visitor survey completed by Colchester BC reported that 65% of the groups surveyed at Abberton during June 2013 were fairly local travelling 10 miles (c. 16km) or less to Abberton Reservoir. Just over 51% lived in Colchester Borough. 52% of visitors at Abberton Reservoir said that they visited because the site is close to home. However, only 14% of visitors to Abberton Reservoir travelled under 5 miles (8km). In light of the survey findings, a Zone of Influence of 13km was used by Colchester BC in the HRA Screening of their Section 2 Local Plan. This has also been used as the ZOI for the HRA Screening of the Strategic Section 1 for Local Plans.

4.159 A review of allocations within 15km of Abberton Reservoir has identified the Tendring and Colchester Borders Garden Community and Robinson Road at Brightlingsea. The SPA is located outside of Tendring to the south west of Colchester and is separated from Brightlingsea by the Colne Estuary, and therefore actual travel distance between the sites is approximately 27km which is likely to considerably reduce the level of recreational visits contributed by this allocation. The Garden Community includes 3,000 dwellings to the east of Colchester, approximately c.6km to the east of Abberton Reservoir. The Garden Community is located within the zone of influence for Abberton Reservoir and is therefore likely to represent the primary potential source of additional recreational visits to Abberton Reservoir SPA/Ramsar.

4.160 The visitor study indicated that no-one at Abberton Reservoir visited to walk their dogs as dogs are not permitted on the reserve. This is notable because dogs and dog walking typically represent one of the most significant disturbance factors to sites designated for birds.

4.161 Importantly, Abberton Reservoir SPA and Ramsar site, is already subject to a strong visitor management regime and the Site Improvement Plan for Abberton Reservoir states that disturbance at ground level is well controlled by Essex & Suffolk Water. In addition, the site is well managed by the Essex Wildlife Trust which implements measures to reduce and manage disturbance, such as provision of an education visitor centre, paths, screens, hides and areas which are not accessible to the public. All of these are overseen by the presence of on-sight wardening.

4.162 **The Tendring District Local Plan Section 2 is not predicted to result in likely significant effects on Abberton Reservoir SPA or Ramsar as a result of recreational pressure, either alone or in-combination**.

Blackwater Estuary SPA/Ramsar

Physical loss / damage

4.163 The Blackwater Estuary SPA/Ramsar is located approximately 5km to the west of Tendring, within Colchester Borough. No development is proposed within the boundaries of the SPA and Ramsar site and it will therefore not be affected by onsite physical loss and damage. However, the site supports transient bird species that use offsite habitat. Discussions with Natural England have indicated that the majority of bird species are not reliant on habitats beyond 2km from the SPA. However, the site supports wintering golden plover, whilst lapwing is also listed as being part of the designated bird assemblage. These species can rely on habitats which extend considerably further from the SPA. Natural England has recommended that suitable habitat within 15km of the SPA be considered as to whether it is important in maintaining the SPA populations for these species.

4.164 The proposed Tendring and Colchester Borders Garden Community (Policy SP8) is located approximately 10km to the northeast of Blackwater Estuary SPA/Ramsar and the large allocations at Clacton-on-Sea are located approximately 14km to the east. As a result, there is potential for the Local Plan Section 2 to result in physical loss and damage to offsite habitat of importance to golden plover and lapwing.

4.165 It is not expected that development will result in fragmentation or severance of habitats given the allocations are proposed within or adjacent to existing settlements and do not separate the SPA/Ramsar from other areas of suitable coastal habitat. However, the loss of agricultural fields may reduce the extent of foraging and loafing habitat upon which lapwing and golden plover depend.

4.166 Preferred examples of offsite foraging habitat for golden plover and lapwing would typically be expected to include larger fields supporting short-grazed grasslands located closer to the estuary, and prone to flooding, where levels of existing disturbance are low, and which support a degree of openness and landscape habitat connectivity to the estuary.

4.167 Therefore, there is currently a lack of evidence to determine the importance of offsite functional land. As a result, further assessment of site allocations within 15km of Blackwater Estuary SPA / Ramsar is recommended as part of the Appropriate Assessment stage to determine the potential for adverse effects on integrity, either alone or in-combination. The assessment should seek to determine the suitability of offsite habitats based on a number of parameters, for example including size, habitat type, proximity to the SPA, and the presence or absence of negative factors such as edge effects and existing levels of disturbance.

4.168 **The loss of offsite habitat as a result of allocations within the Tendring District Local Plan Section 2 has the potential to result in likely significant effects on the Blackwater Estuary SPA/Ramsar as a result of the loss of foraging habitat upon which golden plover and lapwing may depend, and therefore further consideration at the Appropriate Assessment stage is required.**

Outer Thames Estuary SPA

Recreational Disturbance

4.169 It is acknowledged that the qualifying species of the Outer Thames Estuary SPA are susceptible to disturbance. However, it is necessary to consider the likelihood of population growth resulting from the Shared Strategic Plan resulting in a Likely Significant Effect on the qualifying features of the SPA. The SPA comprises an area of open sea covering c.3,924km^2, extending over 40km from the coastline, and reaching as far north as Great Yarmouth. The boundary of this SPA is based on the foraging area of the qualifying species, and notably excludes most of the coastal water in close proximity to Tendring.

4.170 Whilst feeding in the open sea, red throated diver and tern species are highly mobile, covering vast distances, whereas watercraft would be expected to remain relatively close to the coast. Given the mobility of these species and the visibility afforded to them while feeding and loafing at sea they are unlikely to be disturbed by watercraft to any level approaching a significant effect, being able to easily maintain a distance they are comfortable with. Furthermore, the increase in usage of watercraft is unlikely to result in any discernible increase in the numbers, distribution or frequency of watercraft navigating these waters, particularly when considered in light of the scale of the SPA and the existing usage of this area as commercial fishing and shipping waters.

4.171 Therefore, based on a detailed understanding of the usage of the site by its qualifying species, and in light of the negligible likelihood of a significant effect occurring, **the Tendring Local Plan Section 2 would not result in Likely Significant Effects on the Outer Thames Estuary SPA, either alone or in-combination**.

Summary of Screening conclusions

4.172 **Table 4.2** below summarises the Screening conclusions reached in this HRA. Those LSEs shown with no colour were screened out in line with the Screening assumptions provided in Section 3. Impact types for which a conclusion of 'No Likely Significant Effect' was reached are shown in green. Those potential impacts where LSEs cannot be ruled out are shown in orange and these are considered in more detail at the Appropriate Assessment stage in Section 5.

Table 4.2: Summary of Screening conclusions

	Physical damage/ loss of habitat	Non-physical disturbance	Non-toxic Contam-ination	Air pollution	Impacts of recreation	Water quantity and quality
Essex Estuaries SAC	No LSE	Screened out	No LSE	Screened out	Uncertain – proceed to AA	Uncertain – proceed to AA (water quality only)
Hamford Water SAC	Uncertain – proceed to AA (offsite only)	No LSE	No LSE	Screened out	Uncertain – proceed to AA (offsite only)	No LSE
Hamford Water SPA and Ramsar	Uncertain – proceed to AA (offsite only)	No LSE	No LSE	Screened out	Uncertain – proceed to AA	No LSE
Stour and Orwell Estuaries SPA and Ramsar	Uncertain – proceed to AA	Uncertain – proceed to AA	Uncertain – proceed to AA	No LSE	Uncertain – proceed to AA	Uncertain – proceed to AA (water quality only)

	Physical damage/ loss of habitat	Non-physical disturbance	Non-toxic Contam-ination	Air pollution	Impacts of recreation	Water quantity and quality
Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar	Uncertain – proceed to AA (Offsite only)	No LSE	No LSE	Screened out	Uncertain – proceed to AA	Uncertain – proceed to AA (water quality only)
Outer Thames Estuary SPA	Screened out	Screened out	Screened out	Screened out	No LSE	Screened out
Abberton Reservoir SPA and Ramsar	Uncertain – proceed to AA (Offsite only)	Screened out	Screened out	Screened out	No LSE	Screened out
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar	Uncertain – proceed to AA (Offsite only)	Screened out	Screened out	Screened out	Screened out	Screened out
Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Deben Estuary SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Alde–Ore Estuary SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	No LSE	No LSE
Alde, Ore and Butley	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out

	Physical damage/ loss of habitat	Non-physical disturbance	Non-toxic Contam-ination	Air pollution	Impacts of recreation	Water quantity and quality
Estuaries SAC						
Orfordness – Shingle Street SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Sandlings SPA	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out
Staverton Park and The Thicks, Wantisden SAC	Screened out	Screened out	Screened out	Screened out	Screened out	Screened out

5 HRA Screening Conclusion

5.1 The HRA Screening of the Tendring District Local Plan Section 2 has identified several Likely Significant Effects to European Sites which require further consideration at the Appropriate Assessment stage to determine whether they will result in adverse effects on site integrity, and to identify mitigation measures which would ensure adverse effects on integrity are avoided and enable adoption of the Local Plan Section 2.

5.2 Policies for which likely significant effects could not be ruled out were:

- LP 1 Housing supply.
- PP 7 Employment allocations.
- PP 8 Tourism.
- PP 10 Camping and touring caravan sites.
- PP 11 Holiday parks.
- LP 9 Traveller sites.
- Specific allocation policies for housing and employment in Section 9 of Plan.

5.3 The Likely Significant Impacts identified are summarised below:

- **Abberton Reservoir SPA/Ramsar** - physical loss/damage (offsite functional land only).
- **Blackwater Estuary SPA / Ramsar** - physical loss/damage (offsite functional land only).
- **Essex Estuaries SAC** – impact of recreation and water quality.
- **Hamford Water SAC** – Physical loss/damage (offsite functional land only), and impact of recreation.
- **Hamford Water SPA and Ramsar** – physical loss/damage (offsite functional land only) and impact of recreation.
- **Stour and Orwell Estuaries SPA and Ramsar** – physical loss/damage (both direct and offsite functional land), non-toxic contamination, impact of recreation, water quality, and non-physical disturbance.
- **Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar** – physical loss/damage (offsite functional land), impact of recreation and water quality.

5.4 Proposed port development at Mistley (SAE1 and SAE2) has the potential to result in the direct loss and damage of the Stour and Orwell Estuaries SPA and Ramsar as a result of dredging and/or encroachment during construction and therefore further consideration is required at the Appropriate Assessment stage to determine whether existing policy safeguards are sufficiently robust to ensure that these policies will be delivered without adverse effects on integrity, and/or whether additional avoidance and mitigation safeguards are required.

5.5 In addition, all of the proposed allocations within the Tendring District Local Plan Section 2 occur within the zone of influence of one or more of the above sites, and therefore have the potential to result in the loss and damage of offsite functionally linked habitat used by qualifying SPA/Ramsar

bird species. It is recommended that at the Appropriate Assessment a detailed review of each allocation is undertaken to determine the potential importance of each site for SPA/Ramsar birds. This should include an assessment of site specific parameters, including size, distance from SPA/Ramsar sites and component habitats. This process will identify the need for any potential further requirements, such as site specific bird surveys, and will inform appropriate mitigation such as a commitment to project-level HRA, and modification of policy wording to provide sufficient safeguards to ensure loss of habitat would not adversely affect the integrity of European sites.

5.6 Increased recreation from land and water-based activities, as a result of increased housing within the Local Plan Section 2 has the potential to cause likely significant effects to European sites both alone and in-combination with the Shared Strategic Section 1 for Local Plans. Recreational pressures on coastal European sites is a complex issue and is likely to require a strategic approach across the North Essex Authorities to ensure that adverse effects on integrity can be avoided. This has been recognised by the North Essex Authorities and it is anticipated that the most appropriate platform through which to address this impact is via the Appropriate Assessment of the Strategic Section 1 for Local Plans which is assessing the strategic effect of the North Essex Authorities in-combination. This approach is likely to require close liaison with Natural England to agree the most suitable forms of mitigation and avoidance. Initial discussions with Natural England have identified that production of a cross-authority Strategic Mitigation Strategy is likely to be required. This would set out a multi-faceted approach to mitigating recreational impacts based on accepted Zone of Influence, including:

(i) Provision of natural open space and green infrastructure at development sites.

(ii) Increased provision of on-site visitor control methods such as provision of infrastructure, education and wardening.

(iii) Commitment to an appropriate monitoring and feedback loop to ensure a system is in place to trigger remedial measures if monitoring identifies or predicts any significant effects.

5.7 The increased demand for water supply and treatment has the potential to result in likely significant effects on European sites as a result of changes in water quality. It is recommended that further consultation with the Environment Agency and water companies is required to address potential impacts in relation to water and whether this will result in adverse effects on the integrity of European sites. If adverse effects are predicted, the implementation of mitigation measures should be considered, including the upgrade of infrastructure and efficiency measures as required. In addition to this, a detailed review of potential mitigation and safeguard measures should be identified for potential inclusion within the Local Plan Section 2.

5.8 The approach taken by Tendring District Council in addressing the key issues, particularly with regards to working alongside the other Essex Authorities in relation to strategic growth, was fully advocated upon completion of the HAR Screening Stage. Indeed, the coordinated and strategic approach being promoted was deemed to be the most appropriate and pragmatic approach in ensuring that the Tendring District Local Plan Section 2 is sound. The Screening Stage concluded that, through the iterative process of the Appropriate Assessment stage, providing key recommendations and mitigation requirements were fully developed, were included within the Local Plan, and could be successfully implemented, it would be possible to ensure no adverse effects on the above sites would occur as a result of physical loss/damage (offsite), recreation and water quantity/quality, either alone or in-combination.

6 Appropriate Assessment

6.1 Following the Screening stage, if likely significant effects on European sites are unable to be ruled out, the plan-making authority is required under Regulation 105 of the Habitats Regulations 2017 to make an 'Appropriate Assessment' of the implications of the plan for sites, in view of their conservation objectives. EC Guidance[30] states that the Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other plans or projects) on the integrity of European sites with respect to their conservation objectives and to their structure and function. At this Appropriate Assessment Stage, the role and effectiveness of mitigation and avoidance measures were fully considered in determining whether adverse effects on integrity would ensue.

6.2 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. those Annex 1 habitats, Annex II species, and Annex 1 bird populations for which it has been designated) and to ensure their continued viability. A high degree of integrity is considered to exist where the potential to meet a site's conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support.

6.3 An Appropriate Assessment has therefore been undertaken for all of the European sites in Tendring (+20km) where likely significant effects from the Section 2 Local Plan were identified (or were not able to be ruled out) during the Screening stage. Potential likely significant effects on the above sites, either alone or in combination with other policies and proposals, were identified for Local Plan Section 2 policies:

- LP 1 Housing supply.
- PP 7 Employment allocations.
- PP 8 Tourism.
- PP 10 Camping and touring caravan sites.
- PP 11 Holiday parks.
- LP 9 Traveller sites.
- Specific allocation policies for housing and employment in Section 9 of Plan.

6.4 The Likely Significant Effects identified for European sites potentially affected are summarised below:

- **Physical loss/damage** – Stour and Orwell Estuaries SPA/Ramsar (direct and offsite functionally linked land); remaining sites, Abberton Reservoir SPA/Ramsar, Blackwater Estuary SPA/Ramsar, Hamford Water SAC, Hamford Water SPA/Ramsar, and Colne Estuaries SPA and Ramsar (offsite functionally linked land only).
- **Recreational impacts** – Essex Estuaries SAC, Hamford Water SAC, Hamford Water SPA/Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary SPA/Ramsar.

[30] Assessment of plans and projects significantly affecting European sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission Environment DG, November 2001.

- **Water quality** – Essex Estuaries SAC, Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar.
- **Non-physical disturbance** – Stour and Orwell Estuaries SPA/Ramsar.
- **Non-toxic contamination** – Stour and Orwell Estuaries SPA/Ramsar

6.5 During the Appropriate Assessment stage, a conclusion needs to be reached as to whether or not the policies or site allocations in the Local Plan Section 2 would adversely affect the integrity of a European site, either alone or in-combination with other plans or projects. As stated in the EC Guidance, assessing effects on site integrity involves considering whether the predicted impacts of the Local Plan policies (either alone or in combination) have the potential to:

- Cause delays to the achievement of conservation objectives for the site.
- Interrupt progress towards the achievement of conservation objectives for the site.
- Disrupt those factors that help to maintain the favourable conditions of the site.
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem.
- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants).
- Interfere with anticipated natural changes to the site.
- Reduce the extent of key habitats or the population of key species.
- Reduce the diversity of the site.
- Result in disturbance that could affect the population, density or balance between key species.
- Result in fragmentation.
- Result in the loss of key features.

6.6 The conservation objectives for each European site (listed in **Appendix 1**) are generally to maintain the site's qualifying features in favourable condition. The Site Improvement Plans for each European site provide a high level overview of the issues (both current and predicted) affecting the condition of the designated features at the site(s) and outline the priority measures required to improve the condition of the features. This information has been drawn on to help to understand what is needed to maintain the integrity of each European site.

6.7 Where likely significant effects were identified or considered uncertain at the Screening stage in relation to a policy in the Local Plan Section 2 (i.e. those policies shaded red or orange in the screening matrices in **Appendix 2**), the potential impacts have been set out below and judgements made (based on the information available) regarding whether the impact will have an adverse effect on the integrity of each European site. Consideration has been given to the potential for existing mitigation within the Plan, or new and additional mitigation measures to be implemented that could reduce the likelihood or severity of the potential impacts, such that there would not be an adverse effect on the integrity of the site.

Physical loss/damage (direct)

Stour and Orwell Estuaries SPA and Ramsar

6.8 Policy PP6 protects Mistley Port and Marine for future employment development. Mistley is located immediately adjacent to the Stour and Orwell Estuaries SPA and Ramsar site. It was identified at the screening stage that development at this site has the potential to result in Likely Significant Effects on the SPA and Ramsar as a result of encroachment during development works and through dredging activities. Both of these events have the potential to result in loss of, or damage to habitats within the SPA and Ramsar, including those upon which qualifying bird species depend for roosting or feeding. Dredging in particular has the potential to increase the rates of erosion and affect tidal range with possible reductions in the extent of available sediment habitats (mud flats and sand banks) of importance for feeding water birds.

6.9 Port growth per se will not necessarily result in adverse effects on the integrity of the SPA or Ramsar, and at present there are no detailed proposals for these sites. The likelihood and magnitude of any impact upon the SPA/Ramsar would depend largely upon the design proposals, including the extent, layout, type and frequency of activities such as dredging.

6.10 The Site Improvement Plan for the SPA recognises it's vulnerability to 'Coastal Squeeze' specifying that sedimentation rates may not be able to keep pace with sea level rise, and reduced exposure (extent and duration) of mudflats/sandflats, thereby decreasing the availability of feeding habitat for qualifying bird species.

Overview of Bird Distribution

6.11 A review of the British Trust for Ornithology (BTO) Wetland Bird Survey (WeBS) Low tides counts for this site provides an overview of the distribution of qualifying bird species across the SPA/Ramsar site. Low tide count data is of primary relevance because it provides a useful indication of the location and distribution of feeding birds. These areas include the mudflats and sandflats most likely to be affected by potential future dredging operations and port development at Mistley, as protected for by Policy PP6. An overview of the distribution of key species and their susceptibility to such operations is provided below:

- Dunlin – The most numerous qualifying species of the SPA/Ramsar with high concentrations of birds distributed relatively evenly throughout the site. Notably lower concentrations occur in the vicinity of Mistley Port. The distribution of this species also indicates that they are not reliant on specific areas for feeding. This species is considered to be of relatively low susceptibility to potential growth of Mistley Port.

- Grey plover - Feeding distribution is evenly dispersed across the estuaries but with higher concentrations at Holbrook Bay, Copperas Bay and to the east of Shotley Marshes. This species is considered of lower susceptibility to the effects of potential port growth at Mistley.

- Redshank – High concentrations of this species occur throughout the SPA with particularly high density of records along the intertidal areas of the Orwell Estuary. Lower concentrations of this species have been recorded in the vicinity of Mistley port and this species is likely to be of low susceptibility to the effects of potential port growth at Mistley.

- Ringed plover – The distribution of this species is primarily focused to the Orwell Estuary, and within the Stour Estuary, higher densities of feeding birds are recorded at Jacques Bay, Holbrook Bay and in the vicinity of Harwich Harbour. This species is considered of lower susceptibility to the effects of potential port growth at Mistley.

- Turnstone – This species is associated with extensive areas of intertidal throughout both estuaries and is therefore likely to be less dependent on any particular area. Relatively low densities have been recorded in areas most likely to be affected by potential Mistley port development and therefore this species is of low susceptibility to the effects of port growth.

- Hen harrier is a wide ranging species during winter and is not reliant upon the inter-tidal habitats which may be affected by any proposed port growth. This species is therefore considered unlikely to be affected by growth at Mistley Port.

- Shelduck – this species is associated with the large bays throughout the estuaries where expansive inter-tidal habitats occur. High numbers occur across the SPA/Ramsar and the even distribution of this species indicates that it is not dependent upon specific locations for feeding. However particularly dense concentrations have been recorded in the vicinity of Mistley Port including along the mudflats most likely to be affected by any increase in dredging activity and therefore this species is considered of increased susceptibility to dredging activities. Albeit, the widespread distribution indicates that providing the extent of suitable feeding habitat is maintained at the Estuary scale, any effects on this species could be successfully avoided and mitigated if required.

- Pintail – Low tide counts for this species indicate increased concentrations of feeding birds at the upper reaches of the Stour in close proximity to Mistley Port and therefore this species is considered of increased susceptibility to the potential effects of port growth.

- Black-tailed godwit – Significant concentrations of this species occur at the upper reaches of both estuaries. The area immediately adjacent to the existing Port is dredged to maintain the existing main channel and is therefore of lower suitability for this species, but high concentrations of birds occur in the vicinity of Mistley Port and are therefore considered susceptible to potential changes as a result of increased dredging.

- In addition to the above species, are those included as part of the qualifying bird assemblage; cormorant and great crested grebe are not dependent upon the intertidal areas and are therefore unlikely to be affected. Curlew and oystercatcher distribution is relatively even across both estuaries indicating that they are not reliant upon specific locations for feeding, but with higher concentrations recorded to the east of New Mistley and New Mill Creek and therefore may be of increased susceptibility to changes in the extent of mudflats occurring away from the immediate Mistley Port area. High concentrations of wigeon and dark- bellied brent goose occur throughout the SPA indicating that these species are not reliant on particular areas for inter-tidal feeding, albeit high numbers have been recorded in the vicinity of Mistley Port and these species are therefore likely to be of increased susceptibility to dredging activities. Knot is associated with the large bays throughout the estuaries with high numbers recorded across the SPA. High densities have been recorded in the vicinity of Mistley Port, but mainly to the west of the Port with low densities occurring along the main channel to the east, between port and sea, and therefore this species is considered of lower susceptibility to dredging activities.

6.12 In summary, based on their recent distribution densities within the SPA, shelduck, pintail, black-tailed godwit, curlew, oystercatcher, dark-bellied brent geese and wigeon are considered to be of increased susceptibility to the potential effects of dredging as a result of increased growth of Mistley Port.

Discussion

6.13 It is important to recognise that these Mistley Port sites already function as a port and marine facility, and therefore the intended types of use and activity at these sites is already part of the baseline. For example, dredging already occurs in the immediate vicinity of the port. Many of the qualifying species discussed above are widely distributed around the Estuaries and are therefore unlikely to be dependent upon the area most likely to be affected by any dredging associated with Mistley Port. Instead, the primary consideration is to ensure that the extent of suitable feeding habitat (sandflats/mudflats) at the estuary scale is maintained.

6.14 Therefore the potential for dredging activities to result in adverse effects on site integrity will depend largely upon the nature of any future proposals. Dredging to increased depths in areas subjected to existing dredging is likely to be less damaging to SPA/Ramsar birds than proposals

which focus dredging activities to new locations, particularly where high tide roosts or favoured feeding areas of qualifying bird population occur. Notably, there is an existing navigation channel between Mistley Port and the open sea located below the existing mean low water mark, and therefore the area likely to be directly affected by dredging activities is likely to be of low importance for SPA/Ramsar birds. The key consideration is therefore whether, and how, any dredging activity would affect existing sandflats/mudflats as a result of altered levels of erosion and tidal range.

6.15 Any detailed proposals for development of Mistley Port would need to carefully consider bird usage of the SPA/Ramsar and design a scheme which ensures impacts to birds are avoided or minimised. Depending upon the extent, design, frequency of use and magnitude of any proposal, this may require a detailed review of existing bird data and completion of specific bird surveys to inform appropriate scheme design and avoidance and mitigation requirements as appropriate.

Avoidance and Mitigation

6.16 The requirement for and design of any avoidance and mitigation would depend largely upon the nature of any future proposals for Mistley Port. The Site Improvement Plan for the SPA specifies that sedimentation rates may not be able to keep pace with sea level rise, and reduced exposure (extent and duration) of mudflats/sandflats, thereby decreasing the availability of feeding habitat for qualifying bird species. As a result, there is potential for dredging activities, when carefully informed and considered, to contribute to creating and maintaining the extent of mudflats and sandflats through targeted sediment deposition.

6.17 Dredging activities and associated erosion elsewhere in the Stour and Orwell Estuaries is currently being tackled through sediment replacement schemes for additional erosion that can be attributed to port development and maintenance dredging. For example, the Harwich Haven Authority's Mitigation and Monitoring Package (MMP) includes habitat enhancement and sediment replacement components which actively seek to mitigate the potentially harmful effects of dredging. Port development associated with Mistley would be of a considerably smaller scale than Harwich, but the measures being implemented at Harwich provide a useful example of the type of appropriate mitigation and avoidance which can be implemented if required. As specified above, the requirement for, and design of, mitigation and avoidance measures would depend largely upon the nature and details of any application for the site.

6.18 Sensitive scheme design and best practice construction and operational measures would be expected to be effective in avoiding or minimising the likelihood of encroachment during construction resulting in loss or damage. For example, design of construction techniques which minimise the requirement for working within the SPA/Ramsar, use of precautionary working method statements, and implementation of best practice measures such as safe storage of chemicals, screening and fencing to prevent encroachment, and timing works to ensure that those with potential to damage habitats occur during periods when target bird species are less likely to be affected.

6.19 It was recommended that any future development proposals be accompanied by a project level appropriate assessment which demonstrates that the construction and operation of the scheme can be achieved without adverse effects on the integrity of the Stour and Orwell SPA and Ramsar sites and sets out any avoidance and mitigation measures which may be required to provide certainty in the avoidance of adverse effects on site integrity.

6.20 Policy PPL4 has been updated to include the following specific safeguards in relation to European Sites:

'*Where proposals for development are likely to significant impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts*'.

Conclusion

6.21 **The Section 2 Local Plan includes specific commitment for any future proposed development to be subjected to a project level HRA and will only be approved where adverse effects on the integrity of European Sites can be avoided or mitigated successfully, and therefore there is sufficient certainty that the Tendring Local Plan Section 2 will not result in adverse effects on integrity of European Sites either alone or in-combination as a result of physical loss/damage.**

Physical loss/damage (offsite habitat)

Hamford Water SAC

6.22 Policies LP 1 Housing supply; PP 7 Employment allocations; PP 8 Tourism; PP 10 Camping and touring caravan sites; PP 11 Holiday parks; and LP 9 Traveller sites were identified at the Screening stage as potentially resulting in Likely Significant Effects on the Hamford Water SAC as a result of loss of offsite habitat of importance for Fisher's estuarine moth. This species utilises grassland habitats outside of the SPA and as a result, the loss of habitat of potential value for this species (e.g. within agri-environment schemes under options HK15, HK16 and HK17), has the potential to adversely affect the integrity of the SPA.

6.23 A review of the site allocations was completed to determine whether the site allocations support habitat types likely to be of importance in contributing to the integrity of the SAC. This included a review of aerial photography, current land management usage, including land within agri-environment schemes, distance from, and connectivity with, the Hamford Water SAC.

6.24 In assessing the suitability of the site allocations for this species, guidance from the Butterfly Conservation Trust[31] which relates to creating new sites for this species, has been relied upon. In summary, sites considered likely to be of potential importance in supporting the Hamford Water SAC population of must meet the following criteria:

- Not be at risk of flooding in the foreseeable future.
- Be located either behind intact coastal defences or above the 5m contour line.
- Provide a minimum of 0.1ha (1000m^2) of suitable habitat, including abundant Hog's fennel and coarse grasses.
- Be located within 4km of the SAC, as beyond this distance populations are likely to be isolated from the SPA.

6.25 The review of site allocations indicated that none of those located within 4km of the SAC are included in agri-environment schemes which would promote the creation and maintenance of the grassland habitats required by this species. A review of aerial photography identified three site allocations as potentially comprising limited areas of grassland habitat suitable for supporting Fisher's estuarine moth. These site allocations, and their potential importance for this species is discussed below:

- ***Stanton Europark*** – This site is located within an urban industrial part of Harwich, located approximately 2km to the north of Hamford Water SAC. Aerial photography indicates that this site is likely to support a mosaic of tall ruderal and ephemeral grassland, scattered and dense scrub, and areas of bare earth. Historic satellite imagery indicates that the site has received frequent ground disturbance in recent years, and as recently as 2012, the site comprised a construction compound as part of an adjacent (now built) residential development. The habitat mosaic present at the site is likely to represent a snapshot of habitat succession as it continues to succeed towards continuous scrub in the absence of

[31] http://butterfly-conservation.org/files/fishers-estuarine-moth---bespoke-cs-guidance.pdf

intervention or management. It is likely that the site supports the common coarse grasses required by the Fisher's estuarine moth but given its recent establishment and continued encroachment by scrub, it is unlikely to support a significant population of the hog's fennel plant upon which the moth depends. Given the site's urban setting, being encompassed by areas with high levels of artificial lighting and sub-optimal habitat, together with the recent establishment of the habitats present, it is highly unlikely that the site provides an important component in maintaining the Fisher's estuarine moth population for which the Hamford Water SAC is designated.

- ***Land West of Low Road*** – This site comprises an arable field at the southern edge of Harwich. A review of aerial satellite and 'street view' photography indicates that whilst the site is largely devoid of the habitat types upon which the Fisher's estuarine moth depends, an area of grassland occurs in the north of the site allocation which may support the plant species upon which the Fisher's estuarine moth depends. The area of grassland is located 1.1km to the north of the SAC and has continuous semi-natural habitat connectivity with the SAC via hedgerows, arable crops and field margins. The area of grassland is no larger than 0.2 ha. Therefore, whilst it is unlikely to be important in maintaining the integrity of the SAC population, it is large enough to potentially support a viable population and therefore uncertainty remains as to whether the loss would result in adverse effects on site integrity. As a result, safeguards are required to provide sufficient certainty that adverse effects on integrity will be avoided. The recommended mitigation measures are described below.

- ***Carless*** – This site is primarily comprised of arable habitat, woodland and dense scrub, located approximately 2.8km from the SAC. Nevertheless, part of the site is adjacent to saltmarsh and coastal grassland habitats which forms part of the Stour and Orwell Estuaries SPA and Ramsar site, and therefore is located close to habitats of potential importance for this species. In addition, aerial imagery indicates that a small area of rough grassland, totalling approximately 0.6ha in area, occurs in the eastern part of the site. As a result, whilst this area is unlikely to be important in maintaining the Hamford Water SAC population due to its small size, there is insufficient certainty to conclude no adverse effect on integrity. As a result, the mitigation described below will be required.

6.26 In summary, small parts of site allocations Land West of Low Road and Carless are considered potentially suitable for supporting the Fisher's estuarine moth. Given that areas with potential suitability for this species represent small proportions of the total developable area available within each site, the mitigation measures described below are considered likely to be sufficiently robust and effective in ensuring that adverse effects on site integrity can be avoided.

6.27 All other site allocations, including Stanton Europark, have been considered of negligible importance for the Fisher's estuarine moth and therefore no adverse effect on the integrity of the Hamford Water SAC in respect of these site allocations is predicted.

Avoidance and Mitigation

6.28 Policy PPL4 has been updated to include the following specific safeguards in relation to European Sites:

'*Where proposals for development are likely to significant impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts*'.

Conclusion

6.29 **In light of the above mitigation safeguards, the Local Plan Section 2 will not result in adverse effects on the integrity on Hamford Water SAC as a result of loss of habitat**.

Other European sites (SPA and Ramsar sites)

6.30 Tendring District Local Plan Section 2 allocates a number of sites for employment and housing development, in areas where qualifying SPA and Ramsar bird species may make use of offsite habitat for foraging, roosting and loafing. Therefore, Policies LP 1 Housing supply; PP 7 Employment allocations; PP 8 Tourism; PP 10 Camping and touring caravan sites; PP 11 Holiday parks; LP 9 Traveller sites; and policies detailing specific housing and employment allocations, were identified during the Screening stage as potentially resulting in likely significant effects on the following SPA and Ramsar sites as a result of physical loss and damage as a result of loss of offsite functionally linked habitat of potential importance to designated bird species:

- Abberton Reservoir SPA/Ramsar
- Blackwater Estuary SPA/Ramsar
- Hamford Water SPA/Ramsar
- Stour and Orwell Estuaries SPA/Ramsar
- Colne Estuaries SPA and Ramsar

6.31 The above sites share many of the bird species for which they are designated, and the site allocations specified within the Local Plan Section 2 typically fall within the ranges of the qualifying bird species associated with several European sites. Therefore, to avoid repetition, the assessment of adverse effects on the integrity of these sites as a result of loss of offsite foraging habitat has been considered on an allocation basis in this section. Nevertheless, where there are differences in the assessment findings between European sites, this is made clear below.

6.32 A desk-based study was undertaken to identify potential impacts from proposed allocations on offsite habitat used by the qualifying bird species. The desk based study has relied on a sequential approach, whereby if a site's suitability for qualifying bird species is considered negligible or low for a specific reason (e.g. distance or habitat type) no further investigations for that allocation were carried out. If, following the initial review of distance and habitat, a site's potential suitability for qualifying bird species could not be ruled out, a more detailed assessment including mapping of existing relevant bird records may be required. The initial desk study included the following components to inform the assessment:

- Identification of the bird species which are susceptible to the loss of the habitat types affected, and ruling out those species unlikely to utilise the habitat types located within the site allocations (e.g. species restricted to marine habitats).
- A review of aerial imagery and Magic Map Application to identify main habitat types and land use within each site allocation and establish their potential value for qualifying birds.
- Recognition of factors likely to affect suitability of allocations for bird species, including openness, size, shape, proximity of negative factors such as tall boundary features and urban environs, and potential existing sources of disturbance.
- Consideration of the site's location within the landscape. For example, is there direct functional connectivity along flight lines between the allocation and the European sites? Is there landscape scale features which would reduce the suitability of the allocation, e.g. urban areas located along flight lines?
- A review of the site's location within flood risk zones, because many of the SPA bird species favour sites which do or do not flood.

Bird habitat preferences

6.33 Bird habitat preferences were cross referenced against the habitat types present within each allocation (taking into account the factors listed above) to determine the suitability of site allocations for qualifying species. Known habitat preferences are summarised in **Table 6.1**

below, which were taken from *Birds of the Western Palearctic*, British Trust for Ornithology. **Table 6.1** also assesses whether each bird species is susceptible to the loss of habitats located within the site allocations.

Table 6.1 : Typical habitat preferences for SPA and Ramsar birds

Bird species	Season	Species habitat preferences (relative to season of designation)[32]	Susceptible to loss of offsite habitat as a result of Pre-submission Local Plan allocations
Avocet	Wintering	Highly specialised needs most often met in lowland maritime regions. A taste for extensive highly saline tracts of still shallow water and flat bare sand, clay, or mud forming islands, ridges, spits, or margins. Also favours smaller and less saline pools, lagoons, muddy arms or deltas, and estuaries, and sheltered muddy tidal flats where ample loose sediment is rich in food organisms. Suitable habitat sometimes formed by artefacts such as saltpans, irrigation waters, polders, floodlands, and even purpose-made scrapes and flashes of water on nature reserves.	No – habitat types affected are of low importance for this species.
Hen harrier	Wintering	In winter, often on arable farmland or rough pastures, or on heathland, coastal sand-dunes, and marshy areas. Habitat selection largely governed by availability of preferred prey species which can be seized in the open; otherwise, not discriminating but choosing spacious, relatively undisturbed landscapes rather than areas in intensive human use.	**Yes – may utilise arable and pasture in areas away from existing human settlements.**
Golden plover	Wintering	In winter, attracted to mown grass or close-grazed pastures, and to stubbles, fallows, harvest fields, and other farmlands of open character, including floodlands. On coast, tends to neglect tidal flats of mud and sand and to prefer open ground above the foreshore, thus sharing more commonly with Lapwings than with other waders. Strong preference for short permanent pasture for feeding where invertebrate (including earthworm) abundance is highest. Will also utilise bare tilled ground but used more frequently for roosting and loafing than feeding.	**Yes – may utilise arable and pasture.**
Ruff	Wintering	Outside breeding season, the need for proximity between feeding, resting, and roosting places is reduced, with local movements of up to c.20km from one another sometimes being undertaken. Although dry grasslands, harvested cornfields, airfields, and dried beds of seasonal water bodies may still be used, preference is much stronger for muddy margins of lakes, pools, ponds, rivers and other watercourses, irrigated levels, floodlands, and marshes; less frequently seashores and tidal mudflats.	**Yes – may utilise arable and pasture.**
Little tern	Breeding	Frequently coast dwelling, more along mainland than on islands, but spreads freely up suitable reaches of major rivers and to some lakes where suitable conditions occur. Strongly prefers linear strips of bare shingle, shell beach, or sand, only just above normal tide or flood limits, and often only a few metres from shallow clear water, saline or fresh, where fish of suitable size can be caught by plunging, without necessity for extended foraging flights.	No – habitat types affected are of low importance for this species.
Shelduck	Wintering	Choice of wetland, especially for breeding, governed by attachment to salt of brackish water, either shallow coasts and estuaries or inland seas and lakes. As a coastal species, typically ranges only 1-2km out to sea and little further inland. Wholly freshwater habitats distant from sea used only sporadically and by odd pairs or single birds. Needs foraging areas of fairly high productivity, especially sands and mud flats over which shallow water alternates with drying out through tides or evaporation.	No – habitat types affected are of low importance for this species.
Redshank	Wintering	Outside breeding season predominately coastal, feeding mainly on unvegetated tracts of mud on estuaries, marine inlets, and sheltered bays, tending to avoid cliffed and rocky or shingly sectors, and beaches of pure sand. When remaining inland, concentrates at points of ample food resources, such as sewage farms and watersides. As much a wading as a ground bird; swims not infrequently.	No – habitat types affected are of low importance for this species.

[32] *The Birds of the Western Palearctic* (Abridged), Concise Edition, (1998), Oxford University Press

Bird species	Season	Species habitat preferences (relative to season of designation)[32]	Susceptible to loss of offsite habitat as a result of Pre-submission Local Plan allocations
Knot	Wintering	Marine intertidal habitat used during rest of year, normally where large flat muddy, sandy, and pebbly beaches uncovered. At high water, often resists being driven back to vegetated zone behind foreshore, and so forced to pack densely at certain spots.	No – habitat types affected are of low importance for this species.
Dunlin	Wintering	Increasingly, towards south of range, favours lowland and grassland coastal habitat, especially in late summer, including salt-marshes, rough grazing land, sand dunes or sandy machair with moist depressions and river flood plains. Presence of surface water, and of unvegetated patches or short grass, moss, or other low herbage essential. Outside breeding season, strongly attracted to broad coastal beaches, especially mudflats rich in invertebrate food accessible as tide ebbs, but also occurs regularly on lagoons, estuaries, tidal rivers, and margins of lakes and other freshwater bodies as well as sewage farms.	**Yes – may utilise pasture where regular flooding occurs.**
Black-tailed godwit	Wintering	During breeding, typically favours marshy hummocky moorland but changes in land management have created new habitat and poorly drained pastures, damp heaths free of scrub, or border of reedy wetland are of primary importance. But other grasslands managed as meadows, especially when grazed and hay-cut and flooded in winter are also used. Outside the breeding season, favoured habitats include sewage farms, lake margins, tidal marshes, mudflats and sheltered coastal inlets.	**Yes – despite a preference for coastal habitat outside the breeding period this species may use flooded pasture and other grasslands for feeding.**
Dark-bellied brent goose	Wintering	On leaving breeding quarters, resorts to shallow sea coasts and estuaries, especially with extensive mudflats rich in sea grass. Strongly attached to intertidal feeding zones, but in Britain since 1970's increasing numbers have moved inland to feed on grass and cultivated crops. When not feeding, prefers to rest or sleep on sea surface.	**Yes - this species may use pasture and arable fields.**
Wigeon	Wintering	Winter habitat lowland and largely maritime, especially along coasts where shallow, fairly sheltered waters and extensive tracts of mud, sand, or salt marsh offer sustenance and security for gatherings. Freshwater and brackish lagoons and tracts of flooded grassland also attractive, and may be used in preference to coastal waters.	**Yes- may use flooded pasture.**
Teal	Wintering	On passage or in winter will frequent open habitats such as shallow tidal coasts, large estuaries, salt-marshes, and lagoons, brackish or saline, flooded fields, and artificial waters such as reservoirs devoid of vegetation.	**Yes – may use flooded fields.**
Goldeneye	Wintering	In winter, more opportunistic than most relatives, resorting indiscriminately to fresh and salt water with, however, some apparent bias towards estuaries and marine bays, sheltered shallow coasts, and sewage outfalls.	No – habitat types affected are of low importance for this species.
Cormorant	assemblage	Mainly aquatic, in both salt and fresh waters.	No – habitat types affected are not suitable for this species.
Gadwall	Winter	In winter, tends towards local concentration in suitable shallow sheltered parts of large wetlands, lakes, deltas, estuaries, or lagoons.	No – habitat types affected are not suitable for this species.
Pintail	Winter	In winter prefers sheltered coastal habitats, especially on estuaries, floodlands and inland waters nearby. Also feeds on farmland including stubble.	**Yes – may use farmland including stubble fields for feeding.**
Great crested grebe	Winter	Aquatic on a range of types of open water	No – habitat types affected are not suitable for this species.
Oystercatcher	Wintering	Governed by varying reliance upon successful adaptation to feeding on hard-shelled marine molluscs in intertidal shore zones, and more generalised capacity for feeding on softer-bodied invertebrates, terrestrial as well as marine. Locally, also, need to suitable secure roosts at high tide and acceptable nest sites with easily accessible feeding areas can be limiting	No – This species may utilise a range of terrestrial habitats but is primarily reliant on marine habitats and the importance of

Bird species	Season	Species habitat preferences (relative to season of designation)[32]	Susceptible to loss of offsite habitat as a result of Pre-submission Local Plan allocations
		factors. Consequently primarily tied to shorelines which can be fed on at low tide, and secondarily to lakesides, riversides, and a wide variety of terrestrial open ground where less specialized feeding techniques can be employed.	habitats within the site allocations is low.
Ringed plover	Passage and Wintering	A bird of sea coasts. Secondarily occupies adjoining hinterlands up to substantial distance inland, where estuaries, rivers, lakes, tundra, gravel beds, sand bars, grasslands of spare and low growth, or other suitable well-drained terrain exists. Whether breeding, migrating or wintering, tends to be most numerous and concentrated on wide sandy or shingle tidal beaches, with access to suitable resting or nesting places above high-water mark.	No – habitat types affected are of low importance for this species.
Grey plover	Wintering	After breeding, some use of inland staging points, often by lakes on sand bars, mudflats, pools, and moist places, including short grassy fields and floodlands. Most, however, make straight for the sea coast where in contrast to golden plover, they concentrate mainly in the intertidal zone, on broad mudflats or sandy beaches, and to lesser extent on saltings, islets subject to occasional submergence, and neighbouring freshwater pools.	No – This species may utilise a range of terrestrial habitats but is primarily a marine feeding bird and the importance of habitats within the site allocations is low.
Lapwing	Wintering	Requires ready access to soil carrying appreciable biomass of surface or subsurface organisms, not arid and preferably moist or near saturation. Invariably chooses unenclosed terrain affording unbroken all-round views. Throughout historical times, natural habitat has been encroached with suitable substitutes created through farming, with a shift from natural to agricultural land. Shares general habitat preferences with lapwing including a preference for short grazed permanent pasture and to a lesser extent, arable fields.	**Yes - this species is heavily reliant on grasslands, particularly short permanent pastures, and will also utilise arable fields.**
Curlew	Wintering	After breeding season, shifts mainly to marine coastal habitat, especially mudflats and sands extensively exposed at low tide, resting on adjoin saltmarshes, foreshores, and floodlands. Rocky beaches with many pools, muddy estuaries and comparable habitats beside large inland waters, including riverside and swamp edges are also favoured. This species is known to regularly utilise coastal grasslands and arable fields in large numbers.	**Yes - this species is heavily reliant on grasslands, particularly those where flooding occurs. Will also utilise arable fields.**
Turnstone	Wintering	Outside breeding season almost entirely coastal, preferring shores which are stony, rocky, or covered with seaweed, and similar artefacts such as sea walls and breakwaters, harbours, and jetties.	No – habitat types affected are of low importance for this species.

6.34 The review of habitat types located within the site allocations, in light of individual bird species preferences, identified the following species as being potentially susceptible to the loss of offsite habitat associated with site allocations included within Tendring District Local Plan Section 2:

- Hen harrier.
- Golden plover.
- Ruff.
- Dunlin.
- Black-tailed godwit.
- Dark bellied brent goose.
- Widgeon.
- Teal.
- Pintail.
- Lapwing.
- Curlew.

6.35 A summary of the relevant qualifying bird species associated with each of the SPA/Ramsar sites is provided in **Table 6.2** below.

Table 6.2: Qualifying bird species of European sites susceptible to loss of offsite habitat

Key Bird Species Susceptible to loss of functionally linked land	Stour and Orwell SPA/ Ramsar	Blackwater Estuary SPA/ Ramsar	Hamford Water SPA/ Ramsar	Colne Estuary SPA/ Ramsar	Abberton Reservoir SPA / Ramsar
Golden plover	√	√	√	√	√
Lapwing	√	√	√	√	√
Hen harrier	√	√		√	
Ruff		√	√		
Dunlin	√	√			
Black-tailed godwit	√	√	√		
Dark-bellied brent goose	√	√	√	√	
Widgeon	√				
Teal			√		√
Pintail	√				
Curlew	√				

6.36 Following a review of the species habitat preferences and on-going discussions with Natural England, which has confirmed typical winter foraging and roosting distances for the above species in North Essex, it has been agreed that, with the exception of lapwing and golden plover, the above species are unlikely to be reliant upon offsite habitats located further than 2km from the SPA/Ramsar sites. Golden plover and lapwing have been recorded travelling considerably further to access preferred feeding areas and therefore a distance of 15km has been agreed for these species. Lapwing and golden plover are qualifying species for each of the European sites assessed and the 15km distance encompasses each of the site allocations considered at this Appropriate Assessment stage. The specific bird species requiring consideration at each of the site allocations within the Local Plan is outlined in **Table 6.3** below.

Table 6.3: Bird species requiring consideration at each site allocation

Site Allocation Name	Bird Species requiring consideration based on distance from SPA/Ramsar sites
Hartley Garden Village	Golden plover and lapwing only
Oakwood Park	Golden plover and lapwing only
Rouses Farm	Golden plover and lapwing only
Former Tendring 100 Waterworks Site	Golden plover and lapwing only
Stanton Europark, Parkeston	Golden plover, lapwing, hen harrier, dunlin, black-tailed godwit, dark bellied brent goose, widgeon, pintail, curlew, ruff, teal.
Land west of Low Road	Golden plover, lapwing, hen harrier, dunlin, black-tailed godwit, dark bellied brent goose, widgeon, pintail, curlew, ruff, teal.
Land south of Council Offices	Golden plover and lapwing only
Tendring and Colchester Borders Garden Community	Golden plover and lapwing only
Land at Weeley Council Offices	Golden plover and lapwing only
Carless Refinery, Parkeston	Golden plover, lapwing, hen harrier, dunlin, black-tailed godwit, dark bellied brent goose, widgeon, pintail, curlew, ruff, teal.
Orchard Works site rear of London Road	Golden plover and lapwing only
Land adjoining Harwich and Parkeston Football Club	Golden plover, lapwing, hen harrier, dunlin, black-tailed godwit, dark bellied brent goose, widgeon, pintail, curlew, ruff, teal.
Station Yard / Avon Works	Golden plover, lapwing, ruff, black-tailed godwit, dark-bellied brent goose, teal
South of Thorpe Road, Weeley	Golden plover and lapwing only

Assessment of suitability of site allocations as offsite habitat

6.37 Following the establishment of typical habitat preferences for each species, and in light of existing bird records, each allocation site in the Local Plan Section 2 was assessed for its suitability in supporting the relevant SPA birds. The assessment was based on a number of parameters, as described in **Table 6.4** below. Typically, site allocations displayed varying combinations of the parameters outlined below, and were therefore subject to professional judgement and interpretation.

Table 6.4: Habitat suitability rating criteria

Suitability for SPA birds	Typical Description
High	Large sites; area of suitable habitat (e.g. wet grasslands, permanent pastures, arable) capable of supporting significant numbers of SPA birds; absence of any notable negative factors such as PRoW and edge features; land parcel functionally linked with wider habitat and directly linked to SPA via green corridor; site may be prone to flooding (although note absence of flooding favoured by lapwing and golden plover); typically close to SPA/Ramsar and coast.
Moderate	Sites support large areas of functionally linked suitable habitat capable of attracting numbers of SPA birds which by themselves are unlikely to be significant but which may contribute to supporting significant numbers of birds in-combination with other sites. Likely to be further from SPA/Ramsar and coast, and with presence of some limiting factors.
Low	Smaller or fragmented sites; habitats present may be suitable for supporting low numbers of SPA birds on occasion but limited by negative factors such as

Suitability for SPA birds	Typical Description
	size, distance from SPA/Ramsar; absence of sight lines and reductions in 'openness' as a result of edge features such as trees, scrub, and buildings; edge features likely to be close to centre of site; suitability may be compromised by existing recreational use; may be isolated within urban areas.
Negligible	Habitats present are entirely unsuitable for SPA birds, for example existing developed land or small urban infill sites

Table 6.5: Suitability of allocations for SPA birds

Site Allocation Name	Review of Site Parameters	Assessment of Suitability for SPA Qualifying birds
Hartley Gardens	- Located approximately 3.2km to NE of Colne Estuary SPA/Ramsar at closest point. - Only considered for lapwing and golden plover due to distance. - Comprises c.17 individual field enclosures, of which only 3 are permanent pasture, and these a too small to be used by the target species. - Several relatively large arable fields including of c.20ha, 12ha, and 11.5ha provide suitable habitat for target bird species but presence of prominent edge features throughout, in the form of mature hedgerows, linear scrub and tree lines, is likely to reduce suitability for supporting significant numbers of birds alone.	**Moderate** (golden plover and lapwing only)
Oakwood Park	- Located approximately 6.5km to NE of Colne Estuary SPA/Ramsar at closest point, and 6.1km to SW of Hamford Water SPA/Ramsar at closest point - Only considered for lapwing and golden plover due to distance. - Separated from Hamford Water by urban settlements of Kirby le cross, Kirby le Soken and Thorpe le Soken which are likely to reduce the likelihood of significant numbers of birds travelling between the sites. - Comprised of 6 field enclosures, 5 of which are under arable cultivation. A single field of permanent pasture is too small to be of value to the target species. - The largest field is c.15ha but is elongated in shape and therefore reduces distance to edge features. - The field network is separated by prominent edge features throughout including mature tree lines and hedgerows which are likely to reduce the feeling of openness and reduce suitability for the target species. - In the context of distance, availability of alternative habitat and limiting factors, allocation is considered unlikely to support significant numbers of golden plover or lapwing.	Low
Rouses Farm	- Located approximately 2.8km to NE of Colne Estuary SPA/Ramsar at closest point. - Only considered for lapwing and golden plover due to distance. - Comprised primarily of 5 field enclosures, all of which are under arable cultivation. - Largest fields of 13ha and 15ha of arable land provide suitable habitat for target bird species.	**Moderate** (golden plover and lapwing only)

Site Allocation Name	Review of Site Parameters	Assessment of Suitability for SPA Qualifying birds
	- The site is nestled into the western urban edge of Clacton-on-sea and the settlements of St-Osyth, Jaywick and Seawick are located between the allocation and the SPA which may discourage flight paths. In addition, given the distance of 2.8km and the presence of extensive areas of similar and more suitable habitat between the allocation and the SPA, the site is considered to be of moderate suitability. It is therefore unlikely to regularly support significant numbers of birds alone but may contribute to significant numbers cumulatively with other allocations.	
Former Tendring 100 Waterworks Site	- Supports a small area of pasture on raised covered reservoir, but small size and close proximity of buildings and woodlands and urban wider landscape is likely to significantly reduce suitability for SPA birds.	Low
Stanton Europark	- Urban landscape entirely unsuitable for SPA birds.	Negligible
Land west of Low Road	- Site supports c.11ha of arable crop in a single field enclosure located 0.6km to the north of Hamford Water SPA/Ramsar. - The site is relatively close to the SPA and provides direct uncompromised flight access. However, the suitability of the site is limited by its linear shape which reduces the distance to edge features including mature hedgerows and trees around the site periphery and a set-aside strip of rough grassland located down the central spine of the southern part of the site.	Low
Land south of Council Offices	- Site located c.4km from closest SPA (Hamford Water). - Comprises pastoral fields. - Field sizes are small. - Limiting factors include linear field size and shape which reduces openness, and presence of edge features including hedgerows, woodlands and urban edge. - Unlikely to be suitable for supporting significant numbers of SPA birds either alone or in-combination with other sites.	Negligible
Tendring and Colchester Borders Garden Community	- Considered for golden plover and lapwing only due to distance. - An extensive network of sites comprising c.100 individual field enclosures on the eastern edge of Colchester including both permanent pasture and arable land uses. - The allocation is mainly comprised of smaller fields of lower suitability but supports several larger arable fields which may be of increased suitability for attracting golden plover and lapwing. - The suitability of the site is reduced by its distance from the SPA, including 8.5km to the southwest of Stour and Orwell Estuary SPA, and 3km to the north of the Colne Estuary SPA at the closest points. - The suitability of the allocation is also limited by the presence of edge features which dissect or occur adjacent to the fields including woodlands, mature hedgerows and treelines, and buildings.	**Moderate** (golden plover and lapwing only)

Site Allocation Name	Review of Site Parameters	Assessment of Suitability for SPA Qualifying birds
	- In addition, there is an absence of direct, unobstructed flight lines between the allocation and the SPA's with urban conurbations such as Manningtree, Lawford, Old Hedge, Wivenhoe and eastern parts of Colchester being likely to fragment flight paths and reduce habitat connectivity between the allocation and SPA. - Despite the limiting factors described above, given the extent of land and the presence of suitable habitat types in this allocation, it may contribute to supporting numbers of birds which cumulatively with other allocations could reach significant levels.	
Land at Weeley Council Offices	- Site located c.4km from closest SPA (Hamford Water). - Comprises several field enclosures including pasture and arable. - Field sizes are relatively small with the largest being below 5ha. - Limiting factors include linear field shape which reduces openness, and presence of edge features including hedgerows, woodlands and urban edge. - Unlikely to be important in supporting significant numbers of SPA birds either alone or in-combination with other sites.	Low
Carless	- Site located adjacent to Stour and Orwell SPA. - Comprises a small arable field enclosure. - Limiting factors include linear field shape and small size which reduces openness, and presence of edge features including hedgerows, woodlands and industrial edge. - Unlikely to be important in supporting significant numbers of SPA birds either alone or in-combination with other sites.	Low
Land adjoining Harwich and Parkeston Football Club	- Small urban setting and proximity of edge features make site unsuitable for SPA birds	Negligible
Station Yard/Avon Works	- Small urban setting and proximity of edge features make site unsuitable for SPA birds	Negligible
Land South of Pound Corner	- Small suburban site adjacent to development and unsuitable for SPA birds	Negligible
Lanswood Park	- Narrow shape, disturbed ground and proximity of edge tree lines make the site unsuitable for SPA birds	Negligible

6.38 The desk-based review of site allocations identified that the majority of site allocations were considered to have low or negligible potential to support significant numbers of SPA/Ramsar qualifying bird species, either alone or cumulatively with other allocations, and were therefore discounted from further consideration in terms of offsite functional land. The following sites were considered to have moderate suitability for supporting golden plover and lapwing:

- Hartley Gardens.
- Rouses Farm.
- Tendring and Colchester Borders Garden Community.

6.39 These sites have factors which are likely to limit their potential importance for golden plover and lapwing, such as flight lines interrupted by urban settlements, distance from European sites, and the presence of edge features. As a result, the desk study indicates that no single allocation is, on its own, likely to be important in maintaining the integrity of the bird populations at the Stour and Orwell SPA/Ramsar, Hamford Water SPA/Ramsar, Colne Estuary SPA/Ramsar, Blackwater Estuary SPA/Ramsar, and Abberton Reservoir SPA/Ramsar.

6.40 Whilst the three sites identified above provide suitable offsite foraging habitat for golden plover and lapwing in the form of arable fields and short grazed pasture, in isolation the importance of such sites for these species is likely to be low when compared with the extensive areas of habitat of greater suitability both within Tendring District and the wider land areas surrounding these European sites, particularly given the influence of the limiting factors described above. As a result, the potential for the loss of offsite habitat to adversely affect these species relates primarily to the cumulative effect of reducing the extent of feeding areas. The likelihood of this occurring is considered low given the quality of the habitat affected and the small amount of habitat affected as a proportion of that available around each of the European sites.

6.41 Nevertheless, despite the above, uncertainty remains under the precautionary principle as to whether the loss of allocations will, cumulatively with each other and in-combination with the loss of habitat with other plans and projects, adversely affect the integrity of the SPA/Ramsar sites in relation to golden plover and lapwing. Given the dependency of these species on offsite arable fields and grasslands, inclusion and implementation of appropriate safeguards and mitigation will be required in Section 2 of the Tendring District Local Plan to provide certainty that there will be no adverse effect on the integrity of the Stour and Orwell SPA/Ramsar, Hamford Water SPA/Ramsar, Colne Estuary SPA/Ramsar, Blackwater Estuary SPA/Ramsar, and Abberton Reservoir SPA/Ramsar. Mitigation requirements are described below.

Avoidance and Mitigation

6.42 To provide certainty that the loss of offsite functional habitat will not adversely affect the integrity of Stour and Orwell SPA/Ramsar, Hamford Water SPA/Ramsar, Colne Estuary SPA/Ramsar, Blackwater Estuary SPA/Ramsar, and Abberton Reservoir SPA/Ramsar, the following safeguards have been included in the Tendring District Local Plan Section 2:

- *Wintering bird surveys will be required for the three allocations of Hartley Garden Village, Rouses Farm, and Tendring and Colchester Borders Garden Community as part of any project level development proposals to determine their individual and cumulative importance for golden plover and lapwing and inform mitigation proposals.*

- *A commitment to mitigation and phasing of development is required within the Local Plan Section 2 dependent on the findings of bird surveys. This will need to take into account the cumulative numbers of SPA birds affected by the allocations as they come forward for development. In the unlikely but possible event that cumulative numbers of SPA birds affected are likely to exceed thresholds of significance (i.e. >1% of the associated European Site), appropriate mitigation in the form of habitat creation and management in perpetuity, either on-site or through provision of strategic sites for these species elsewhere within Tendring, will be required. If required, mitigation will need to create and manage suitably located habitat which maximises feeding productivity for these SPA species, and such mitigatory habitat would need to be provided and fully functional prior to development which would affect significant numbers of SPA birds.*

6.43 The Tendring District Local Plan Section 2 recognises the above recommendations made as part of the HRA of the Regulation 18 stage, and includes confirmation that the Council is committed to implementing these recommendations.

6.44 The mitigation measures provided above are considered precautionary, appropriate and effective. Given their size, each allocation would likely to be capable of mitigating for their own impact on-

site if necessary, and therefore the above measures have been recommended to provide certainty that the cumulative effect of habitat loss would not result in significant adverse effects.

Conclusion

6.45 **The above mitigation safeguards have been committed to in the Tendring District Local Plan Section 2, and providing that they are implemented successfully, adverse effects on the integrity of the Stour and Orwell SPA/Ramsar, Hamford Water SPA/Ramsar, Colne Estuary SPA/Ramsar, Blackwater Estuary SPA/Ramsar, and Abberton Reservoir SPA/Ramsar, as a result of loss of offsite functionally linked habitat will be avoided.**

Recreational impacts

6.46 The HRA Screening identified the potential for likely significant effects on the following European Sites as a result of increases in recreational activities:

- Colne Estuary SPA/Ramsar.
- Essex Estuaries SAC.
- Stour and Orwell Estuaries SPA/Ramsar.
- Hamford Water SAC/SPA/Ramsar.

6.47 This assessment identified that recreational impacts to the Colne Estuary SPA/Ramsar, Essex Estuaries SAC, the Stour and Orwell Estuaries SPA/Ramsar, and Hamford Water SPA/Ramsar would, in the absence of additional mitigation and avoidance measures, be expected to result in adverse effects on the integrity of these sites, either alone, or in-combination with other plans and projects.

6.48 The following recommendation was recommended at the Regulation 18 stage of plan preparation:

Additional mitigation and avoidance measures in the form of a Recreation and Avoidance Mitigation Strategy (RAMS) will need to be prepared and agreed with Natural England prior to adoption of the plan, to ensure adverse effects on integrity (AEOI) are avoided. A commitment to the successful delivery and implementation of the RAMS will need to be included within the Tendring Local Plan Section 2 to ensure that the plan is sound.

6.49 Since, the above recommendations made at the Regulation 18 Stage, the Local Plan has been updated to recognise the requirement for production of a RAMS and the Plan specifies that Tendring are committed to implementing the recommendations provided b this assessment. In addition, Policy PPL4 Biodiversity and Geodiversity also specifies that, '*Proposals for new development should also have regard to any published local Recreational Disturbance Avoidance and Mitigation Strategies and include any measures which may be necessary to support the aims of the strategy, to help to mitigate any likely recreational impacts arising from the development*'.

6.50 The assessment of whether the Tendring Local Plan Section 2 will result in adverse effects on the integrity of each site either alone or in-combination is discussed below. Mitigation and avoidance requirements for recreational impacts have been provided in a single section owing to their similar requirements, and final conclusions in light of the mitigation proposed are provided.

Colne Estuary SPA/Ramsar

6.51 The Colne Estuary SPA and Ramsar site is located along the southwest edge of Tendring where it borders Colchester Borough. The key threat relates primarily to disturbance of water birds from people and dogs in addition to water sports such as use of jet skis and motorboats.

6.52 In general, the majority of housing allocations, which are likely to represent the main source of increases in recreational visits to the SPA/Ramsar, are located several kilometres away from the

Colne Estuary. The only site allocation considered to be located within walking distance of the site is for 100 dwellings at Robinson Road in Brightlingsea, which represents a small proportion of the total quantum of housing proposed within the Tendring Local Plan Section 2. As a result, the majority of visitors originating from other allocations are likely to arrive by car, and therefore the provision of alternative open space close to home may represent a useful measure in helping to mitigate recreational impacts. This is discussed in more detail in the mitigation section below.

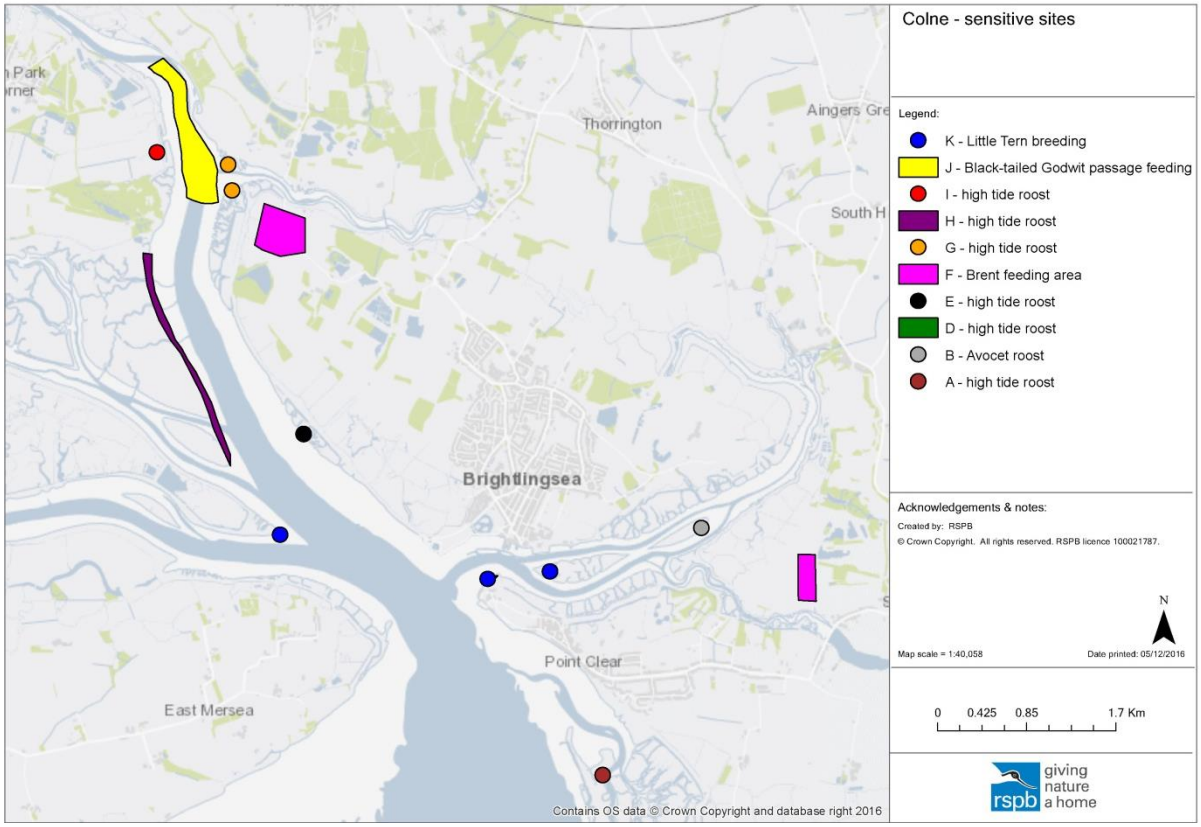
6.53 Visitor monitoring by Colchester Borough Council between 2010 and 2013 was undertaken at Cudmore Grove and Brightlingsea Marshes parts of the SPA, located to the west and east of the estuary respectively. The information gained from these visitor surveys and their relevance in informing this assessment are discussed and interpreted below.

6.54 Many of the key areas of importance within the SPA/Ramsar are currently managed by Natural England and Essex Wildlife Trust to protect and benefit the qualifying bird species of the Colne Estuary, including taking measures to protect key areas from recreational disturbance such as through restricting access to permit holders only, erection of fencing and signage and provision of on-site wardening. Recreational impacts are more likely to occur where unmanaged recreational activity occurs in close proximity to sensitive areas of high importance for birds, such as high tide roosts, nesting sites (e.g. for little tern) and important feeding areas. Such locations tend to be where access public access, for example via provision of car parks and Public Rights of Way occur in close proximity to sensitive locations.

6.55 In order to identify broad areas of the Colne Estuary SPA/Ramsar which are likely to be of increased risk of impacts associated with recreational disturbance, a review of existing management regimes and accessibility has been undertaken.

6.56 **Figure 6.1** below, has been produced by the RSPB as part of the Appropriate Assessment work being completed by Colchester Borough Council for their Section 2 Local Plan. The map and identifies sensitive areas of the Colne Estuary in terms of nesting, roosting and feeding for qualifying bird species.

Figure 6.1: Colne Estuary – Sensitive bird sites identified by RSPB



6.57 The Colne Estuary National Nature Reserve (NNR) comprises much of the SPA in areas sensitive to disturbance. This site covers an area of 576 ha and includes component sites to the south west of St Osyth at 'Colne Point', west of Brightlingsea at 'Brightlingsea Marshes', and across the Estuary at the 'East Mersea Marshes'. The NNR also incorporates the Colne Point Essex Wildlife Trust reserve, which is managed by both Essex Wildlife Trust and NE. The wider NNR is managed by Natural England.

6.58 The 'Colne Point' compartment of the NNR is wardened and only accessible to permit holders. Important nesting areas for little terms are fenced off, and informative signage is provided. In addition, public access in the vicinity of the site is restricted to the south east corner where a public footpath runs along the sea wall at the site boundary. Much of the salt marsh, mudflats and beach are physically separated from the public footpath via a series of creeks, including Ray Creek. As a result, it is likely that the existing infrastructure and management regime at Colne Point is likely to be resilient, at least to some extent, to population growth and associated recreational increases in Tendring.

6.59 The East Mersea Flats area of the NNR is located on the western side of the Estuary, along the eastern edge of Mersea Island. Official parking is available at Cudmore Grove Country Park and at the junction of East Road and Ivy Lane. In addition, a ferry operates between the eastern edge of Mersea Island at Mersea Stone and St Osyth Point across the channel in Tendring. A public footpath runs along the entire northern edge of the SPA. The key findings of the visitor surveys completed at Cudmore Grove indicated that the majority of visitors travelled by car (194 of 230 groups interviewed) with a small proportion (30 of the 230) arriving on foot. The majority (134 of 230) lived in Colchester, with 16 from Braintree and just 8 from Tendring, and 70% of visitors travelled 15 miles or less to visit the site. Cudmore Grove is an important destination for dog walking with 52% of visitors surveyed confirming this as the main reason for their visit and 64% of visitors visited all year round, including regular dog walkers.

6.60 A review of the Visitor Study and the BTO WeBS low tide count data for this area suggests that the northeast coastline where sandflats and mudflats meet a fringe of saltmarsh to the north of Mersea Stone is particularly important for SPA birds. Whilst, due to the visitor infrastructure at this location, there is likely to be an increased risk of recreational disturbance to birds, the visitor surveys indicated that the percentage of visitors originating from Tendring is low, probably as a result of the travel distance and the availability of similar coastal locations in closer proximity. Nevertheless, the increased contribution of visitors as a result of population increases associated with Section 2 of the Tendring District Local Plan, and particularly the Tendring and Colchester Borders Garden Community, may contribute in-combination to recreational pressures capable of resulting in adverse effects on integrity.

6.61 The Brightlingsea Marshes NNR part of the SPA is also only accessible to permit holders. Birds utilising the site, for example for feeding, are therefore likely to be resilient to the effects of recreational disturbance. However, public access in this area is provided by a public footpath which runs along the seawall between the southwest edge of the NNR and the eastern edge of the saltmarsh, and also by the presence of the Promenade Way Car Park, which incorporates public toilets and a café. The footpath extends from the car park northwards to Wivenhoe and lies within or adjacent to the SPA, passing close to high tide roosts opposite Rat Island and at Aldborough Point. The key findings of the visitor surveys undertaken at this location concluded that there was no significant difference in visitor numbers between winter and spring periods; that 45% of visitors were locals living in Brightlingsea, after which Colchester was the next most frequent place of origin; and that of a total of 310 visitors surveyed, 91 had travelled more than 5 miles. In addition, the survey revealed that dog walking and walking were the most popular reasons for visiting the site, and 30% of those surveyed stated that they visited the site daily. In light of the current infrastructure at the site, and its appeal to regular dog walkers during winter, the area is likely to be of increased susceptibility to recreational disturbance and increases in visitors associated with housing allocations, particularly those on the edge of Clacton-on-Sea, the Tendring and Colchester Borders Garden Community, and Robinson Road in Brightlingsea, have the potential to result in adverse effects on the SPA/Ramsar.

6.62 A sensitive area for SPA birds has been identified by the RSPB along the western edge of the Colne channel stretching from Rat Island in the south to Fingringhoe Wick in the north. This area is located within Ministry of Defence land and is not publically accessible. As a result the potential for recreational disturbance at this location as a result of terrestrial activities is unlikely. Potential effects associated with water-based activities are discussed below.

6.63 The St Osyth Stone Point peninsular and shoreline of Brightlingsea Creek is another location where sensitive bird areas occur in close proximity to areas with high levels of existing visitor pressures. Public Rights of Way (PRoW) occur along both the north and south shore of Brightlingsea Creek and little tern nesting sites and avocet roosts occur within this area, albeit these important features are in locations which are restricted from public access (e.g. Cindery Island and another unnamed island immediately to the east of Cindery Island). Nevertheless, the Town of Brightlingsea, the presence of Haven Holiday Park, and the accessibility provided by existing PRoW's are likely to result in relatively high levels of visitor pressure in areas of importance for SPA/Ramsar birds. As a result, this area is likely to be of increased susceptibility to recreational disturbance and increases in visitors associated with housing allocations, particularly those on the edge of Clacton-on-sea, the Tendring and Colchester Borders Garden Community, and Robinson Road in Brightlingsea, have the potential to result in adverse effects on the Colne Estuary SPA/Ramsar.

6.64 Water based recreational activities including sailing, motorboats, and jet skis have also been identified as resulting in disturbance to SPA/Ramsar bird species. Within the Colne Estuary, the primary marina's and launch sites are located at Brightlingsea and Wivenhoe but impacts are likely to occur at locations where such activities occur in proximity to areas of sand and mudflats where birds are feeding, and high tide roosts associated with salt marshes.

6.65 The effect of water based recreation on SPA/Ramsar birds is difficult to predict and manage but studies from elsewhere in the UK[33] suggest that people will travel relatively long distances to partake in such activities and that these visits are more prevalent in the summer months. It is generally accepted that water sports are less likely to take place in the winter months, when the designated 'wintering' species are present. However, these activities are also likely to occur during the winter months, and the peak participation is likely to coincide with bird passage periods and the summer nesting period for little tern.

6.66 The RSPB in their consultation response to the HRA of the Tending Submission Draft Local Plan[34] Section 2 highlighted this issue by recognising that there is often an overlap of our traditional 'summer' compared to the bird 'passage' periods. For certain designated species, particularly black-tailed godwit and redshank. The autumn passage for waders (when birds are migrating south from their breeding grounds) starts as early as late-June, but the main window is July, August and September. Crucially, whenever they are present as non-breeding water birds, their designated status stands. Internationally important numbers of certain species can be present on our estuaries in early-August and therefore the potential for conflict with recreational activity including water sports can be high.

6.67 Little Terns are also sensitive to water-based recreational activities. This species nests on shallow sandy areas above the high water mark and RSPB have highlighted that a key issue is that water sport-users, particularly jet-skiers, often beach their craft on these sites increasing the risk of desertion, chilling of eggs or a heightened predation risk. Furthermore, intense water sport use in favoured feeding areas (typically within 2km of the coast) may affect the ability of this species to feed and therefore provision their young.

6.68 In light of the above, and to enable a sufficient level of certainty that the policies contained in the Local Plan will not result in adverse effects on the Colne Estuary SPA/Ramsar, appropriate mitigation will be required. The most effective means of control is through the provision of a Recreation and Avoidance Mitigation Strategy (RAMS) which includes a code of conduct (involving marinas and leisure operators), wardening, monitoring and enforcement. This is considered in more specific detail in the mitigation section below.

6.69 In terms of in-combination effects, the zone of influence for the Colne Estuary SPA/Ramsar includes Braintree District and Colchester Borough and in-combination effects with the Shared Strategic Section 1 for Local Plans and Section 2 Local Plans for these Districts have been identified. The HRA's of the Braintree and Colchester Section 2 Local Plans both concluded that they will need to be part of a Recreational Avoidance and Mitigation Strategy (RAMS) for this SPA/Ramsar in partnership with Tendring, and other Essex Authorities to ensure adverse effects are mitigated.

6.70 **In summary, population growth and increased coastal visits as a result of Section 2 of the Tendring District Local Plan is likely to contribute to increases in both land-based and water-based recreational pressures at the Colne Estuary SPA/Ramsar sites, which have the potential, in the absence of mitigation and avoidance measures, to adversely affect the integrity of the bird qualifying features as a result of the effects of disturbance, both alone and in-combination with the North Essex Authorities Shared Strategic Section 1 for Local Plans and Section 2 Local Plans. Mitigation will be required to ensure adverse effects can be avoided, and this is described in detailed below**.

Essex Estuaries SAC

6.71 Essex Estuaries SAC is designated for the presence of coastal and inter-tidal habitats and the area of coverage in North Essex is largely shared with the Colne Estuary SPA and Ramsar. The habitats for which the SAC is designated are resilient to the disturbance impacts described above

[33] Cruickshanks, K., Liley, D., Fearnley, H., Stillman, R., Harvell, P., Hojet. & Underhill-Day, J. (2010). Desk Based Study on Recreational Disturbance to birds on the Humber Estuary. Footprint Ecology / Humber Management Scheme

[34] Letter from Mark Nowers, RSPB, dated 2017.

for the Colne Estuary SPA/Ramsar but this site is vulnerable to the physical damage which can be caused by trampling and erosion associated with terrestrial recreation and wave damage caused by water based recreation. The SAC is also vulnerable to the effects of localised nutrient enrichment and other negative factors associated with recreation such as littering, fire and vandalism, albeit the qualifying habitats, which are regularly inundated by tidal waters are not particularly sensitive to such factors . Areas of particular susceptibility to the effects of recreational activities are likely to be as described above for the Colne Estuary.

6.72 In terms of in-combination effects, the zone of influence for the Colne Estuary SPA/Ramsar includes Braintree District and Colchester Borough and in-combination effects with Section 2 Local Plans for these Districts and the Shared Strategic Section 1 for Local Plans have been identified. The HRA's of the Braintree and Colchester Section 2 Local Plans both concluded that they will need to be part of a RAMS for this SPA/Ramsar in partnership with Tendring and other Essex Authorities to ensure adverse effects are mitigated.

6.73 **In the absence of mitigation and avoidance measures, the predicted increases in recreational activities as a result of the Tendring Local Plan Section 2, would be expected to increase the prevalence and occurrence of negative activities occurring within the SAC, and could lead to adverse effects on integrity either alone or in combination with the Colchester and Braintree Section 2 Local Plans and Shared Strategic Section 1 for Local Plans. As a result, adequate avoidance and mitigation measures will be required as detailed in the mitigation section below**.

Stour and Orwell Estuaries SPA/Ramsar

6.74 The Stour and Orwell Estuaries SPA and Ramsar sites are located along the northern edge of Tendring. The HRA Screening assessment identified that the Tendring Local Plan Section 2 was likely to result in significant effects on the SPA/Ramsar as a result of increases in recreational disturbance. The Site Improvement Plan (SIP) indicates that 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; wildfowling, and military overflight training, whilst some activities, such as powerboating, may produce physical disturbance to habitats.

6.75 The SIP indicates that moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds, but the types, levels and locations of potentially disturbing activities are constantly changing and a better understanding is required 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 in order to manage change, with intervention as necessary in order to minimise the risks of disturbance impacts.

6.76 In general, significant housing allocations, which are likely to represent the main source of increases in recreational visits to the SPA/Ramsar, are located several kilometres away from the Stour and Orwell Estuaries SPA/Ramsar. The only site allocation considered to be located within walking distance of the site is for 150 dwellings at EDME Maltings in Mistley, which represents a small proportion of the total quantum of housing proposed within the Tendring Local Plan Section 2. As a result, the majority of visitors originating from other allocations are likely to arrive by car, and therefore the provision of alternative open space close to home may represent a useful measure in helping to mitigate recreational impacts. This is discussed in more detail in the mitigation section below.

6.77 Visitor surveys of the Stour Estuary were completed by Colchester Borough Council between 2010 and 2013 at the Stour Estuary RSPB reserve, and at The Walls in Manningtree. This information is useful in understanding the patterns and purposes of recreational visits to enable accurate predictions of the key sources of impact, and to enable any mitigation and avoidance measures to be suitably focused. As a result, the mitigation and avoidance measures recommended below have been largely based on the visitor monitoring data available for this assessment.

6.78 At the Stour Estuary, the number of visitors varied considerably over the course of the three year survey period. In total 217 visitor groups were surveyed and the highest number of visitors was recorded in winter 2012 (63 groups). There were significantly higher numbers of visitors at the weekend and, over the three years, twice the number of groups visited at the weekend than during the week. A large proportion of visitors to the site travelled from the Harwich area (48%), and the majority of visitors had travelled less than 5 miles to visit the site. Of the 217 groups surveyed, 35 had travelled over 11 miles to visit, with most of these being at the weekend. Dog walking and walking were the predominant activities and during the week there were more people dog walking and at the weekend the numbers walking and dog walking were virtually the same.

6.79 When asked how frequently people visited the most common answer was less than once a month (54 out of 217), whilst the second most common answer given was 2-6 times a week (44 groups). 34% of visitors said that they do no visit alternative sites regularly and of those that do visit alternative sites regularly, Tendring coastal sites were the most common site visited (57 out of 124) with many visitors citing the beach as the preferred location. 16% of visitors said that they did not have good access to open space close to home. During the spring 2012 survey almost half of people surveyed said that they do not have good access to open space.

6.80 The visitor surveys at The Walls in Manningtree identified that the number of visitors at The Walls varied considerably over the course of the three year survey period. In total 278 groups were surveyed over the three years and there were higher numbers of visitors at the weekend during winter. During all of the spring survey periods the number of weekend and week day visitors was similar. Over the 3 year survey period a low proportion (12 of the 278) of the groups surveyed said that they were on holiday in the area. Visitors came from a wide range of locations to visit The Walls, principally throughout Tendring, Suffolk and Colchester. A large number of visitors (114/278) lived in Lawford, Manningtree and Mistley (14, 29 and 71 respectively). 25 were from Colchester, 12 were from Ipswich with the remaining visitors spread around a number of towns and villages. The majority of visitors had travelled less than 5 miles to visit the site.

6.81 Walking was the predominant activity at The Walls (61% of visitors). Exercise was the second most popular activity (21% of visitors). Dog walking was not as popular here as at other sites in North Essex, with 20% of visitors dog walking. The number of dog walkers was evenly split between weekdays and weekend. Of the 278, 113 visitors cited proximity to home as a reason for visiting. The frequency people visited the site was similar across daily, 2-6 times a week, once a week and less than once a month visitation frequencies.

6.82 The above information demonstrates that, while the majority of visitors to the Stour Estuary, and those visiting regularly live in close proximity, the attraction and pull of the site is wide reaching. The Colchester BC visitor study, together with the results of a Footprint Ecology Study as described above in the Screening stage, resulted in a 13km zone of influence being recommended for the Stour and Orwell, within which proposed housing allocations were considered likely to contribute to Likely Significant Effects. This distance incorporates many of the site allocations within Tendring, including those located at Harwich, Mistley, Manningtree, Weeley and perhaps most notably, the Tendring and Colchester Borders Garden Community where c.3,000 homes are proposed.

6.83 Walking and dog walking were the primary activities at the site and are both of these activities have been recorded as disturbing birds. As a result, they are likely to contribute the greatest proportional source of disturbance to bird species, particularly where such activities occur close to important feeding or roosting areas in locations which are not subject to daily management and wardening. As a result, any mitigation and avoidance measures proposed (see below) will need to give particular consideration to mitigating the effects of these sources of disturbance.

6.84 In terms of public access and existing management along the Tendring edge of the Stour Estuary, The Essex Way long distance public footpath extends along the majority of the coastline, from Manningtree in the west to Harwich in the East. However, a notable area where public access is

restricted by the absence of PROWs, and via severance and screening from the railway line and industrial zones, occurs between Harwich International Port/Parkeston Quay and the western edge of the Stour Estuary RSPB reserve to the west. This incorporates an extensive area of saltmarsh of key importance for SPA/Ramsar birds including Deep Fleet, Bramble Creek and Copperas Creeks. In addition, much of this area is located within the RSPB's Stour Estuary reserve, which is managed to protect the birds from disturbance, including a ban on dogs within most of the reserve, provision of on-site wardening, and use of barriers, screens and bird hides to manage visitor movements. As a result, disturbance of SPA/Ramsar qualifying birds is less likely at these locations.

6.85 In addition to the above, Essex Wildlife Trust manages the Wrabness Nature Reserve which overlooks the saltmarsh and mudflats at Jacques Bay. Again, this site is managed to minimise potential disturbance to birds, including dogs being permitted only when under close control, wardening on site and provision of screening along the sea wall including through maintenance of scrub and tree lines.

6.86 The area between Mistley and Nether Hall, which includes Landooze Rill and Ballister Creek is also relatively well protected from terrestrial recreational disturbance due to the absence of PROWs, private land and the railway.

6.87 A review of WeBS data indicates feeding areas of particular importance for SPA/Ramsar birds in locations close to areas where recreational access is high and unmanaged includes in the vicinity of Mistley and Manningtree, which is particularly important for feeding knot, black-tailed godwit, redshank and shelduck. Elsewhere along the Tendring part of the Stour Estuary, important bird locations are primarily located adjacent to the locations described above where the probability of recreational disturbance is lower.

6.88 In light of the above, it is likely that the impacts of terrestrial recreation impacts as a result of the Tendring Local Plan Section 2 would be expected to be relatively localised and focused in the vicinity of Mistley and Manningtree and these are likely to be key locations in providing mitigation and avoidance measures. Any mitigation and avoidance proposals will need to be based on latest visitor and bird monitoring data, and align with the Recreation Avoidance and Mitigation Strategy (RAMS) being produced by the Suffolk authorities of Ipswich, Suffolk Coastal and Babergh.

6.89 The Suffolk authorities, have identified, as part of the HRAs of their Local Plans, similar recreational impacts on the Stour and Orwell SPA/Ramsar. In order to comply with the requirements of the Habitats Regulations, and to prepare sound plans, they are currently producing a RAMS which has been informed by visitor monitoring work undertaken by Footprint Ecology, which is yet to be published. It is expected that these studies will provide a detailed baseline of current visitor patterns, hotspots where disturbance is, or is predicted to be, a key issue, and quantified data which can be used to aid future monitoring. The studies will set out detailed information relating to the existing recreational pressures on the SPA/Ramsar, and will set out mitigation and avoidance proposals including locations, methods and funding mechanisms. As a result, it is likely that Essex Authorities, including Tendring, will need to adopt and implement a similar approach in preparation of an Essex RAMS.

6.90 Water based recreational activities including sailing, motorboats, and jet skis have also been identified as resulting in disturbance to SPA/Ramsar bird species. Tendring District Council has advised of recreational disturbance due to jet-ski use in the Stour and Orwell Estuaries, and this was specifically raised as an issue during a workshop for the Suffolk RAMS held on 10/11/16 when it was confirmed that enforcement action was required.

6.91 Within the Stour Estuary, marina's and launch sites occur at Manningtree and Mistley, with tidal boat moorings scattered throughout the estuary. However, the majority of recreational marinas are located in the northern part of the SPA, associated with the Orwell Estuary at sites including Ipswich, Suffolk Yacht Harbour at Stratton Hall, Shotley Gate, and Wolverston Marinas. These marinas are located a considerable distance from the site allocations proposed in the Tendring

Local Plan Section 2 and the plan is therefore considered unlikely to result in noticeable increases in the use of these facilities. Nevertheless, Policy PP6 protects employment development of Mistley Port and associated facilities which may lead to an increase in the availability of leisure and recreational water craft facilities at Mistley.

6.92 The effect of water based recreation on SPA/Ramsar birds is difficult to predict and manage but studies from elsewhere in the UK[35] suggest that people will travel relatively long distances to partake in such activities and that these visits are more prevalent in the summer months. It is generally accepted that water sports are less likely to take place in the winter months, when the designated 'wintering' species are present. However, these activities are also likely to occur during the winter months, and the peak participation is likely to coincide with bird passage periods.

6.93 The RSPB in their consultation response to the HRA of the Tending Submission Draft Local Plan[36] Section 2 highlighted this issue by recognising that there is often an overlap of our traditional 'summer' compared to the bird 'passage' periods. For certain designated species, particularly black-tailed godwit and redshank. The autumn passage for waders (when birds are migrating south from their breeding grounds) starts as early as late-June, but the main window is July, August and September. Crucially, whenever they are present as non-breeding water birds, their designated status stands. Internationally important numbers of certain species can be present on our estuaries in early-August and therefore the potential for conflict with recreational activity including water sports can be high.

6.94 In light of the above, and to enable a sufficient level of certainty that the policies contained in the Local Plan will not result in adverse effects on the Stour and Orwell Estuaries SPA/Ramsar, appropriate mitigation will be required. The most effective means of control is likely to be through the provision of a Recreation and Avoidance Mitigation Strategy (RAMS) which includes a code of conduct (involving marinas and leisure operators), wardening, monitoring and enforcement. This is considered in more specific detail in the mitigation section below.

6.95 In terms of in-combination effects, a 13km zone of influence for the Stour and Orwell Estuary has been identified, which includes the Suffolk authorities, Tendring District and Colchester Borough. The Suffolk authorities are mitigating for in-combination effects via the Suffolk RAMS described above and are therefore not predicted to result in in-combination effects on the SPA/Ramsar as a result of recreational effects. Visitor monitoring at the SPA/Ramsar concluded that significant proportions of visitors originated from both Colchester and Tendring and therefore it is concluded that these authorities will, as has been confirmed by the HRAs of the Colchester Local Plan Section 2 and the HRA of North Essex Authorities Local Plan Strategic Section 1, need to adopt a similar approach to mitigating recreational impacts on the Stour and Orwell Estuary SPA/Ramsar to ensure adverse effects are avoided.

6.96 **In summary, population growth and increased coastal visits as a result of the Tendring Local Plan Section 2 is likely to contribute to increases in both land-based and water-based recreational pressures at the Stour and Orwell Estuaries SPA/Ramsar sites, which have the potential, in the absence of mitigation and avoidance measures, to adversely affect the integrity of the site's bird qualifying features as a result of the effects of disturbance, both alone and in-combination with other plans and projects. Mitigation in the form of a RAMS will be required to ensure adverse effects can be avoided, and this is described in detail below.**

[35] Cruickshanks, K., Liley, D., Fearnley, H., Stillman, R., Harvell, P., Hoskin, R. & Underhill-Day, J. (2010). Desk Based Study on Recreational Disturbance to birds on the Humber Estuary. Footprint Ecology / Humber Management Scheme

[36] Letter from Mark Nowers, RSPB, dated 2017.

Hamford Water SPA/Ramsar

6.97 Hamford Water SPA and Ramsar site is located on the eastern coast of Tendring. The key recreational threat identified at the Screening stage relates primarily to disturbance of water birds from people and dogs in addition to water sports such as use of jet skis and motorboats.

6.98 In general, the majority of housing allocations, which are likely to represent the main source of increases in recreational visits to the SPA/Ramsar, are located several kilometres away from Hamford Water. The only site allocation considered to be located within walking distance of the site is for 315 dwellings at Land to the West of Low Road in Harwich, which represents a small proportion of the total quantum of housing proposed within the Tendring Local Plan Section 2. As a result, the majority of visitors originating from other allocations are likely to arrive by car, and therefore the provision of alternative open space close to home may represent a useful measure in helping to mitigate recreational impacts. This is discussed in more detail in the mitigation section below.

6.99 Visitor monitoring by Colchester Borough Council between 2010 and 2013 was undertaken at Kirkby Quay and The Naze, both located at the southern edge of the site. This study resulted in an 8km zone of influence being recommended, within which proposed housing allocations were considered likely to contribute to Likely Significant Effects. Housing allocations located within 8km include those proposed at Harwich, Thorpe-le-Soken, Weeley and Clacton-on-Sea. These allocations are therefore likely to have increased potential to result in recreational effects on the site.

6.100 The information gained from these visitor surveys is useful in understanding the patterns and purposes of recreational visits to enable accurate predictions of the key sources of impact, to enable any mitigation and avoidance measures to be suitably focused, and to provide a baseline against which future monitoring can be compared. As a result, the mitigation and avoidance measures recommended below have been largely based on the visitor monitoring data available for this assessment and described herein.

6.101 The Colchester BC visitor monitoring found that numbers of visitors recorded at the Kirby Quay part of the SPA were relatively low, with a total of 35 groups recorded, whilst a total of 231 groups were recorded at the Naze. The majority of these visitors were found to travel from the local area with all visitors travelling to Kirkby Quay and 80% of visitors travelling to The Naze originating from within 8km.

6.102 Surveys at Kirby Quay found that the site was predominantly visited by low numbers of local people, mainly for the purposes of dog walking. In addition, the majority of visitors cited proximity to home as the main reason for visiting. The majority of visitors confirmed that they also visited Walton-on-the-Naze. The Colchester BC monitoring concluded from the findings that housing increases proposed in Tendring would be unlikely to result in significant increases in visitors to this site.

6.103 Surveys at the Naze reported roughly equal numbers of visitors during winter and spring surveys. Weekends were busier than weekdays, and the study explains that visitor numbers were higher than reported because not all visitor groups could be surveyed. A proportion of 58% of visitors lived within five miles of the site, and a relatively high number of groups surveyed (20) were holidaying locally. A total of 39 of the 231 groups had travelled over 30 miles to visit the site. In keeping with the findings from other coastal sites in Tendring, the primary activities being conducted at the site were walking and dog walking. The main reasons given for visiting the site included it 'being liked', 'being attractive', and 'being close to home'. Approximately 20% of the respondents said they visited the site daily, whilst c.25% visited less than once a month.

6.104 The above findings are broadly similar to those of the other Tendring coastal sites, with the majority of visits comprising local walkers and dog walkers, whilst the site's unique nature is also able to attract regular visitors from considerably further afield. This information is useful in informing the mitigation measures likely to be required, including a necessity to provide

alternative open spaces at housing allocations which attract local and regular walkers and dog walkers, whilst recognising that the unique attraction of the coastal site cannot be replicated and therefore will require on-site measures to mitigate impacts. Mitigation measures in respect of recreational impacts are discussed in more detail below.

6.105 Natural England has confirmed that water-based activities are a threat to the site, resulting in disturbance to birds and damage to inter-tidal habitats through wave action. Notable sources of water based recreational activities at the site are largely limited to the Titchmarsh Marina, and the Walton and Frinton Yacht Club Marina, both in the south of the site, in the vicinity of Walton-on-the-Naze and support a variety of water based forms of recreation along the Walton Channel, where there is increased potential for disturbance to birds in areas inaccessible by foot, such as at Stone Marsh, Stone Creek, Hedge-end Island and Standcreek Salts. These areas also support extensive areas of saltmarsh and may therefore also be susceptible to the effects of boat wash, which can result in habitat erosion.

6.106 The effect of water based recreation on SPA/Ramsar birds is difficult to predict and manage but studies from elsewhere in the UK[37] suggest that people will travel relatively long distances to partake in such activities and that these visits are more prevalent in the summer months. It is generally accepted that water sports are less likely to take place in the winter months, when the designated 'wintering' species are present. However, these activities are also likely to occur during the winter months, and the peak participation is likely to coincide with bird passage periods and the summer nesting period for little tern.

6.107 The RSPB in their consultation response to the HRA of the Tending Submission Draft Local Plan[38] Section 2 highlighted this issue by recognising that there is often an overlap of our traditional 'summer' compared to the bird 'passage' periods. For certain designated species, particularly black-tailed godwit and redshank. The autumn passage for waders (when birds are migrating south from their breeding grounds) starts as early as late-June, but the main window is July, August and September. Crucially, whenever they are present as non-breeding water birds, their designated status stands. Internationally important numbers of certain species can be present on our estuaries in early-August and therefore the potential for conflict with recreational activity including water sports can be high.

6.108 Little Terns are also sensitive to water-based recreational activities. This species nests on shallow sandy areas above the high water mark and RSPB have highlighted that a key issue is that water sport-users, particularly jet-skiers, often beach their craft on these sites increasing the risk of desertion, chilling of eggs or a heightened predation risk. Furthermore, intense water sport use in favoured feeding areas (typically within 2km of the coast) may affect the ability of this species to feed and therefore provision their young.

6.109 In light of the above, and to enable a sufficient level of certainty that the policies contained in the Local Plan will not result in adverse effects on the Hamford Water SPA/Ramsar, appropriate mitigation will be required. The most effective means of control is likely to be through the provision of a Recreation and Avoidance Mitigation Strategy (RAMS) which includes a code of conduct (involving marinas and leisure operators), wardening, monitoring and enforcement. This is considered in more specific detail in the mitigation section below.

6.110 A review of bird distribution using the BTO WeBS low tide count data has identified the following areas which are likely to be of increased susceptibility to recreational disturbance to their relative importance for bird species and accessibility by terrestrial or water based sources of potential disturbance:

[37] Cruickshanks, K., Liley, D., Fearnley, H., Stillman, R., Harvell, P., Hoskin, R. & Underhill-Day, J. (2010). Desk Based Study on Recreational Disturbance to birds on the Humber Estuary. Footprint Ecology / Humber Management Scheme

[38] Letter from Mark Nowers, RSPB, dated 2017.

- North east of Horsey Island at mouth of Walton Creek – Brent goose susceptible to disturbance by water craft.
- Western edge of SPA to north of White House and Gull Cottages – Brent goose, wigeon, golden plover, lapwing, knot, dunlin, redshank, black-tailed godwit and bar-tailed godwit susceptible to disturbance from walkers and dog walkers using public footpath along sea wall to south.
- East of Pewit Island – Oystercatcher, ringed plover and dunlin susceptible to disturbance by water craft.
- Walton Channel – Golden plover, lapwing and knot susceptible to disturbance by water craft as provides route between marina and open sea, and terrestrial disturbance from the permissive path which follows the eastern edge of the channel.
- The Twizzle and Coles Creek – golden plover, grey plover, lapwing and knot susceptible to disturbance from water craft accessing nearby Titchmarsh Marina.
- The Wade – Golden plover, lapwing and dunlin susceptible to footpath along seawall, including at Peter's Point and Marsh House.
- Middlebeach to north of Crabknowe spit – Grey plover, knot, dunlin, redshank and black-tailed godwit susceptible to water craft and public footpath along coastline to west.
- Stone Point – Black-tailed and Bar-tailed godwits are susceptible to disturbance from water craft.

6.111 The above assessment highlights areas likely to be of increased vulnerability to recreational disturbance. A large proportion of Hamford Water is protected from disturbance due to the inaccessibility of the habitat types present, both for land and water based sources of disturbance, such as Horsey Island, Hedge-end Island, Skipper's Island, and a complex series of creeks and saltmarsh which prevent access. In addition, public footpaths are restricted to the perimeter of the SPA and do not dissect any key areas. As a result, a large proportion of this site is located a considerable distance from sources of potential disturbance. In light of this, the qualifying features of the SPA and Ramsar are likely to have some degree of resilience to the effects of recreational disturbance at the site. Nevertheless, the effects of increased recreational disturbance are difficult to predict, and accessibility at the site is predicted to increase as a result of the England Coastal Path proposals. As a result, appropriate mitigation and safeguards will be required to ensure that Tendring District Local Plan Section 2 does not result in adverse effects on site integrity.

6.112 Hamford Water SPA/Ramsar zone of influence is 8km and therefore no in-combination effects are predicted as a result of visitors from outside of Tendring. As a result, mitigation in the form of a Recreation Avoidance and Mitigation Strategy for Hamford Water SPA/Ramsar site will need to include Tendring District Council only.

6.113 **In summary, population growth and increased coastal visits as a result of the Tendring Local Plan Section 2 is likely to contribute to increases in both land-based and water-based recreational pressures at Hamford Water SPA and Ramsar site, which has the potential, in the absence of mitigation and avoidance measures, to adversely affect the integrity of the site's qualifying features as a result of the effects of disturbance, alone. Mitigation and avoidance measures will be required to ensure adverse effects can be avoided, and this is described in detail below.**

Hamford Water SAC

6.114 Hamford Water SAC boundary is concurrent with the Hamford Water SPA/Ramsar described above and therefore the interpretation of visitor patterns and key areas of recreational pressure

described above are also of relevance in assessing whether recreational will result in adverse effects on integrity of the site in respect of this species.

6.115 As described above, a large proportion of Hamford Water is protected from recreational disturbance to grassland habitats due to the inaccessibility of the habitat types present. For example, islands such as Horsey Island, Hedge-end Island, Skipper's Island, plus the presence of a complex series of creeks and saltmarsh, prevents access to many of the strongholds for this species. As a result, the qualifying feature of the SAC is likely to have some degree of resilience to the effects of recreational disturbance at the site.

6.116 Natural England has advised that the grassland habitat, of importance in maintaining the Fisher's estuarine moth population for which the SAC is designated, occurs in close proximity to existing footpaths, particularly in the vicinity of the sea wall. As a result, an increase in recreational activities at the site has the potential to affect this species through nutrient enrichment and trampling of habitat.

6.117 Nevertheless, the susceptibility of this species to the effects of recreation is considered low. Indeed, the Site Improvement Plan for Hamford Water does not list Fisher's estuarine moth as a feature currently affected by recreational disturbance. The effect of recreation would need to result in significant degradation of the areas of grasslands which support the food plant upon which this species depends to result in adverse effects on integrity. This is considered highly unlikely given extent of habitat available in areas protected from disturbance. In addition, the site is actively managed by Natural England and the Essex Wildlife Trust and the distribution of important areas of habitat for this species are known. As a result, on-site management, such as fencing and signage, can be implemented with relative ease in areas where recreational disturbance is recorded.

6.118 Any increases in visitor numbers at the site as a result of the Tendring Local Plan Section 2 would be expected to contribute additional visits to existing visitor locations and distributions, rather than create new patterns and behaviours. The effect of habitat degradation along publically accessible areas would be expected to be restricted and localised. Therefore, in light of the above information, **an increase in recreational visits as a result of the Tendring District Local Plan Section 2 is not predicted to result in adverse effects on the Hamford Water SAC, either alone or in-combination with other plans and projects**.

Consideration of the England Coastal Path

6.119 The England Coastal Path project is pertinent in considering the accuracy of the key locations and impacts identified herein. The new National Trail, which is being led by Natural England, will give people right of access around the entire open coastline of England. This includes, where appropriate, any land, other than the trail itself, which forms part of the coastal margin and which has public rights of access along the way. Natural England expects to complete work on the England Coast Path in 2020 and it is understood that sections of the trail within Essex are underway and are expected to be completed by 2020. At present, the exact alignment of the path in Essex is not known, but it is reasonable to assume that it will further increase accessibility to sensitive areas and therefore the interpretation of key areas within this assessment may be subject to change in the near future.

6.120 The specific impacts associated with the England Coastal Path will need to be carefully considered by Natural England and appropriate mitigation and avoidance measures will be required to ensure that the project does not adversely affect European Sites. It is likely that the mitigation required in respect of recreational impacts, as described below, will need to carefully align with those proposed by Natural England, and ideally a coordinated approach to mitigation is likely to be the most effective approach to avoiding impacts on European sites. As a result, the Recreation and Avoidance Mitigation Strategy outlined below will require close consultation and agreement with Natural England.

Bird Aware Essex Coast (Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (RAMS))

6.121 This assessment has identified that recreational impacts to the Colne Estuary SPA/Ramsar, Essex Estuaries SAC, the Stour and Orwell Estuaries SPA/Ramsar and Blackwater Estuary SPA/Ramsar would, in the absence of mitigation and avoidance measures, be expected to result in adverse effects on the integrity of these sites, either alone, or in-combination with other plans and projects. As a result, at an early stage in the iterative HRA process it was recommended that additional mitigation and avoidance measures in the form of a Recreational disturbance and Avoidance and Mitigation Strategy (RAMS) would be needed and agreed with Natural England prior to adoption of the Local Plan to ensure adverse effects on integrity (AEOI) are avoided. A commitment to the successful delivery and implementation of a RAMS was made by Tendring District Council is included within the Local Plan to ensure that the plan is sound.

6.122 The need for a Recreational disturbance Avoidance and Mitigation Strategy (RAMS) was identified at an early stage in the iterative HRA process. Further consideration was given to this at the appropriate assessment stage, partly to reflect that mitigation measures must be considered at the appropriate assessment stage and also as examples of mitigation strategies elsewhere have continued to emerge and the conservation community continue to share good practice.

6.123 The Essex Coast RAMS Strategy Document, which will ensure that the RAMS is delivered in perpetuity, was finalised in January 2019 and adopted by the twelve local authority partners, including Tendring District Council. As already detailed in this report, Natural England were involved in the preparation of the Essex Coast RAMS and endorse the RAMS Strategy Document.

6.124 A RAMS SPD was consulted on in January-February 2020. The SPD has now been finalised and Natural England have confirmed that they endorse the SPD. Tendring District Council have now adopted the SPD.

6.125 The additional measures required to avoid AEOI are applicable to each of the European Sites listed above, and therefore the recommended approach to mitigation and avoidance detailed herein in the form of a RAMS is applicable to each of them. Albeit, where site-specific measures are required, this is made clear below.

6.126 The effects of recreational disturbance on coastal European sites, and/or those with sensitive bird populations have been studied and recognised throughout the UK. In light of an emerging body of research, the preferred approach to mitigation and avoidance of such impacts via the delivery of mitigation strategies has received a growing consensus of support by Natural England and other key stakeholders such as the RSPB and the Wildlife Trusts.

6.127 Relevant examples include the Recreation Avoidance and Mitigation Strategy which is currently being prepared as a strategic document by the Suffolk Authorities of Ipswich, East Suffolk and Babergh Authorities to mitigate recreational impacts of their Local Plans on the Stour and Orwell Estuaries SPA/Ramsar; the production of a joint Sustainable Access Strategy which is being prepared by Shepway and Rother Districts to mitigate recreational impacts of their Local Plans on the Dungeness SAC/SPA/Ramsar; Bird Aware Solent to mitigate recreational impacts of Local Plans on European sites around the Solent and the Thames Basin Heaths Delivery Framework, which sets out the mitigation requirements to enable development within a Zone of Influence around the Thames Basin Heaths SPA.

6.128 A key component of the above examples is the adoption of a strategic approach to mitigation which involves more than one Authority. The sources of recreational impacts on European sites, typically originate from more than one Authority, as is the case in Essex. As a result, it is typically the effect of multiple and widespread sources of recreational impact which may result in adverse effects on site integrity in-combination. In light of the above, the approach to mitigation detailed herein is considered a robust and appropriate means of ensuring impacts are successfully avoided and mitigated, which has been endorsed by Local Plan Inspectors.

6.129 The multiple, widespread, and cross-boundary origins of recreational impacts reflect the unique attraction that these sites have for visitors. The experience that they offer cannot be easily replicated, and as a result, whilst a multi-faceted approach is required, including the promotion of local education initiatives, and provision of alternative opportunities for recreation for those regular local visitors, the primary component of a successful RAMS will primarily involve providing appropriate management at the European sites to avoid and minimise impacts and that such management continues to be informed by regular monitoring of people and birds.

6.130 In light of the above, and through close liaison with Natural England during the preparation of their Section 2 Local Plans and the Shared Strategic Section 1 Local Plan, the North Essex Authorities together with other Essex Authorities have adopted a joint strategic approach to ensuring impacts associated with recreation will be adequately addressed and mitigated. Through a series of meetings, Essex LPAs agreed to prepare and implement RAMS for all Essex coastal European sites. The broad principles of what is required as part of the RAMS is set out in this section.

Mechanisms of funding and delivery

6.131 The Essex Coast RAMS Strategy Document, which will ensure that the RAMS is delivered in perpetuity, was finalised in January 2019 and adopted by the twelve local authority partners, including Tendring District Council. As already detailed in this report, Natural England were involved in the preparation of the Essex Coast RAMS and endorse the RAMS Strategy Document.

6.132 The RAMS will be delivered through an SPD. A RAMS SPD was consulted on in January-February 2020. The SPD has now been finalised and Natural England have confirmed that they endorse the SPD which has now been adopted by Tendring District Council.

6.133 The RAMS approach follows a meeting between the North Essex Authorities, LUC and Natural England (8th February 2017), at which Natural England recommended that the NEAs prepare and deliver a RAMS for the relevant European sites. This was widened to include all Essex coastal sites and 12 Greater Essex LPAs and work commenced on the Essex Coast RAMS in 2017. This approach has been used successfully elsewhere such as the Thames Basin Heaths SPA Avoidance and Mitigation SPD (TBH SPD), which was developed to provide guidance to ensure that new development does not have adverse effects on this SPA which is designated for heathland birds susceptible to recreational pressures.

6.134 The TBH SPD has been adopted by eleven local authorities which incorporate the SPA's Zone of Influence and involves an approach to mitigation which includes i) provision of Suitable Alternative Natural Greenspace (SANGs), and ii) Access Management. The TBH SPD provides a specific approach to access management and it is recommended that the RAMS produced by the North Essex Authorities should adopt a similar approach to delivery. The TBH SPD specifies that existing landowners and managers should deliver access management and funding should come from developer contributions, with funding provided in perpetuity. Access management is coordinated strategically by Natural England working with Local Authorities in line with an overarching strategy.

6.135 As per the TBH SPD, it was recommended that RAMS for the above European sites include access management which is funded by a charge levied on developer contributions which includes an allowance for the cost of this service, and that the charge collected in relation to access management measures are pooled for strategic allocation.

6.136 To ensure that there is a sufficient level of certainty that the RAMS will successfully mitigate the recreational impacts identified in this HRA, and will continue to do so for lifetime of the plan, the Essex Coast RAMS has been prepared, adopted by Tendring District Council and approved by Natural England prior to adoption of the Local Plan.

Provision of Visitor Surveys

6.137 To ensure that RAMS continues to be based upon up-to-date information, it is recommended that regular visitor monitoring is undertaken as part of the RAMS. The initiation and frequency of such monitoring should be agreed with Natural England in preparing the RAMS. This will ensure that the RAMS provides an up to date baseline against which to measure the status, extent and effect of recreational pressures going forward, and will ensure that the specifications committed to in the RAMS continue to be based upon up to date information and in agreement with Natural England. It will also be important to ensure that up to date bird data is also available to inform mitigation measures. This is regularly undertaken at each of the European sites as part of the BTO's WeBS Core Counts and Low Tide Counts. It is therefore predicted that such information will be available but, to ensure certainty, a commitment will be required by the Essex Coast RAMS partner authorities that in the event that suitably up to date bird survey data is not available, albeit unlikely, they will undertake equivalent survey work to inform the RAMS.

Provision of open space and green infrastructure

6.138 During a meeting on 8th February 2017 between the North Essex Authorities, LUC and Natural England, it was broadly agreed by all parties that given the unique nature and attraction of these coastal Europeans sites, the focus of the RAMS should primarily be on access management and monitoring as described below.

6.139 Nevertheless, the provision of alternative natural green space and green infrastructure (GI) represents an important aspect of the overall mitigation required. The provision of alternative greenspace in mitigating the effect of recreational pressures on sensitive European sites is actively encouraged by Natural England elsewhere, for example it forms a key component of the Thames Basin Heaths Delivery Framework. And therefore the strategic approach to incorporating protective measures specified in the Shared Strategic Section 1 Local Plan is considered likely to provide an effective contribution in mitigating significant effects associated with recreation.

6.140 To maximise the effectiveness of its role in mitigation recreational impacts on the coastal European sites, the design and management of open space and green infrastructure has focused towards attracting those groups of visitors who regularly visit the European Sites. This primarily includes walkers and dog walkers.

6.141 Despite the commitment of minimum standards for open space and protection and enhancement of GI, in order for such measures to effectively contribute towards mitigating recreational impacts at European sites, the design and management of GI and open space will need to be specifically designed and managed to provide a desirable alternative location for the regular daily activities typically undertaken by local residents at European Sites, including most notably walking and dog walking. This can be achieved by ensuring that the management of such sites is specifically targeted towards ensuring that these target groups are provided for. For example, sites which provide a range of walking routes including short and long distance options, and which encompass a range of habitat types, are perceived as being safe, and provide areas which are safe for dogs to exercise off of leads and which provide dog bins are likely to be particularly appealing.

6.142 As discussed previously, the attraction of the coastline is strong and therefore provision of alternative open space is likely to be less effective for those allocations located in close proximity to accessible parts of the European sites. No such site allocations occur within Colchester, and therefore it is recommended that strategic provision of GI and high quality open space is targeted towards the larger strategic housing allocations including the Tendring and Colchester Borders Garden Community, where their distance is such that visits to the European Sites will typically involve driving. As a result, if well designed, there is likely to be an opportunity for open space at such sites to attract regular dog walkers and walkers instead of visiting the European sites.

6.143 The size of these sites will also enable greater flexibility in their design and masterplanning at the project stage will enable these sites to provide the range of features required to maximise attractiveness to the target groups described above.

Watercraft and Powered Paragliding disturbance - Code of Conduct

6.144 Water-based and powered paragliding recreational activities are likely to be more prevalent during summer months when disturbance to bird populations for which the European sites are designated is less likely. The nesting sites of little terns are located on shallow sandy areas above the high tide mark and are therefore not especially vulnerable to such activities. Nevertheless, both air and water recreation does occur during the winter and passage months, and where such activities occur in close proximity to bird areas, there is a high probability of disturbance to birds while feeding or roosting in otherwise undisturbed locations.

6.145 It is difficult to manage and monitor the location and frequency of such activities because they are less predictable and take place in inaccessible locations. As a result, it is recommended that the most appropriate means of reducing the frequency and severity of such activities is by promoting a Code of Conduct and encouraging increased self-regulation from participants. This could be achieved via an education and awareness campaign targeted at the leisure operators, marinas, sailing clubs and holiday parks, in addition to quaysides, jetties and other launch sites. Such an approach could be undertaken via promotional leaflets, posters and signage.

6.146 With regard to powered paragliding, Natural England has confirmed that it has met with paramotor users on the Colne and Blackwater Estuaries to explain the impacts their sport can have if not undertaken responsibly. Guidance was also provided on how they can avoid disturbing birds whilst flying. Natural England confirmed that as a result of this meeting the users were likely to be more aware of their responsibilities and are self-policing the sport locally where possible.

6.147 Natural England is looking to undertake a similar approach with Jet skiers and the Essex Coast RAMS can build on this approach already taken forward by Natural England staff. A code of conduct would form a key aspect of supporting responsible behaviour and reducing the potential effect of powered paragliding and other recreational activities.

6.148 A code of conduct would not guarantee the avoidance of AEoI on its own, but it would certainly provide an important role in encouraging people to undertake recreational activities responsibly, particularly if promoted by RAMS rangers and linked to penalties and enforcement as is intended.

6.149 A code of conduct approach is not intended to mitigate for the small proportion of irresponsible people, but rather to educate and inform the majority of people who are keen to act in responsible and sensitive manner. Indeed, most forms of disturbance to are likely to be a result of ignorance rather than malice, therefore, whilst such measures will never be solely effective at eliminating potential impacts, they have a key role to play in contributing to the effectiveness of overall mitigation and avoidance, and therefore education through a code of conduct should be recognised as a key component to the Essex Coast RAMS.

6.150 Importantly, given the specialist nature of these activities, increases associated with the Local Plans is likely to be minor, and when this is coupled with the current absence of an Essex Coastal RAMS or similar mechanism for education and policing, the mitigation measures proposed are considered likely to represent a significant improvement relative to the current baseline level of impact.

On site management and monitoring

6.151 The European sites are managed by Natural England, Essex Wildlife Trust and the RSPB, and therefore the RAMS was developed in close consultation and agreement with these key stakeholders to ensure that the measures proposed will be targeted to resolving specific issues and recreational threats and maximise the benefit of the measures proposed in mitigating recreational impacts. This was achieved via workshops for the specific European sites which included appropriate stakeholder representatives such as site managers and area advisers.

6.152 Detailed management measures are provided in the RAMS and have been specifically informed via the workshops and consultation described above. Recommended aspects for inclusion within

the RAMS were informed by earlier iterations of this HRA and the Section 1 HRA and included, but were not limited to, the following:

- Provision of physical barriers to movement (fencing, screening, planting and bird hides).
- Provision of wardening, whether part-time, permanent or seasonal.
- Provision of educational resources including promoting self-regulation.
- Education initiatives such as provision of interpretation boards and signage, leaflets, posters, and liaison with local schools and leisure operators.
- Provision of infrastructure to encourage activities to focus on specific areas. E.g. via path upgrades, provision of benches and signage etc.
- Clear route signage.
- Closure and rerouting of paths during sensitive periods.
- Promoting a code of conduct aimed at providers and participants of water based recreation.
- Habitat management and enhancement to provide locations for birds away from disturbance sources (e.g. high tide roosts).

6.153 As described above, to ensure that the RAMS continues to be based upon up-to-date information, regular monitoring will be required. Bird surveys are regularly undertaken at each of the European sites as part of the BTO's WeBS Core Counts and Low Tide Counts and it is therefore predicted that such information will be available but, to ensure certainty, a commitment will be required by the Essex Coast RAMS partner authorities that in the event that suitably up to date bird survey data is not available during each five year period, albeit unlikely, they will undertake equivalent survey work to inform the RAMS.

Update on Bird Aware Essex Coast

6.154 As previously explained in this HRA report, the need for a Recreational disturbance Avoidance and Mitigation Strategy (RAMS) was identified at an early stage in the iterative HRA process. Further consideration was given to this at the appropriate assessment stage, partly to reflect that mitigation measures must be considered at the appropriate assessment stage and also as examples of mitigation strategies elsewhere have continued to emerge and the conservation community continue to share good practice.

6.155 The Essex Coast RAMS Strategy Document, which will ensure that the RAMS is delivered in perpetuity, was finalised in January 2019 and adopted by the twelve local authority partners, including Tendring District Council. As already detailed in this report, Natural England initiated and were involved in the preparation of the Essex Coast RAMS and endorse the RAMS Strategy Document.

6.156 A RAMS SPD was consulted on in January-February 2020. The SPD has now been finalised and Natural England have confirmed that they endorse the SPD. Tendring District Council have now adopted the SPD. The Essex Coast RAMS has the brand name, Bird Aware Essex Coast, which uses the same branding as the well-established Bird Aware Solent. One of the partner LPAs has become the Accountable Body. They will be responsible for developer contributions and will employ a Delivery Officer to manage the project.

6.157 Policy PPL4: Biodiversity and Geodiversity has been updated as part of the Main Modifications to include the following wording;

'*Sites designated for their international, European and national importance to nature conservation: including Ramsar sites; Special Protection Areas (SPAs); Special Areas of Conservation (SACs); Marine Conservation Zones (MCZs); Natural Nature Reserves (NNRs); and Sites of Special Scientific Interest (SSSIs) will be protected from development likely to have an adverse effect on their integrity.*

'Where proposals for development are likely to significant impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts. An Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) has been completed in compliance with the habitats Directive and Habitats Regulations. Contributions will be secured from residential development, within the Zones of Influence, towards mitigation measures identified in RAMS'.

In-combination Effects

6.158 Recreational impacts by their very nature are in-combination effects. The avoidance and mitigation provided by the Bird Aware Essex Coast described above will not only ensure that the Local Plan does not contribute to additional recreational impacts, but will also ensure that Tendring District Council contributes towards reducing the effect of existing recreational pressure on European Sites. Therefore there is no mechanism by which in-combination effects could occur with other plans and projects.

Conclusions

6.159 Tendring District Council has signed up to and is a key partner in the Essex Coast RAMS/ Bird Aware Essex Coast recreational mitigation strategy. This mechanism is supported by Natural England as ensuring that AEoI to European Sites will be avoided through the Section 2 Local Plan. The strategy has also been found robust and appropriate through the NEAs Section 1 Local Plan Examination in Public, Colchester Local Plan Section 2, and Chelmsford City Council's Local Plan Examinations.

6.160 As a result, there is certainty that the impacts identified in this assessment can be avoided or mitigated fully. As a result, **the Appropriate Assessment concludes that the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of Essex Estuaries SAC, Hamford Water SAC, Hamford Water SPA/Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary SPA/Ramsar as a result of recreational impacts, either alone or in-combination, due to the adequacy, appropriateness and effectiveness of the RAMS mitigation being adopted**.

Water quality

6.161 The HRA Screening stage identified the potential for likely significant effects on the following European Sites as a result of changes to water quality from increased development proposed within the Tendring District Local Plan Section 2 and in-combination with other plans and projects:

- Essex Estuaries SAC.
- Stour and Orwell Estuaries SPA/Ramsar.
- Colne Estuary SPA/Ramsar.

6.162 The assessment of whether the Tendring Local Plan Section 2 will result in adverse effects on site integrity is discussed for each of these sites below.

Essex Estuaries SAC

6.163 The SAC supports tidal and estuarine habitat, which lies along the southwest coastline/estuary of Tendring. Increased demand and treatment of water as a result of the Local Plan Section 2 has the potential to lead to adverse effects in the SAC.

6.164 A review of the HGWCS at the Screening stage identified Clacton-Holland Haven, Colchester, and Jaywick New WRCs as having insufficient wastewater treatment capacity to cope with additional growth in the Local Plan Section 2.

6.165 A desk-based review of site allocations was undertaken to identify allocations that fall within these WRC water catchment area. Site allocations that were identified included Hartley Garden Village mixed use development and Former Tendring 100 Waterworks Site housing development in Jaywick WRC catchment area and Robinson Road in Brightlingsea WRC catchment area. Brightlingsea WRC was not considered further in this assessment as the WRC based on the HGWCS findings was found to have sufficient headroom to cope with the proposed single, small housing development.

6.166 Consultation with Anglian Water on the 7th April 2017 identified that "*there is insufficient capacity to accommodate the scale of growth envisaged in the Local Plan for those developments which would be served by Clacton-Holland Haven, Jaywick and Manning Tree Water Recycling Centres (formerly sewage treatment works)*."

6.167 Manningtree WRC discharges into the River Stour and will therefore not have adverse effects on this SAC. Further consideration however is required for Jaywick WRC (previously identified in the HGWCS with insufficient headroom) and Clacton-Holland Haven WRC, both of which discharge into coastal waters in and adjacent to the SAC. In doing so, it should be noted that it is likely that that any pollutants entering the North Sea will be diluted and have minimal impacts on surrounding habitat, due to the proximity of the SAC there is potential for impacts to occur.

6.168 In addition to this, a high level assessment undertaken by Affinity Water identified three site allocations which fall within Jaywick and Clacton-Holland Haven with requirements for infrastructure upgrades. These are Hartley Garden Village, Oakwood Park and Rouses Farm. The assessment did not identify any other areas with requirements for infrastructure upgrades; however it was recommended that a more detailed study should be undertaken to confirm this.

6.169 Based on findings from the HGWCS and responses from Anglian Water and Affinity Water, the following site allocations were identified with potential to have a significant adverse effect on the SAC:

- Hartley Garden Village.
- Oakwood Park.
- Rouses Farm.
- Land at Coppins Court.
- Station Gateway Development.
- Former Tendring 100 Waterworks Site.

6.170 There is potential for significant adverse effects on the SAC to occur in-combination with Tendring and Colchester Borders Garden Community proposed in the Strategic Section 1 for the North Essex Authorities Local Plans.

6.171 A review of Colchester WCS (2016) was undertaken to identify potential impacts from the proposed Tendring and Colchester Borders Garden Community. The study found that Colchester WRC had sufficient capacity under the current permit to accept additional wastewater flow from the proposed Garden Community.

6.172 It therefore considered unlikely, providing suggested infrastructure and options proposed within the WCS is implemented, that the Garden Community in-combination with the Tendring District Local Plan Section 2 will have an adverse effect on the integrity of the SAC.

6.173 Importantly, the most recent Tendring District Water Cycle Study in 2017 concluded that "*the Load Standstill assessments for BOD* (Biochemical Oxygen Demand) *show that improvements to Clacton-Holland Haven, Colchester, Jaywick New and Manningtree WRCs are possible using conventional wastewater treatment technologies currently available, demonstrating that an engineering solution is feasible and hence treatment capacity should not be seen as a barrier to growth*.

Avoidance and Mitigation

6.174 The Tendring District Water Cycle Study recommended the following:

- The phasing of developments draining to the five WRCs will need to be discussed between Tendring District Council and Anglian Water to ensure no development occurs before the necessary upgrades are in place, and development is phased in line with Anglian Water's asset management plans. Development would need to be phased and potentially delayed until Anglian Water has accounted for the new development.

- The WCS has concluded feasible solutions are possible to ensure environmental conditions and legislative objectives are met. However, this WCS recommends that Tendring District Council, the Environment Agency, and Anglian Water should work together to determine when solutions will implemented and hence conclude when and how much development can be accommodated across the study area in the early phases of the Local Plan delivery period.

- To ensure that the planned level of development within the plan period does not result in a negative impact upon wildlife both inside and outside of designated sites, it is recommended that policy is included within the Local Plan to ensure that these matters are addressed at a strategic level.

6.175 The Tendring Local Plan specifically recognises that the HRA completed at the Regulation 18 stage recommended the inclusion of policy safeguards to ensure that adequate water treatment capacity exists prior to developments proceeding and a commitment that the phasing of development would not exceed water and sewage infrastructure capacity and that the necessary infrastructure upgrades would be in place prior to developments coming forward. The Plan now includes a commitment that the Council is committed to implementing the recommendations in the Appropriate Assessment and that these will be further progressed through Strategic Growth DPDs.

Conclusion

6.176 **Providing that the above mitigation safeguards included in, and supported by, the Tendring District Local Plan Section 2, are implemented successfully, adverse effects on the integrity of the Essex Estuaries SAC alone or in-combination, as a result of water quality issues will be avoided.**

Colne Estuary SPA/Ramsar

6.177 The SPA/Ramsar supports breeding and overwintering birds, which are reliant on tidal and estuarine habitat along the south-west edge of Tendring. This SPA/Ramsar also lies adjacent to Colchester Borough and overlaps with Essex Estuaries SAC. It is therefore likely that impacts from water quality detailed above for the SAC will also apply to the SPA.

6.178 As with the Essex Estuaries SAC, a review of HGWCS, responses from Anglian Water and Affinity Water, and the recent Tendring Water Cycle Study, identified Jaywick and Clacton-Holland Haven WRC with insufficient capacity to cope with proposed growth within the Local Plan Section 2. Both WRC discharge into coastal waters to the south of Tendring.

6.179 The SPA/Ramsar predominantly lies in the estuary to the west of Tendring with a small area falling along the coastline at Colne Point. It is therefore likely that only a small part of the SPA/Ramsar is likely to be affected by impacts from water quality issues at Jaywick and Clacton-Holland Haven WRC, which discharge further east along the coastline. In addition to this, it is

likely that any pollutants entering the North Sea will be diluted, resulting in minimal impacts to the SPA/Ramsar.

6.180 There is however potential for in-combination effects to occur in relation to the site allocation Tendring and Colchester Borders Garden Community proposed in the Strategic Section 1 for Local Plans, which is expected to use Colchester WRC and surrounding local WRC to treat its wastewater.

6.181 A review of Colchester WCS (2016) was undertaken to identify potential impacts from the proposed Garden Community. The study found that Colchester WRC had sufficient capacity under the current permit to accept additional wastewater flow from the proposed Garden Community.

6.182 It is therefore considered unlikely, providing suggested infrastructure and options proposed within the WCS is implemented, that the Garden Community in-combination with the Tendring District Local Plan Section 2 will have an adverse effect on the integrity of the SAC.

6.183 Importantly, the most recent Tendring District Water Cycle Study concluded that "*the Load Standstill assessments for BOD* (Biochemical Oxygen Demand) *show that improvements to Clacton-Holland Haven, Colchester, Jaywick New and Manningtree WRCs are possible using conventional wastewater treatment technologies currently available, demonstrating that an engineering solution is feasible and hence treatment capacity should not be seen as a barrier to growth*.

Avoidance and Mitigation

6.184 The Tendring District Water Cycle Study recommended the following:

- The phasing of developments draining to the five WRCs will need to be discussed between Tendring District Council and Anglian Water to ensure no development occurs before the necessary upgrades are in place, and development is phased in line with Anglian Water's asset management plans. Development would need to be phased and potentially delayed until Anglian Water has accounted for the new development.

- The WCS has concluded feasible solutions are possible to ensure environmental conditions and legislative objectives are met. However, this WCS recommends that Tendring District Council, the Environment Agency, and Anglian Water should work together to determine when solutions will implemented and hence conclude when and how much development can be accommodated across the study area in the early phases of the Local Plan delivery period.

- To ensure that the planned level of development within the plan period does not result in a negative impact upon wildlife both inside and outside of designated sites, it is recommended that policy is included within the Local Plan to ensure that these matters are addressed at a strategic level.

6.185 The Tendring Local Plan specifically recognises that the HRA completed at the Regulation 18 stage recommended the inclusion of policy safeguards to ensure that adequate water treatment capacity exists prior to developments proceeding and a commitment that the phasing of development would not exceed water and sewage infrastructure capacity and that the necessary infrastructure upgrades would be in place prior to developments coming forward. The Plan now includes a commitment that the Council is committed to implementing the recommendations in the Appropriate Assessment and that these will be further progressed through Strategic Growth DPDs.

Conclusion

6.186 **Providing that the above mitigation safeguards included in, and supported by, the Tendring District Local Plan Section 2, are implemented successfully, adverse effects on the integrity of the Colne Estuary SPA and Ramsar either alone or in-combination, as a result of water quality issues will be avoided.**

Stour and Orwell Estuaries SPA/Ramsar

6.187 The SPA/Ramsar supports breeding and wintering bird species, which are reliant on coastal and estuarine habitat between the eastern parts of Essex/Suffolk border to the north of Tendring. Increased demand and treatment of water as a result of the Tendring District Local Plan Section 2 therefore has the potential to lead to adverse effects in the SPA/Ramsar.

6.188 A review of the HGWCS at the Screening stage identified Harwich and Dovercourt WRC, which discharges 500m from the SPA/Ramsar site, as being due to exceed capacity as a result of increased employment and housing growth. In addition to this, consultation with Anglian Water identified there is insufficient capacity at Manning Tree WRC to accommodate growth proposed within the Local Plan. This WRC discharges into a watercourse that is directly linked to the SPA/Ramsar.

6.189 A high level assessment undertaken by Affinity Water did not identify any likely impacts to the water network, which discharge in and/or near to the SPA/Ramsar from proposed development. It was however recommended that a more detailed study is carried out to ensure there are no impacts from development and whether additional infrastructure and upgrades are required.

6.190 In addition to this, there is potential for significant adverse effects on the SPA/Ramsar to occur in-combination with Tendring and Colchester Borders Garden Community proposed in the Strategic Section 1 for North Essex Authorities Local Plans. This proposed Garden Community falls within a number WRC catchment areas, including Manning Tree WRC, which is already considered to have insufficient capacity to support additional growth proposed in the Tendring District Local Plan.

6.191 A review of Colchester WCS (2016) was undertaken to identify potential impacts from the proposed Garden Community on the SPA/Ramsar. Overall, the study found that Colchester WRC had sufficient capacity under the current permit to accept additional wastewater flow from the proposed Garden Community. This was based on the assumption that the majority of the proposed growth will be serviced by Colchester WRC.

6.192 Although there is sufficient capacity at Colchester WRC to service growth at the Garden Community, the study identified the potential for adverse effects to occur as a result of the significant infrastructure upgrades to the Colchester WRC, which could affect the viability of local WRC. There is therefore potential for impacts to affect Manning Tree WRC, which could as a result adversely affect the SPA/Ramsar. It was recommended by AWS in the WCS *'that significant investment would be required to upgrade and enable these local WRCs to serve growth within the garden communities and thereby maintaining their viability. This approach may be more expensive in the short term, but could prove to be more sustainable in the longer term in terms of balancing environmental benefits with cost.'*

6.193 Depending on proposals relating to the Garden Community in relation to water treatment, there is potential for significant effects to adversely affect the integrity of the SPA/Ramsar.

6.194 Importantly, the most recent Tendring District Water Cycle Study concluded that "*the Load Standstill assessments for BOD (Biochemical Oxygen Demand) show that improvements to Clacton-Holland Haven, Colchester, Jaywick New and Manningtree WRCs are possible using conventional wastewater treatment technologies currently available, demonstrating that an engineering solution is feasible and hence treatment capacity should not be seen as a barrier to growth"*.

Avoidance and Mitigation

6.195 As described above, to ensure water quality does not adversely affect the integrity of the SPA/Ramsar, it is essential that the Tendring District Local Plan Section 2 includes a specific commitment to ensure that phasing of development does not exceed infrastructure capabilities and that the necessary upgrades are in place prior to development coming forward, prior to adoption of the plan.

6.196 The Tendring District Water Cycle Study recommended the following:

- The phasing of developments draining to the five WRCs will need to be discussed between Tendring District Council and Anglian Water to ensure no development occurs before the necessary upgrades are in place, and development is phased in line with Anglian Water's asset management plans. Development would need to be phased and potentially delayed until Anglian Water has accounted for the new development.

- The WCS has concluded feasible solutions are possible to ensure environmental conditions and legislative objectives are met. However, this WCS recommends that Tendring District Council, the Environment Agency, and Anglian Water should work together to determine when solutions will implemented and hence conclude when and how much development can be accommodated across the study area in the early phases of the Local Plan delivery period.

- To ensure that the planned level of development within the plan period does not result in a negative impact upon wildlife both inside and outside of designated sites, it is recommended that policy is included within the Local Plan to ensure that these matters are addressed at a strategic level.

6.197 The Tendring Local Plan specifically recognises that the HRA completed at the Regulation 18 stage recommended the inclusion of policy safeguards to ensure that adequate water treatment capacity exists prior to developments proceeding and a commitment that the phasing of development would not exceed water and sewage infrastructure capacity and that the necessary infrastructure upgrades would be in place prior to developments coming forward. The Plan now includes a commitment that the Council is committed to implementing the recommendations in the Appropriate Assessment and that these will be further progressed through Strategic Growth DPDs.

Conclusion

6.198 **Providing that the above mitigation safeguards included in, and supported by, the Tendring District Local Plan Section 2, are implemented successfully, adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, alone or in-combination, as a result of water quality issues will be avoided**.

Non-physical disturbance

Stour and Orwell Estuaries SPA/Ramsar

6.199 The Screening stage identified that whilst bird populations in the vicinity of employment allocations in the Tendring District Local Plan Section 2are likely to be habituated to baseline levels of noise and disturbance associated with existing employment activities, the introduction of new or irregular activities has the potential to result in likely significant effects through bird disturbance.

Avoidance and Mitigation

6.200 Employment allocations with potential to result in likely significant effects on the Stour and Orwell Estuaries SPA and Ramsar site were identified as part of the initial HRA of the Regulation 18 draft Local Plan Section 2 and subsequently specific recommendations were provided to include specific wording and safeguards within relevant site specific policies. As a result, Tendring District Council has updated the Local Plan Section 2 to include the following wording for the Carless site allocations:

'*Assessment of any impact on nature conservation, including on the Stour and Orwell Estuaries SPA and Ramsar site, should be undertaken. Development will only be permitted where a project level assessment has demonstrated in accordance with the Habitat Regulations, that any proposal will not adversely affect the integrity of the Stour and Orwell Estuaries SPA and Ramsar site,*

either alone or in-combination. If significant effects are considered likely, an appropriate mitigation strategy should be submitted or compensatory habitat provided'.

6.201 The additional safeguards provided in the Plan ensure that developments at this site will only be permitted where project specific HRA has demonstrated that the scheme would avoid adverse effects on site integrity. This provides a high level of certainty that adverse effects on integrity would be avoided, and therefore the requirement of this assessment is to determine whether the provision of employment development at each of these sites can, following implementation of appropriate avoidance and mitigation measures, be achieved without adverse effects on integrity. The types of measures expected are likely to include specific sensitive scheme design, sensitive construction timings, screening, and best practice construction methods. All of which are well-established and likely to be effective in avoiding or minimising effects of each development. As a result, it is considered possible to implement employment development at this site without adverse effects on site integrity of the Stour and Orwell Estuaries SPA/Ramsar, and provision of appropriate avoidance and mitigation measures would provide sufficient certainty in this conclusion.

6.202 Policy PPL4: Biodiversity and Geodiversity has been updated via the Main Modifications to include the following wording;

'*Sites designated for their international, European and national importance to nature conservation: including Ramsar sites; Special Protection Areas (SPAs); Special Areas of Conservation (SACs); Marine Conservation Zones (MCZs); Natural Nature Reserves (NNRs); and Sites of Special Scientific Interest (SSSIs) will be protected from development likely to have an adverse effect on their integrity.*

Where proposals for development are likely to significant impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts. An Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) has been completed in compliance with the habitats Directive and Habitats Regulations. Contributions will be secured from residential development, within the Zones of Influence, towards mitigation measures identified in RAMS'.

6.203 **Given the level of protection provided by main modification MM33.2 as described above, there can be sufficient certainty that adverse effects on the integrity of European sites can be avoided or successfully mitigated. The Tendring Local Plan Section 2 will not result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar as a result of non-physical disturbance, either alone or in-combination.**

Non-toxic contamination

Stour and Orwell Estuaries SPA/Ramsar

6.204 The Screening stage identified that employment allocations at Mistley and Harwich may result in the degradation of salt marsh and intertidal habitat as a result of dust contamination and smothering, and thereby reduce the extent and quality of feeding and roosting habitat upon which SPA and Ramsar bird species depend.

Avoidance and Mitigation

6.205 The Regulation 18 stage Local Plan Section 2 originally included the following wording: '*assessment of any impact on nature conservation, including on the Stour and Orwell Estuaries SPA and Ramsar site should be undertaken. If significant effects are considered likely an appropriate mitigation strategy should be submitted'*. Nevertheless, this wording was considered inadequate to provide the necessary level of certainty that adverse effects on integrity would be avoided. As a result, specific recommendations were made to update the Plan. As a result,

Tendring District Council has updated the Local Plan Section 2 to include the following wording for the Carless site allocation:

'*Assessment of any impact on nature conservation, including on the Stour and Orwell Estuaries SPA and Ramsar site, should be undertaken. Development will only be permitted where a project level assessment has demonstrated in accordance with the Habitat Regulations, that any proposal will not adversely affect the integrity of the Stour and Orwell Estuaries SPA and Ramsar site, either alone or in-combination. If significant effects are considered likely, an appropriate mitigation strategy should be submitted or compensatory habitat provided'*.

6.206 The additional safeguards provided in the Plan ensure that developments at this site will only be permitted where project specific HRA has demonstrated that the scheme would avoid adverse effects on site integrity. This provides a high level of certainty that adverse effects on integrity would be avoided, and therefore the requirement of this assessment is to determine whether the provision of employment development at this site will, following implementation of appropriate avoidance and mitigation measures, be achieved without adverse effects on integrity. The types of measures expected are likely to include specific sensitive scheme design, sensitive construction timings, screening, and best practice construction methods. All of which are well-established and likely to be effective in avoiding or minimising effects of each development. As a result, it is considered possible to implement employment development at this site without adverse effects on site integrity of the Stour and Orwell Estuaries SPA/Ramsar, and provision of appropriate avoidance and mitigation measures would provide sufficient certainty in this conclusion.

6.207 The above safeguards were originally only applied to the Carless site. Nevertheless, the main modification MM33.2 provides additional avoidance and mitigation through the following wording within Policy PPL4: Biodiversity and Geodiversity;

'Sites designated for their international, European and national importance to nature conservation: including Ramsar sites; Special Protection Areas (SPAs); Special Areas of Conservation (SACs); Marine Conservation Zones (MCZs); Natural Nature Reserves (NNRs); and Sites of Special Scientific Interest (SSSIs) will be protected from development likely to have an adverse effect on their integrity.

Where proposals for development are likely to significant impact upon International and European sites, applications must be supported by a Habitats Regulation Assessment (HRA) to provide sufficient information to the Council to establish the likelihood and nature of impacts before a decision can be made. If necessary, this may need to be followed by a more detailed 'Appropriate Assessment' of the impacts. An Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) has been completed in compliance with the habitats Directive and Habitats Regulations. Contributions will be secured from residential development, within the Zones of Influence, towards mitigation measures identified in RAMS'.

6.208 **Given the level of protection provided by main modification MM33.2 as described above, the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of any European Sites as a result of non-toxic contamination, either alone or in-combination.**

7 Conclusion

7.1 At the Screening stage, Likely Significant Effects (LSEs) on European sites, either alone or in combination with other policies and proposals, were identified for Local Plan policies:

- LP 1 Housing supply.
- PP 7 Employment allocations.
- PP 8 Tourism.
- PP 10 Camping and touring caravan sites.
- PP 11 Holiday parks.
- LP 9 Traveller sites.

7.2 The Likely Significant Effects identified at the Screening stage were:

- **Physical loss/damage** – Abberton Reservoir SPA/Ramsar (offsite only), Blackwater Estuary SPA/Ramsar (offsite only), Hamford Water SAC (offsite only), Hamford Water SPA/Ramsar (offsite only), Stour and Orwell Estuaries SPA/Ramsar (direct and offsite habitat loss), and Colne Estuaries SPA and Ramsar (offsite only).
- **Recreational Impacts** – Essex Estuaries SAC, Hamford Water SAC, Hamford Water SPA/Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary SPA/Ramsar.
- **Water quality** – Essex Estuaries SAC, Stour and Orwell Estuaries SPA/Ramsar, Colne Estuary SPA/Ramsar.
- **Non-toxic contamination** – Stour and Orwell Estuaries SPA/Ramsar.
- **Non-physical disturbance** – Stour and Orwell Estuaries SPA/Ramsar.

7.3 The Appropriate Assessment stage identified whether the above LSE's will, in light of mitigation and avoidance measures, result in adverse effects on the integrity of the European sites either alone or in-combination with other plans or projects. Where necessary, suitable mitigation measures and modified policy wording is provided which would enable a sufficient level of certainty to conclude no Adverse Effect on Integrity (AEOI).

Physical loss/damage

7.4 The Appropriate Assessment of physical loss/damage concluded that the majority of site allocations were of negligible to low potential importance for relevant qualifying features including bird species and Fisher's estuarine moth. A low number of site allocations were identified which may contribute to maintaining populations of qualifying species in-combination with other allocations. As a result, safeguards have been incorporated in the plan for loss of specific offsite habitats, in the form of further survey and assessment as part of any development proposal, and commitment to phasing of development and provision of suitable mitigatory habitat as appropriate.

7.5 **In light of the commitment within the Local Plan (MM33.2, Policy PPL4) that, if required, a project level HRA will completed to demonstrate that adverse effects on the**

integrity of European sites can be avoided or successfully mitigated, the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of any European Sites as a result of physical loss/damage, either alone or in-combination.

Recreational impacts

7.6 Recreational impacts were identified as a key threat to Essex Estuaries SAC, Hamford Water SAC, Hamford Water SPA/Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary SPA/Ramsar, both alone and as a result of in-combination effects with neighbouring Authorities including Colchester Borough Council, Braintree District Council, and the Suffolk Authorities. This issue is an increasingly prevalent issue across the UK, and in response to emerging research and evidence, the consensus between Local Authorities, Natural England, and other key stakeholders such as the RSPB and the Wildlife, is that the most appropriate method of mitigation and avoidance is via implementation of Recreation Avoidance and Mitigation Strategies (RAMS) which provide a multi-faceted approach and are adaptive and responsive to regular monitoring.

7.7 Key aspects of the RAMS will include provision of alternative open space and green infrastructure, on-site management, and an adaptable approach which responds to regular monitoring of both people and birds.

7.8 Tendring District Council has signed up to and is a key partner in the Essex Coast RAMS/ Bird Aware Essex Coast recreational mitigation strategy. This mechanism is supported by Natural England as ensuring that AEoI to European Sites will be avoided through the Local Plan. The strategy has also been found robust and appropriate through the NEAs Section 1 Local Plan Examination in Public, Colchester Local Plan Section 2, and Chelmsford City Council's Local Plan Examinations.

7.9 As a result, there is certainty that the impacts identified in this assessment can be avoided or mitigated fully. As a result, **the Appropriate Assessment concludes that the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of Essex Estuaries SAC, Hamford Water SAC, Hamford Water SPA/Ramsar, Stour and Orwell Estuaries SPA and Ramsar, and Colne Estuary SPA/Ramsar as a result of recreational impacts, either alone or in-combination, due to the adequacy, appropriateness and effectiveness of the RAMS mitigation being adopted**.

Water quality

7.10 The Appropriate Assessment concluded that adverse effects on the integrity of European sites as a result of changes in water quality can be avoided provided additional commitments and policy safeguards are included in the local plan prior to adoption. This included a specific commitment to ensure that phasing of development does not exceed infrastructure capabilities and that the necessary upgrades are in place prior to development coming forward.

7.11 This conclusion is supported by the most recent Tendring Water Cycle Study 2017 which concluded that "*the Load Standstill assessments for BOD show that improvements to Clacton-Holland Haven, Colchester, Jaywick New and Manningtree WRCs are possible using conventional wastewater treatment technologies currently available, demonstrating that an engineering solution is feasible and hence treatment capacity should not be seen as a barrier to growth*", and that "*The WCS has concluded feasible solutions are possible to ensure environmental conditions and legislative objectives are met*".

7.12 As a result, **the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of the Stour and Orwell Estuaries SPA/Ramsar, the Colne Estuary SPA/Ramsar and Essex Estuaries SAC as a result of changes in water quality, either alone or in-**

combination due to the ability and commitment to address water treatment capacity issues prior to specific developments coming forward.

Non-toxic contamination

7.13 The Screening stage identified that the construction and operation of employment sites in the vicinity of the Stour and Orwell Estuaries SPA/Ramsar has the potential to result in non-toxic contamination capable of resulting in likely significant effects on qualifying bird species. Additional mitigation has been provided in the Tendring District Local Plan Section 2 which commits to specific project level assessment and mitigation as required.

7.14 In light of the commitment within the Local Plan (MM33.2, Policy PPL4) that, if required, a project level HRA will completed to demonstrate **adverse effects on the integrity of European sites can be avoided or successfully mitigated, the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of any European Sites as a result of non-toxic contamination, either alone or in-combination.**

Non-physical disturbance

7.15 The Screening stage identified that the introduction of new or irregular activities at employment sites in the vicinity of the Stour and Orwell Estuaries SPA/Ramsar has the potential to result in non-physical disturbance of qualifying bird species. Additional mitigation has been provided in the Tendring District Local Plan Section 2 which commits to specific project level assessment and mitigation as required.

7.16 In light of the commitment within the Local Plan (MM33.2, Policy PPL4) that, if required, a project level HRA will completed to demonstrate **adverse effects on the integrity of European sites can be avoided or successfully mitigated, the Tendring Local Plan Section 2 will not result in adverse effects on the integrity of any European Sites as a result of non-physical disturbance, either alone or in-combination.**

Conclusion

7.17 The approach taken by Tendring District Council in addressing the key issues, particularly with regards to working alongside the other North Essex Authorities in relation to strategic growth, is advocated and represents a robust approach in ensuring certainty that the Tendring District Local Plan Section 2 is sound.

7.18 **In Conclusion, the Tendring District Local Plan Section 2 has been updated by the main modifications to include specific policy safeguards and commitments previously recommended, and providing that these are adopted and successfully implemented, it can be concluded with certainty that there will be no adverse effects on European sites either alone or in-combination.**

Natural England Consultation Response

7.19 Natural England in its role as the Statutory Consultee for this HRA, confirmed in its response, dated 28th June 2017, that it supported the conclusions of the *Habitats Regulations Assessment (HRA) of Tendring District Draft Local Plan Section 2: Stage 2 Appropriate Assessment (AA)*. The summary extract of Natural England's response is provided below:

7.20 `*Based on the information provided in the AA, and provided each of the recommended safeguards are fully incorporated into the relevant policies, Natural England agrees that the Plan is unlikely to have an adverse effect on the integrity (AEOI) of Abberton Reservoir Special Protection Area (SPA) and Ramsar site1, the Blackwater Estuary SPA and Ramsar site, Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site, the Essex Estuaries Special Area of Conservation (SAC), Hamford Water SAC, SPA and Ramsar site or the Stour and Orwell Estuaries SPA and Ramsar site'*.

Appendix 1

European Site Information

This appendix contains information about the European sites scoped into the HRA. Information about each site's area, the site descriptions, qualifying features and pressures and threats are drawn from Natural England's Site Improvement Plans (SIPs)[39] and the Standard Data Forms or Ramsar Information Sheets available from the JNCC website[40]. Site conservation objectives are drawn from Natural England's website and are only available for SACs and SPAs.[41]

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Large estuarine site in south-east England. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach river.					
Essex Estuaries SAC	46140.82	Annex 1 habitats that are a primary reason for selection of this site: Estuaries Mudflats and sandflats not covered by seawater at low tide Salicornia and other animals colonising mud and sand Spartina swards (*Spartinion maritimae*) Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)	With regard to the individual species and/or assemblage of species for which the site has been classified: Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore:	**Coastal squeeze** – 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, '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. **Fisheries: Commercial marine and estuarine** – Shellfish dredging over subtidal habitats has been identified as an Amber activity and is considered a high priority for assessment and development of possible management for the site. Bottom towed fishing gear has been categorised as a 'Red' for the interest	**Habitat -** The qualifying habitats of the SAC are reliant a range of coastal factors, including salinity, sedimentation, tide, sea level, turbidity and elevation, which influence the interdependent intertidal, subtidal and terrestrial habitats. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. Additional factors are provided below for each habitat (where relevant).

[39] Site Improvement Plans: East of England, Natural England, http://publications.naturalengland.org.uk/category/4873023563759616

[40] JNCC Data Forms http://jncc.defra.gov.uk/default.aspx?page=4

[41] European Site Conservation Objectives, Natural England, http://www.naturalengland.org.uk/ourwork/conservation/designations/sac/conservationobjectives.aspx

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Mediterranean and thermo-Atlantic halophilous scrubs Annex 1 habitats present as a qualifying feature: Sandbanks which are slightly covered by seawater all the time	The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.	features listed, specifically the seagrass beds *Zostera* spp, a sub-feature of the SAC. **Planning Permission: general** – 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. **Invasive species** – Non-native invasive species such as the American whelk tingle *Urosalpinx cinerea* and Slipper limpet *Crepidula fornicata* are known to occupy subtidal muddy habitats, potentially impacting native communities through competition for resources and predation. Invasive common cord grass may adversely affect plant species for which the Essex Estuaries SAC is designated. **Fisheries: Recreational marine and estuarine** – Recreational bait digging may damage the intertidal mudflats and sandflats and associated sub-features and communities, such as eelgrass beds. The extent of the activity and potential impacts on site features are not currently well understood. **Air Pollution: risk of atmospheric nitrogen deposition** - Atmospheric nitrogen deposition exceeds the	**Sandbanks which are slightly covered by sea water all the time.** Reef-building species such as *Sabellaria spinulosa* help to stabilise the sediment, allowing the colonisation of sessile animals.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
				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.	
Hamford Water is located on the Essex coast in eastern England. It is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud- and sand-flats, and Site Name Area (ha) Qualifying Features Conservation objectives (only available for SACs & SPAs) Key vulnerabilities / factors affecting site integrity saltmarsh. The rich invertebrate fauna and sheltered nature of the site results in its importance for internationally important numbers of waterbirds during the passage and winter periods, as well as for breeding terns in summer. The shallow and sheltered nature of the complex provides refuge for waterbirds, especially in periods of severe weather.					
Hamford Water SAC	50.34	Fisher's estuarine moth *Gortyna borelii lunata*	Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features;	**Inappropriate scrub control –** Scrub encroachment results in a loss of habitat for Fisher's Estuarine Moth, as the moth's larval foodplant (Hog's Fennel) is a species of open grassland. Although there are plans in place for scrub reduction/control in several areas, more action is likely to be needed to get/keep it under control.	**Habitat -** The qualifying habitats of the SAC are reliant a range of coastal factors, including salinity, sedimentation, tide, sea level, turbidity and elevation, which influence the interdependent intertidal, subtidal and terrestrial habitats. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
			The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.		
Hamford Water SPA	2187.21	Annex I species present as a qualifying feature: During the breeding season: Little Tern *Sterna albifrons* Over winter Avocet *Recurvirostra avosetta*; Golden Plover *Pluvialis apricaria*; Ruff *Philomachus pugnax*. This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: On passage: Ringed Plover *Charadrius hiaticula*.	Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features;	**Coastal squeeze –** The Essex coastline is subject to rising sea levels and increasing frequency in coastal and tidal surges, as a result of climate. To prevent intertidal habitats from shifting landward hard sea defences have been implemented. The combination of climate change, sea defences and subsidence are likely to contribute to coastal squeeze, which will lead to the degradation and reduction of suitable habitat used by overwintering and breeding birds for feeding, roosting and/or nesting. **Changes in species distribution –** Declines in the number of bird species present at Hamford Water SPA have occurred. This is likely to be the result of changes in population and distribution on an international scale, due to climate change. **Public access/disturbance –** Hamford Water attracts a large number of yachts and accompanying watersports. Sensitive areas of the SPA are threatened by unauthorised access	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat. *Anas crecca* Eurasian teal (Non-breeding)

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Over winter: Black-tailed Godwit *Limosa limosa islandica;* Dark-bellied Brent Goose *Branta bernicla bernicla;* Grey Plover *Pluvialis squatarola*; Ringed Plover *Charadrius hiaticula;* Teal *Anas crecca*; Common shelduck *Tadorna tadorna;* Common redshank *Tringa tetanus*. The area qualifies under Article 4.2 of the Directive (79/409/EEC) by	The distribution of the qualifying features within the site.	on foot, from boats and by quad bike/motorbike. **Air pollution: Risk of atmospheric nitrogen deposition –** 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. **Fisheries: Commercial marine and estuarine –** Commercial fishing activities can be very damaging to inshore marine habitats and the bird species dependent on the communities they support. Any 'amber or green' categorised commercial fishing activities in European Marine Sites are assessed by Kent and Essex Inshore Fisheries Conservation Authority (IFCA). This assessment takes into account any in-combination effects of amber activities and/or appropriate plans or projects.	▪ Habitat Preference – Lakes, marshes, ponds & shallow streams. ▪ Diet – Omnivorous, mostly seeds in winter, feeds mostly at night in shallow water. *Branta bernicla bernicla* Dark-bellied brent goose (Non-breeding) Habitat Preference – Tundra, and on migration marshes and estuaries. Diet – Vegetation, especially eel-grass. *Charadrius hiaticula* Ringed Plover Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans. *Limosa limosa islandica* Black-tailed Godwit:

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Marshy grassland and steppe, and on migration mudflats. Diet - Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season. *Pluvialis squatarola* Grey Plover Habitat Preference – Tundra, and on migration pasture and estuaries. Diet - In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs *Recurvirostra avosetta* Pied Avocet Habitat Preference – coastal lagoons on the east coast in summer and the Exe estuary in winter.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet - Invertebrates, especially insects, crustaceans, worms, also small fish. *Sterna albifrons* Little tern (Breeding) Habitat Preference – Seacoasts, rivers and lakes. Diet – Small fish and invertebrates. *Tadorna tadorna* Shelduck Habitat Preference – Coasts, estuaries and lakes. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans. *Tringa tetanus* Redshank Habitat Preference – Rivers, wet grassland, moors and estuaries. Diet - Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs,

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					marine worms (estuaries).
Hamford Water Ramsar site	2187.21	Species/populations with peak counts in spring/autumn: Ringed plover, *Charadrius hiaticula;* Common redshank , *Tringa totanus tetanus.* Species/populations with peak counts in winter: Dark-bellied brent goose, *Branta bernicla bernicla;* Black-tailed godwit , *Limosa limosa islandica.* Species/populations identified subsequent to designation for possible future consideration under criterion 6. Grey plover, *Pluvialis squatarola*.	None available.	Similar to Hamford Water SPA (above).	Refer to Hamford Water SPA above.
The Stour and Orwell estuaries straddle the eastern part of the Essex/Suffolk border in eastern England. The estuaries include extensive mud-flats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The mud-flats hold *Enteromorpha, Zostera* and *Salicornia* spp. The site also includes an area of low-lying grazing marsh at Shotley Marshes on the south side of the Orwell. In summer, the site supports important numbers of breeding Avocet *Recurvirostra avosetta*, while in winter they hold major concentrations of waterbirds, especially geese, ducks and waders. The geese also feed, and waders roost, in surrounding areas of agricultural land outside the SPA. The site has close ecological links with the Hamford Water and Mid-Essex Coast SPAs, lying to the south on the same coast.					

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Stour and Orwell Estuaries SPA	3676.92	Annex I species: Over winter: Hen Harrier *Circus cyaneus* This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: Over winter: Black-tailed Godwit *Limosa limosa islandica* Dunlin *Calidris alpina alpina* Grey Plover *Pluvialis squatarola* Pintail *Anas acuta* Redshank *Tringa totanus* Ringed Plover *Charadrius hiaticula* Shelduck *Tadorna tadorna* Turnstone *Arenaria interpres* The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000waterfowl including:	With regard to the individual species and/or assemblage of species for which the site has been classified ("the Qualifying Features" listed below); Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.	**Coastal squeeze** – Coastal defences are present along most of the Orwell coastline to mitigate for impacts from climate change, such as rising sea level. Unless changes are made to the management of the coastline, habitats supporting qualifying SPA birds will be lost or degraded through coastal squeeze, sedimentation and reduced exposure. **Public access/disturbance** – Stour and Orwell Estuaries is subject to land- and water-based activities, including boating and water sports; walking; bait- digging; fishing; wildfowling; and military overflight training. These activities are likely to impact habitats supporting breeding and overwintering water birds. 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 is required to ensure the Estuaries are appropriately managed. **Changes in species distribution** – Declines in the number of bird species present at Orwell coastline have occurred. This is likely to be the result of changes in population and distribution on an international scale, due to climate change. **Invasive species** – An increase in Spartina anglica may be affecting the growth of Spartina maritime, a key habitat feature for qualifying bird	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat. *Limosa limosa islandica*: Black-tailed Godwit: Habitat Preference – Marshy grassland and steppe, and on migration mudflats. Diet - Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Cormorant *Phalacrocorax carbo*; Pintail *Anas acuta*; Ringed Plover *Charadrius hiaticula;* Grey Plover *Pluvialis squatarola*; Dunlin *Calidris alpina alpine*; Black-tailed Godwit *Limosa limosa islandica;* Redshank *Tringa tetanus*; Shelduck *Tadorna tadorna*; Great Crested Grebe *Podiceps cristatus;* Curlew *Numenius arquata*; Dark-bellied Brent Goose *Branta bernicla bernicla;* Wigeon *Anas Penelope*; Goldeneye *Bucephala clangula*; Oystercatcher *Haematopus ostralegus;* Lapwing *Vanellus vanellus*;		roosting and feeding areas of saltmarsh and mudflat. **Planning permission: General** – The issue of development in combination with other factors is not fully understood. To ensure management is appropriate to the SPA a better understanding of the sensitivities relating to each habitat, species and location to different types of development is required. Difficult issues highlighted by the SIP include; a) Assessing the cumulative effects of numerous, small and often 'non-standard' developments. b) Development outside the SPA boundary can have negative impacts, particularly on the estuaries' birds. c) Assessing the indirect, 'knock-on' effects of proposals. d) Pressure to relax planning conditions on existing developments. **Air pollution: impact from atmospheric nitrogen deposition** – 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. **Inappropriate coastal management** – Due to the presence of existing hard sea defences, such as sea walls there is little scope for adaptation to rising sea levels. Any freshwater habitats behind failing seawalls are likely to be inundated by seawater, which would	*Calidris alpina alpine*: Dunlin Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat. Diet - Tundra, moor, heath, and on migration estuaries and coastal habitat. *Pluvialis squatarola*: Grey Plover Habitat Preference – Tundra, and on migration pasture and estuaries. Diet - In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. *Anas acuta*: Pintail Habitat Preference – Lakes, rivers, marsh & tundra Diet - A variety of plants and invertebrates.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Knot *Calidris canutus*; Turnstone *Arenaria interpres*.		result in the loss of this habitat within the SPA. **Fisheries: Commercial and estuarine** – Commercial fishing activities can be very damaging to inshore marine habitats and the bird species dependent on the communities they support. Any 'amber or green' categorised commercial fishing activities in European Marine Sites are assessed by Kent and Essex Inshore Fisheries Conservation Authority (IFCA). This assessment takes into account any in-combination effects of amber activities and/or appropriate plans or projects.	*Tringa totanus*: Redshank Habitat Preference – Rivers, wet grassland, moors and estuaries. Diet - Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries). *Charadrius hiaticula*: Ringed Plover Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans. *Tadorna tadorna*: Shelduck Habitat Preference – Coasts, estuaries and lakes. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Arenaria interpres: Turnstone Habitat Preference – On migration beaches and rocky coasts. Diet - Insects, crustaceans and molluscs. *Phalacrocorax carbo*: Cormorant Habitat Preference – Larger lakes and coastal. Diet - Fish. *Podiceps cristatus*: Great Crested Grebe Habitat Preference – Reed-bordered lakes, gravel pits, reservoirs and rivers. In the winter, they are also found along the coast. Diet - Mostly fish, some aquatic invertebrates especially in summer. *Numenius arquata*: Curlew Habitat Preference – Marsh, grassland and on migration mudflats.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet - Worms, shellfish and shrimps. *Branta bernicla bernicla*: Dark-bellied brent goose Habitat Preference – Tundra, and on migration marshes and estuaries. Diet - Vegetation, especially eel-grass. *Anas Penelope*: Wigeon Habitat Preference – Marsh, lakes, open moor, on migration estuaries. Diet - Mostly leaves, shoots, rhizomes and some seeds. *Bucephala clangula*: Goldeneye Habitat Preference – Lakes, rivers, and on migration seacoasts. Diet - Insects, molluscs and crustaceans. *Haematopus ostralegus*: Oystercatcher

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Sandy, muddy and rocky beaches. Diet - Mussels and cockles on the coast, mainly worms inland. *Vanellus vanellus*: Lapwing Habitat Preference – Pasture, arable land, wet meadow, on migration estuaries Diet - Worms and insects. *Calidris canutus islandica*: Red knot Habitat Preference – Tundra, and on migration coastal habitat. Diet - In summer, insects and plant material, and in winter inter-tidal invertebrates, esp molluscs. *Calidris canutus*: Knot Habitat Preference – Coastal habitat.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet - Insects and plant material during the summer; and inter-tidal invertebrates, especially molluscs during the winter.
Stour and Orwell Estuaries Ramsar site	3676.92	Ramsar criterion 2 Contains seven nationally scarce plants: Stiff saltmarsh-grass *Puccinellia rupestris* Small cord-grass *Spartina maritime* Perennial glasswort *Sarcocornia perennis* Lax-flowered sea lavender *Limonium humile* Eelgrasses *Zostera angustifolia*, Z. marina and Z. noltei. Ramsar criterion 5 Assemblages of international importance; species with peak counts in winter; 63,017 waterfowl.	None available.	Similar to Stour and Orwell Estuaries SPA (See above). A key threat identified by RIS was erosion. **Erosion –** Natural coastal processes exacerbated by fixed sea defences, port development and maintenance dredging. Erosion is being tackled through sediment replacement for additional erosion that can be attributed to port development and maintenance dredging. A realignment site has been created on-site to make up for the loss of habitat due to capital dredging. General background erosion has not been tackled although a Flood Management Strategy for the site is being produced.	**Plants** Plant communities are reliant on the coastal habitats within the Ramsar site. These habitats are dependent on a range of coastal factors and processes, including salinity, sedimentation, sea level, turbidity and elevation. **Birds** Refer to Stour and Orwell Estuaries SPA above.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Ramsar criterion 6 species/ populations occurring at levels of international importance: Species with peak counts in spring/autumn: Common redshank, *Tringa totanus tetanus.* Species with peak counts in winter: Dark-bellied brent goose, *Branta bernicla bernicla;* Northern pintail, *Anas acuta*; Grey plover, *Pluvialis squatarola*; Red knot, *Calidris canutus islandica;* Dunlin , *Calidris alpina alpina* Black-tailed godwit, *Limosa limosa islandica;* Common redshank, Tri*nga totanus tetanus.*			
The Colne Estuary is located on the coast of Essex in eastern England. It is a comparatively short and branching estuary, with five tidal arms that flow into the main channel of the River Colne. The estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mud-flat communities typical of south-eastern English estuaries. The estuary is of importance for a range of wintering wildfowl and waders, in addition to breeding Little Tern Sterna albifrons which nest on shell, sand and shingle spits. There is a wide variety of coastal habitats					

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
which include mud-flat, saltmarsh, grazing marsh, sand and shingle spits, disused gravel pits and reedbeds which provide feeding and roosting opportunities for the large numbers of waterbirds that use the site. The Colne Estuary is an integral component of the phased Mid-Essex Coast SPA					
Colne Estuary (Mid-Essex Coast Phase 2) SPA	2701.43	Annex I populations of the following species: During the breeding season - • Little Tern *Sterna albifrons* Over winter - • Avocet *Recurvirostra avosetta* • Golden Plover *Pluvialis apricaria* • Hen Harrier *Circus cyaneus* • This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: Over winter - • Dark-bellied Brent Goose *Branta bernicla bernicla*	Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.	**Coastal Squeeze** – 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. **Public access /disturbance** – 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. **Planning permission: general** – Several of the issues affecting the Essex Estuaries and the management	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat. Dark-bellied brent goose (Non-breeding); *Branta bernicla bernicla* Habitat Preference – Tundra, and on migration marshes and estuaries.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		• Redshank *Tringa totanus* • The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl		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. **Changes in species distributions** – 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. **Invasive species** – An increase in Pacific oyster *Crassostrea gigas* 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. **Fishing** – 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	Diet - Vegetation, especially eel-grass. Common pochard (Breeding); *Aythya ferina* Habitat Preference – Lakes & slow rivers, and on migration also estuaries Diet – Mostly plant material, also small animals. Hen harrier (Non-breeding); *Circus cyaneus* Habitat Preference – Moor, marsh, steppe and fields. Diet – Mainly small birds and mammals. Ringed plover (Breeding); *Charadrius hiaticula* Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet – In summer, invertebrates and in winter primarily marine

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
				damaging to inshore marine habitats and the bird species dependent on the communities they support. **Air Pollution: risk of atmospheric nitrogen deposition** – 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.	worms, crustaceans and molluscs. Common redshank (Non-breeding); *Tringa tetanus* Habitat Preference – Rivers, wet grassland, moors and estuaries. Diet – Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries). Little tern (Breeding); *Sterna albifrons* Habitat Preference – Seacoasts, rivers and lakes. Diet – Small fish and invertebrates.
Colne Estuary (Mid-Essex Coast Phase 2) Ramsar site	2701.43	Ramsar criterion 1 The site is important due to the extent and diversity of saltmarsh present. Ramsar criterion 2 The site supports 12 species of nationally scarce plants and at	None available.	Similar to Colne Estuary SPA (above).	**Habitat -** Saltmarsh habitat is reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation. These factors influence the complex interdependent intertidal, subtidal and

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		least 38 British Red Data Book invertebrate species. Ramsar criterion 3 This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain. Ramsar criterion 5 Assemblages of international importance: Species with peak counts in winter: 32041 waterfowl (5 year peak mean 1998/99-2002/2003) Ramsar criterion 6 Species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in winter: Dark-bellied brent goose, *Branta bernicla bernicla;* Common redshank, *Tringa totanus tetanus.* Species/populations identified subsequent to designation for			terrestrial habitats present along the coast. **Plants -** Plant communities are reliant on the coastal habitats within the Ramsar site. These habitats are dependent on a range of coastal factors and processes, including salinity, sedimentation, sea level, turbidity and elevation. **Invertebrates -** These species are reliant on the saltmarsh habitat and characteristic flora and fauna that are present within the European site. Key sources of food range from flowering plants, organic matter and other invertebrate species. **Birds -** Refer to Colne Estuary (Mid-Essex Coast Phase 2) SPA above. Consideration also needs to be given to black-tailed godwit, for which this Ramsar site is designated for; Black-tailed godwit *Limosa limosa islandica* Habitat Preference – Marshy grassland and

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		possible future consideration under criterion 6.			steppe, and on migration mudflats. Diet – Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season.
This SPA crosses the 12 nautical mile boundary and therefore lies partly in territorial and partly in offshore waters; hence it is a site for which both Natural England and JNCC have responsibility to provide statutory advice. The SPA lies along the east coast of England in the southern North Sea and extends northward from the Thames Estuary to the sea area off Great Yarmouth on the East Norfolk Coast.					
Outer Thames Estuary SPA	379268.14	Gavia stellata: Red-throated Diver	With regard to the SPA and pSPA and the individual species and/or assemblage of species for which the site has been or may be classified (the 'Qualifying Features' including the 'Additional Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of the habitats of the qualifying features	**Fisheries: Commercial marine and estuarine** – 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. 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 & Essex IFCA, and was not found to be	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). *Gavia stellata* Red-throated Diver (wintering) Habitat Preference – nest on small pools and lochs, moving to the coast in winter, sometimes turn up on big lakes and reservoirs.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
			The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.	problematic and so can be deemed to be low-risk.	Diet – primarily a fish-eater, though it sometimes feeds on molluscs, crustaceans, frogs, aquatic invertebrates, insects, fish spawn or even plant material.
Abberton Reservoir is a large water storage reservoir close to the Essex coast. It is one of the most important reservoirs in the country for overwintering waterfowl and also supports substantial aggregations of moulting birds in early autumn and a large colony of tree-nesting cormorants. Causeways divide the reservoir into three sections.					
Abberton Reservoir SPA	726.2	Supports the following internationally important waterbird assemblage: *Podiceps cristatus*; Great crested grebe (Non-breeding) *Phalacrocorax carbo*; Great cormorant (Breeding) *Cygnus olor*; Mute swan (Non-breeding) *Anas penelope*; Eurasian wigeon (Non-breeding) *Anas strepera*; Gadwall (Non-breeding)	With regard to the individual species and/or assemblage of species for which the site has been classified: Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore:	**Siltation** – high sediment load in reservoir inflow due to agricultural practices within catchment. **Public access / disturbance** – designated waterbirds are vulnerable to human disturbance but well controlled by Essex & Suffolk Water; occasional trespassing and disturbance by low flying aircraft. **Planning permission: general** – potential future threat to designated waterbirds if farmland providing supporting habitat close to the SPA were lost to development; requires further study.	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting,

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Anas crecca; Eurasian teal (Non-breeding) *Anas clypeata*; Northern shoveler (Non-breeding) *Aythya ferina*; Common pochard (Non-breeding) *Aythya fuligula*; Tufted duck (Non-breeding) *Bucephala clangula*; Common goldeneye (Non-breeding) *Fulica atra*; Common coot (Non-breeding) *Pluvialis apricaria*; European golden plover (Non-breeding)	The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.	**Changes in species distributions** – unexplained decline in designated population of cormorant. **Bird strike** – death of designated mute swans and possibly other species from collision with overhead powerlines near reservoir. **Water pollution** – Water stored in the reservoir is high in nutrients (eutrophic) as it comes from intensively farmed catchment areas. Resulting algal blooms may include toxic blue-green algae that can kill wildfowl, though no significant mortality has been recorded. Historically, increased water from the reservoir led to low water levels although no decrease in wildfowl was attributed to this. Currently the water level of the main, eastern section is being raised by 3 metres to increase storage capacity. As part of the level-raising scheme, the original concrete banks have been removed and the shoreline re-profiled, creating extensive new areas of shallow wetland habitat for the site's waterfowl. The Water Company has a consultative committee which addresses conservation issues at all its sites, and the Abberton Reserve Committee (involving Essex Wildlife Trust and EN) addresses local issues.	foraging or roosting habitat. *Podiceps cristatus*; Great crested grebe (Non-breeding) Habitat Preference – Reed-bordered lakes, gravel pits, reservoirs and rivers. In the winter, they are also found along the coast. Diet – Mostly fish, some aquatic invertebrates esp in summer. *Phalacrocorax carbo*; Great cormorant (Breeding) Habitat Preference – Larger lakes and coastal habitat. Diet – Fish, mostly by diving from surface. *Cygnus olor*; Mute swan (Non-breeding) Habitat Preference – Lakes, ponds & rivers. Diet – Aquatic vegetation (to 1m deep), also grazes on land; occasionally takes

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
				Air Pollution: risk of atmospheric nitrogen deposition – The site is identified as at risk from air pollution as Nitrogen deposition levels exceed the site- relevant critical load for ecosystem protection. However the site's Nitrogen load is likely to be dominated by levels in the water entering the reservoir (mainly from the distant Ouse catchment) rather than direct deposition.	insects, molluscs, small amphibians. *Anas penelope*; Eurasian wigeon (Non-breeding) Habitat Preference – Marsh, lakes, open moor, and on migration also estuaries. Diet – Mostly leaves, shoots, rhizomes, also some seeds. *Anas strepera*; Gadwall (Non-breeding) Habitat Preference – Marshes, lakes, and on migration also rivers and estuaries. Diet – Leaves, shoots, mostly while swimming with head under water. *Anas crecca*; Eurasian teal (Non-breeding) Habitat Preference – Lakes, marshes, ponds & shallow streams. Diet – Omnivorous, mostly seeds in winter,

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					feeds mostly at night in shallow water. *Anas clypeata*; Northern shoveler (Non-breeding) Habitat Preference – Shallow lakes, marsh, reedbed & wet meadow. Diet – Omnivorous, esp. small insects, crustaceans, molluscs, seeds; filters particles with sideways sweeping of bill. *Aythya ferina*; Common pochard (Non-breeding) Habitat Preference – Lakes & slow rivers, and on migration also estuaries. Diet – Mostly plant material, also small animals. *Aythya fuligula*; Tufted duck (Non-breeding) Habitat Preference – Marshes, lakes, and on migration also rivers, estuaries.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet – Omnivorous, feeds on mud bottom mostly by diving. *Bucephala clangula*; Common goldeneye (Non-breeding) Habitat Preference – Lakes, rivers, and on migration also seacoasts. Diet – Insects, molluscs and crustaceans, mainly by diving. *Fulica atra*; Common coot (Non-breeding) Habitat Preference – Lakes, marsh, rivers, and seacoast. Diet – Omnivorous, but mostly aquatic plants.
Abberton Reservoir Ramsar site	726.2	Supports 23787 waterfowl (5 year peak mean 1998/99-2002/2003) including the following internationally important waterbird assemblage: Gadwall, *Anas strepera strepera*; Northern shoveler, *Anas clypeata*;	None available.	Similar to Abberton Reservoir SPA (above).	Refer to Abberton Reservoir SPA above.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Eurasian wigeon, *Anas Penelope*; Mute swan, *Cygnus olor* Common pochard, *Aythya farina*; Great cormorant, *Phalacrocorax carbo carbo;* Eurasian teal, *Anas crecca*; Tufted duck, *Aythya fuligula*; Common coot, *Fulica atra atra*; Pied avocet, *Recurvirostra avosetta;* Ruff, *Philomachus pugnax*, Black-tailed godwit, *Limosa limosa islandica;* Spotted redshank, *Tringa erythropus,* Common greenshank , *Tringa nebularia,* Common goldeneye , *Bucephala clangula*			
The Blackwater Estuary is a large estuary between the Dengie peninsula and Mersea Island on the Essex coast. It stretches from immediately adjacent to Maldon and about 8 km south of Colchester.					

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	4395.15	Qualifying Features (Waterbird assemblage): *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding) *Aythya ferina*; Common pochard (Breeding) *Circus cyaneus*; Hen harrier (Non-breeding) *Charadrius hiaticula*; Ringed plover (Breeding) *Pluvialis squatarola*; Grey plover (Non-breeding) *Calidris alpina alpina*; Dunlin (Non-breeding) *Limosa limosa islandica*; Black-tailed godwit (Non-breeding) • *Sterna albifrons*; Little tern (Breeding) Additional Qualifying Features Identified by the 2001 UK SPA Review: *Tadorna tadorna*; Common shelduck (Non-breeding) *Recurvirostra avosetta*; Pied avocet (Non-breeding)	With regard to the individual species and/or assemblage of species for which the site has been classified: • Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: • The extent and distribution of the habitats of the qualifying features; • The structure and function of the habitats of the qualifying features; • The supporting processes on which the habitats of the qualifying features rely;	Similar to Colne Estuary SPA (above)	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat. Dark-bellied brent goose (Non-breeding); *Branta bernicla bernicla* Habitat Preference – Tundra, and on migration marshes and estuaries. Diet – Vegetation, especially eel-grass. Common pochard (Breeding); *Aythya farina*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Charadrius hiaticula; Ringed plover (Non-breeding) *Pluvialis apricaria*; European golden plover (Non-breeding) *Philomachus pugnax*; Ruff (Non- breeding) *Tringa totanus*; Common redshank (Non-breeding)	• The populations of the qualifying features; • The distribution of the qualifying features within the site.		Habitat Preference – Open lakes and gravel pits in the summer and large lakes and estuaries during the winter. Diet – Plants and seeds, snails, small fish and insects. Hen harrier (Non-breeding); *Circus cyaneus* Habitat Preference – Moor, marsh, steppe and fields. Diet – Mainly small birds and mammals. Ringed plover (Breeding); *Charadrius hiaticula* Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Grey plover (Non-breeding); *Pluvialis squatarola*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Tundra, and on migration pasture and estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Dunlin (Non-breeding); *Calidris alpina alpine* Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat. Diet – Insects, snails and worms. Black-tailed godwit (Non-breeding); *Limosa limosa islandica* Habitat Preference – Marshy grassland and steppe, and on migration mudflats. Diet – Insects, worms and snails, but also some plants, beetles, grasshoppers and other

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					small insects during the breeding season. Little tern (Breeding); *Sterna albifrons* Habitat Preference – Seacoasts, rivers and lakes. Diet – Small fish and invertebrates. Waterbird Assemblage – The waterfowl assemblage relies on a variety of habitats to support population numbers, including intertidal mudflats and sandflats, boulder and cobble shores, saltmarsh, seagrass beds and shallow coastal waters
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site	4395.15	Represents 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. Invertebrate fauna includes at least 16 British Red Data Book species: • water beetle *Paracymus aeneus*; • damselfly *Lestes dryas*;	None available.	Similar to Colne Estuary SPA (above).	**Habitat -** Saltmarsh habitat is reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. **Invertebrates -**

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		• flies *Aedes flavescens, Erioptera bivittata, Hybomitra expollicata* ; • spiders *Heliophanus auratus* and *Trichopterna cito*; • beetles *Baris scolopacea, Philonthus punctus, Graptodytes bilineatus* and *Malachius vulneratus*; • flies *Campsicemus magius, Myopites eximia*; • moths *Idaea ochrata* and *Malacosoma castrensis*; • spider *Euophrys*. Supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. Supports the following internationally important wildfowl assemblage: • Dark-bellied brent goose, *Branta bernicla bernicla*;			These species are reliant on the saltmarsh habitat and characteristic flora and fauna that are present within the European site. Key sources of food range from flowering plants, organic matter and other invertebrate species. **Birds -** Refer to Blackwater Estuary (Mid-Essex Coast Phase 4) SPA above for details on qualifying bird species.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		• Grey plover , *Pluvialis squatarola*; • Dunlin , *Calidris alpina alpine*; • Black-tailed godwit, *Limosa limosa islandica*; • European golden plover , *Pluvialis apricaria apricaria*; • Common redshank , *Tringa totanus tetanus*.			
Dengie is located on the coast of Essex in eastern England. It is a large and remote area of tidal mud-flats and saltmarshes at the eastern end of the Dengie peninsula, between the adjacent Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It is of importance for wintering populations of Hen Harrier Circus cyaneus, wildfowl and waders. The formation of cockleshell spits and beaches is of geomorphological interest.					
Dengie (Mid-Essex Coast Phase 1) SPA	3127.23	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive: Over winter - Bar-tailed Godwit *Limosa lapponica*; Hen Harrier *Circus cyaneus*. This site also qualifies under Article 4.2 of the Directive	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: The extent and distribution of the habitats of the qualifying features.	Similar to Colne Estuary SPA (above).	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below).

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		(79/409/EEC) by supporting populations of European importance of the following migratory species: Over winter - Grey Plover *Pluvialis squatarola* Knot *Calidris canutus* Assemblage qualification: A wetland of international importance. The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl. Over winter, the area regularly supports 31,452 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Black-tailed Godwit *Limosa limosa islandica* Dunlin *Calidris alpina alpine* Lapwing *Vanellus vanellus*; Oystercatcher *Haematopus ostralegus* Dark-bellied Brent Goose *Branta bernicla bernicla*	The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The population of each of the qualifying features. The distribution of the qualifying features within the site.		Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat. Hen harrier *Circus Cyaneus* Habitat Preference – Moor, marsh, steppe and fields. Diet – Mainly small birds and mammals. Dark-bellied brent geese *Branta bernicla bernicla* Habitat Preference – Tundra, and on migration marshes and estuaries. Diet – Vegetation, especially eel-grass Grey plover *Pluvialis squatarola* Habitat Preference – Tundra, and on migration pasture and estuaries.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Cormorant *Phalacrocorax carbo* Great Crested Grebe *Podiceps cristatus* Knot *Calidris canutus* Grey Plover *Pluvialis squatarola* Bar-tailed Godwit *Limosa lapponica*.			Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Knot *Calidris canutus* Habitat Preference – Coastal habitat. Diet - Insects and plant material during the summer; and inter-tidal invertebrates, especially molluscs during the winter. Dunlin (Non-breeding); *Calidris alpina alpine* Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat. Diet – Insects, snails and worms. Black-tailed godwit *Limosa limosa* Habitat Preference – Marshy grassland and

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					steppe, and on migration mudflats. Diet – Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season. Bar-tailed godwit *Limosa lapponica* Habitat preference – Estuaries and coastlines. Diet – Mainly shellfish, marine snails and worms and shrimps.
Dengie (Mid-Essex Phase 1) Ramsar site	3127.23	Ramsar criterion 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 criterion 2 Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants:	None available.	Similar to Colne Estuary SPA (above).	**Habitat -** Saltmarsh habitat is reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. **Invertebrates -** These species are reliant on the saltmarsh habitat and characteristic flora and fauna

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Sea kale *Crambe maritime* Sea barley *Hordeum marinum* Golden samphire *Inula* *Crithmoides* Lax flowered sea *lavender Limonium* humile The glassworts *Sarcocornia perennis* and *Salicornia pusilla* Small cord-grass *Spartina maritime* Shrubby sea-blite *Suaeda vera* The eelgrasses *Zostera angustifolia*, *Z. marina and Z. noltei.* The invertebrate fauna includes the following Red Data Book species: a weevil *Baris scolopacea* a horsefly *Atylotus latistriatus* a jumping spider *Euophrys browning* Ramsar criterion 3			that are present within the European site. Key sources of food range from flowering plants, organic matter and other invertebrate species. **Birds -** Refer to Dengie (Mid- Essex Phase 1) SPA above for details on qualifying bird species.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		This site supports a full and representative sequence of saltmarsh plant communities covering the range of variation in Britain. Ramsar criterion 5 Assemblages of international importance: Species with peak counts in winter: 43828 waterfowl (5 year peak mean 1998/99-2002/2003) Ramsar criterion 6 Species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in winter: Dark-bellied brent goose *Branta bernicla bernicla* Grey plover *Pluvialis squatarola* Red knot *Calidris canutus islandica*			
The Deben Estuary is located on the coast of Suffolk in eastern England. It extends south-eastwards for over 12 km from the town of Woodbridge to the sea just north of Felixstowe. It is relatively narrow and sheltered, and has limited amounts of freshwater input. The estuary mouth is the narrowest section and is protected by the presence of shifting sandbanks. The intertidal areas are constrained by sea walls. The saltmarsh and intertidal mud-flats that occupy the majority of the site, however, display the most complete range of saltmarsh community types in Suffolk. The estuary holds a range of swamp communities that fringe the estuary, and occasionally form larger stands. In general, these are dominated by Common Reed Phragmites australis. The estuary is of importance for its wintering waterbirds, especially Avocet *Recurvirostra avosetta*.					

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Deben Estuary SPA	978.93	*Branta bernicla bernicla*: Dark-bellied brent goose; *Recurvirostra avosetta*: Pied avocet	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.	**Coastal squeeze** – Examination of the quality of saltmarsh, rather than quantity (which had shown little change in extent) through a detailed vegetation mapping survey of saltmarsh habitats (carried out to the National Vegetation Classification (NVC) standard (Abrehart and Jackson 2013)) provides evidence of coastal squeeze. Results were compared with an earlier NVC study (Suffolk Wildlife Trust 1993) and indicated that there had been a widespread decline in the quality of saltmarsh, and an increase in lower marsh habitats at the expense of mid and upper marsh vegetation communities. This is indicative of coastal squeeze as changes result from more frequent inundation. Also, coastal squeeze on saltmarsh will affect mudflat areas as saltmarsh is lost and the estuary balance/function is altered. This may have effects on SPA birds as well. The developing policy of the Deben Estuary Partnership should have scope for natural adaption. **Public Access/Disturbance** – Increased recreational activity on the estuary could lead to increased levels of disturbance to wintering birds, to their detriment. Sources of disturbance include boats, canoes, jet skis, walkers and dogs, kite surfers, paramotorists, and low flying aircraft, etc. Shooting activity outside the site is unregulated and may be a significant source of disturbance to wintering birds.	In general, the qualifying bird species of the SPA rely on: The sites ecosystem as a whole (see list of habitats below). Maintenance of populations of species that they feed on (see list of diets below). Off-site habitat, which provide foraging habitat for these species. Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat. Avocet *Recurvirostra avosetta* Habitat preference – freshwater, coastal, wetland and lagoons. Diet - primary food is invertebrates, especially crustaceans and worms. In fresh water they also take insects found on the surface or within the top

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
				Changes in species distribution – There is a risk of Spartina anglica encroaching on estuarine muds. With Spartina at the front, and reed encroaching at the back, the saltmarsh could be squeezed out affecting the habitats of birds. **Air Pollution: risk of atmospheric nitrogen deposition** – Air pollution impacts on vegetation diversity. Aerial deposits of nitrogen may exceed the threshold limit (20 – 30 kg N ha-1 yr-1) above which the diversity of saltmarsh vegetation begins to be altered (possibly to reed) and adversely impacted. The impact on SPA birds is unclear. Many land use practices contribute to this issue including locally land spreading, outdoor pigs, high nutrient inputs on fields, etc. **Water Pollution** – Inappropriate water quality may impact on the supporting habitats of SPA birds. Eutrophication may be having an influence on reed growth and saltmarsh composition. Increased flood events could lead to habitat change/loss of diversity. Nutrient run off from farming operations could exacerbate the issue.	layers of the bottom sediments Golden plover *Pluvialis apricaria* Habitat preference – In summer they inhabit upland moorlands, in winter they move to lowland fields Diet - Worms, beetles and insects. Hen harrier *Circus cyaneus* Habitat Preference – Moor, marsh, steppe and fields. Diet – Mainly small birds and mammals. Short-eared owl *Asio flammeus* Habitat preference – in winter on coastal marshes and wetlands Diet - Small mammals, especially voles. Dark-bellied geese, *Branta bernicula bernicula*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Tundra, and on migration marshes and estuaries. Diet – Vegetation, especially eel-grass Shelduck *Tadorna tadorna* Habitat Preference – Coasts, estuaries and lakes. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans. Grey plover *Pluvialis squatarola* Habitat Preference – Tundra, and on migration pasture and estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Black-tailed godwit *Limosa limosa*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Marshy grassland and steppe, and on migration mudflats. Diet – Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season. Redshank *Tringa totanus* ■ Habitat Preference – Rivers, wet grassland, moors and estuaries. ■ Diet - Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries). Gadwall *Anas strepera* Habitat Preference – Marshes, lakes, and on migration also rivers and estuaries. Diet – Leaves, shoots, mostly while swimming with head under water.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Teal *A. crecca* Habitat Preference – Lakes, marshes, ponds & shallow streams. Diet – Omnivorous, mostly seeds in winter, feeds mostly at night in shallow water. Shoveler *A. clypeata* Habitat Preference – Shallow lakes, marsh, reedbed & wet meadow. Diet – Omnivorous, esp. small insects, crustaceans, molluscs, seeds; filters particles with sideways sweeping of bill. Oystercatcher *Haematopus ostralegus* Habitat Preference – Sandy, muddy and rocky beaches. Diet - Mussels and cockles on the coast, mainly worms inland.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Ringed plover *Charadrius hiaticula* Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Snipe *Gallinago gallinago* Habitat preference – breeding season on moorland, in winter around the edges of pools in well-vegetated wetlands. Diet - Small invertebrates, including worms and insect larvae. Wintering species include: Cormorant *Phalacrocorax carbo* Habitat Preference – Larger lakes and coastal. Diet - Fish.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Pintail *Anas acuta* Habitat Preference – Lakes, rivers, marsh & tundra Diet - A variety of plants and invertebrates. Wigeon *A. penelope,* Habitat Preference – Marsh, lakes, open moor, and on migration also estuaries. Diet – Mostly leaves, shoots, rhizomes, also some seeds. Goldeneye *Bucephala clangula,* Habitat Preference – Lakes, rivers, and on migration also seacoasts. Diet – Insects, molluscs and crustaceans, mainly by diving. Coot *Fulica atra*,

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Lakes, marsh, rivers, and seacoast. Diet – Omnivorous, but mostly aquatic plants. Dunlin *Calidris alpina,* Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat. Diet – Insects, snails and worms. Curlew *Numenuis arquata,* Habitat Preference – Marsh, grassland and on migration mudflats. Diet - Worms, shellfish and shrimps. Turnstone *Areneria interpres* Habitat Preference – On migration beaches and rocky coasts. Diet - Insects, crustaceans and molluscs.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Twite *Carduelis flavirostris* Habitat preference – In winter coastal fields and saltmarshes. Diet – Seeds.
Deben Estuary Ramsar site	978.93	Ramsar criterion 2 Supports a population of the mollusc Vertigo angustior (Habitats Directive Annex II (S1014); British Red Data Book Endangered). Martlesham Creek is one of only about fourteen sites in Britain where this species survives. Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in winter: Dark-bellied brent goose, *Branta bernicla bernicla.*	None available.	Similar to Deben Estuary SPA (above).	**Habitat -** Saltmarsh habitat is reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. **Birds -** Refer to Deben Estuary SPA above for details on qualifying bird species.
The Alde-Ore Estuary is located on the Suffolk coast in eastern England. It comprises the estuarine complex of the rivers Alde, Butley and Ore, including Havergate Island and Orfordness. There is a variety of habitats including intertidal mud-flats, saltmarsh, vegetated shingle (including the second-largest and best-preserved area in Britain at Orfordness), saline lagoons and semi-intensified grazing marsh.					

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
Alde-Ore Estuary SPA	2416.87	During the breeding season: Avocet *Recurvirostra avosetta*; Little Tern *Sterna albifrons*; Marsh Harrier *Circus aeruginosus*; Sandwich Tern *Sterna sandvicensis.* Over winter: Avocet *Recurvirostra avosetta*. This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: During the breeding season: Lesser Black-backed Gull *Larus fuscus.* Over winter: Redshank *Tringa tetanus*.	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.	**Hydrological changes** – Flood wall breaches in December 2013 (due to tidal surge) has led to flooding of Hazelwood Marshes and Lantern Marshes south (both currently intertidal). This has lead to a loss of nesting habitat and saline lagoons. **Public Access/Disturbance** – Human disturbance to nesting birds on beaches, notably on Orfordness and Shingle Street, by people accessing the southern end of the ness by boat, plus walkers along beach from Aldeburgh, and recreational beach users at Shingle Street. Human trampling affects vegetated shingle habitat. Military and private aircraft (paramotors, helicopters and planes) regularly fly low over the site leading to disturbance of SPA features, wintering and breeding birds. **Coastal squeeze** – Seawalls afford little scope for natural adaption of the estuary to sea level rise through roll back of habitat. Saltmarsh is at risk of being squeezed in the future (although currently the estuary is perceived as in balance) and limited areas of natural habitat transition within the site could be lost. The developing policy of the Alde and Ore Estuary Partnership should consider scope for natural adaption to sea level rise. **Inappropriate pest control** - Fox predation/disturbance is a key issue for breeding birds on Orfordness, particularly Lesser black backed gulls.	Marsh harrier *Cirus aeruginosus* Habitat preference - reedbeds and marshes, as well as farmland near wetlands Diet – Small birds and mammals. Avocet *Recurvirostra avosetta* Habitat Preference – coastal lagoons on the east coast in summer and the Exe estuary in winter. Diet - Invertebrates, especially insects, crustaceans, worms, also small fish. Ruff *Philomachus pugnax* Habitat preference – coastal wetlands and lagoons. Diet – Insects, larvae, frogs, small fish, seeds. Sandwich tern *Sterna sandvicensis*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Assemblage qualification: A seabird assemblage of international importance. The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 seabirds During the breeding season, the area regularly supports 59,118 individual seabirds (Count period ongoing) including: Herring Gull *Larus argentatus*, Black-headed Gull *Larus ridibundus*, Lesser Black-backed Gull *Larus fuscus*, Little Tern *Sterna albifrons*, Sandwich Tern *Sterna sandvicensis*. Assemblage qualification: A wetland of international importance. The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl		Foxes can cause gulls and other breeding birds to abandon nesting sites, and predate adult birds and chicks. **Changes in species distributions** – There are negative population trends in bird species using the site. Breeding locations are moving within and away from the designated site, possibly due to habitat change on site, as a reaction to other species and due to draw of other adjacent hinterland habitat. This requires further investigation and possible mitigation. **Invasive species** - Spartina is encroaching on estuarine muds. With Spartina at the front, and reed encroaching at the back, saltmarsh could be squeezed out. **Air Pollution: impact of atmospheric nitrogen deposition** – Air pollution impacts on vegetation diversity. Aerial deposits of nitrogen may exceed the site relevant critical load (20 – 30 kg N ha-1 yr-1) above which the diversity of saltmarsh vegetation begins to be altered (possibly to reed) and adversely impacted. Many land use practices contribute to this problem locally including land spreading, outdoor pigs, high nutrient inputs on fields. **Fisheries: Commercial marine and estuarine** – There are many different fishing pressures close to shore that may include bycatch of juvenile fish	Habitat preference – coastal habitats. Diet – Fish such as sandeels, sprats and whiting Little tern *Sterna albifrons* Habitat Preference – Seacoasts, rivers and lakes. Diet – Small fish and invertebrates. Bittern *Botaurus stellaris* Habitat preference – wetlands with large reedbeds Diet – Fish, amphibians and insects Bewick's swan *Cygnus columbianus* Habitat preference – freshwater coastal farmland, wetlands Diet – fields on leftover potatoes and grain. On their breeding grounds they eat aquatic plants and grass

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Over winter, the area regularly supports 24,962 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Black-tailed Godwit *Limosa limosa islandica*; Dunlin *Calidris alpina alpina*, Lapwing *Vanellus vanellus*, Shoveler *Anas clypeata*, Teal *Anas crecca*, Wigeon *Anas penelope*, Shelduck *Tadorna tadorna*, White-fronted Goose *Anser albifrons albifrons*, Redshank *Tringa totanus*, Avocet *Recurvirostra avosetta*.		and disturbance of fish nursery areas that could potentially have an impact on Little tern Sterna Albifrons by reducing suitable feeding areas.	Hen harrier *Circus cyaneus* Habitat Preference – Moor, marsh, steppe and fields. Diet – Mainly small birds and mammals. Golden plover *Pluvialis apricaria* Habitat preference – In summer they inhabit upland moorlands, in winter they move to lowland fields Diet - Worms, beetles and insects. Short-eared owl *Asio flammeus* Habitat preference – in winter on coastal marshes and wetlands Diet - Small mammals, especially voles. Mediterranean gull *Larus melanocephalus* Habitat preference – coastal wetlanda and some reservoirs inland

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet – Insects, fish, offal and carrion. Common tern *Sterna hirundo* Habitat preference – breeds along coasts with shingle beaches and rocky islands, on rivers with shingle bars, and at inland gravel pits and reservoirs, feeding along rivers and over freshwater. Diet – fish Lesser black-backed gull *Larus fascus graellsii* Habitat preference – UK's coastline in summer and on some inland high moors, increasingly common in urban habitats Diet – Omnivore - scavenges a wide range of food Redshank *Tringa tetanus* Habitat Preference – Rivers, wet grassland, moors and estuaries.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet - Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries). Shelduck *Tadorna tadorna* Habitat Preference – Coasts, estuaries and lakes. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans. Wigeon *Anas Penelope* Habitat Preference – Marsh, lakes, open moor, and on migration also estuaries. Diet – Mostly leaves, shoots, rhizomes, also some seeds. Teal *Anas crecca* Habitat Preference – Lakes, marshes, ponds & shallow streams. Diet – Omnivorous, mostly seeds in winter,

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					feeds mostly at night in shallow water. Black-tailed godwit *Limos limos* Habitat Preference – Marshy grassland and steppe, and on migration mudflats. Diet – Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season. Gadwall *Anas strepera* Habitat Preference – Marshes, lakes, and on migration also rivers and estuaries. Diet – Leaves, shoots, mostly while swimming with head under water. Shoveler *Anas clypeata* Habitat Preference – Shallow lakes, marsh, reedbed & wet meadow.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet – Omnivorous, esp. small insects, crustaceans, molluscs, seeds; filters particles with sideways sweeping of bill. Herring gull *Larus argentatus* Habitat preference – widespread and can easily be seen at virtually any seaside town in the breeding season and inland all year round, especially at rubbish tips, playing fields and reservoir roosts Diet – Ominivorous- carrion, offal, seeds, fruits, young birds, eggs, small mammals, insects and fish. Oystercatcher *Haematopus ostralegus* Habitat Preference – Sandy, muddy and rocky beaches.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet - Mussels and cockles on the coast, mainly worms inland. Ringed plover *Charadrius hiaticula* Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Lapwing *Vabellus vanellus* Habitat Preference – Pasture, arable land, wet meadow, on migration estuaries Diet - Worms and insects. Black headed gull *Larus ridibundus* Habitat preference – coastal and inland Diet – Worms, insects, fish and carrion.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Barn owl *Tyto alba* Habitat preference – open country, along field edges, riverbanks and roadside verges Diet – Mice, voles, shrews and some larger mammals and small birds. Cormorant *Phalacrocorax carbo* Habitat Preference – Larger lakes and coastal. Diet - Fish. White-fronted goose *Anser albifron albifrons* Habitat preference – freshwater, farmland and wetlands. Diet – Grass, clover, grain, winter wheat and potatoes. Brent goose *Branta bernicla* Habitat Preference – Tundra, and on migration marshes and estuaries.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Diet – Vegetation, especially eel-grass. Pintail *Anas acuta* Habitat Preference – Lakes, rivers, marsh & tundra Diet - A variety of plants and invertebrates. Grey plover *Pluvialis squatarola* Habitat Preference – Tundra, and on migration pasture and estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs. Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat. Diet – Insects, snails and worms. Curlew *Numenuis arquata,*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Marsh, grassland and on migration mudflats. Diet - Worms, shellfish and shrimps.
Alde-Ore Estuary Ramsar site	2546.99	Ramsar criterion 2 The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates. Ramsar criterion 3 The site supports a notable assemblage of breeding and wintering wetland birds. Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species regularly supported during the breeding season: Lesser black-backed gull, *Larus fuscus graellsii;* Species with peak counts in winter: Pied avocet , *Recurvirostra avosetta;*	None available.	Similar to Alde-Ore-Estuary SPA (above).	**Habitat -** Intertidal mudflats, saltmarsh, reed swamp, coastal freshwater, brackish lagoons are reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. **Invertebrates -** These species are reliant on the inter-tidal habitat and characteristic flora and fauna that are present within the European site. Key sources of food range from flowering plants, organic matter and other invertebrate species. **Birds -**

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Common redshank, *Tringa totanus tetanus.*			Refer to Alde-Ore Estuary SPA above for details on qualifying bird species.
Alde-Ore Estuary SAC	1632.63	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) Estuaries Mudflats and sandflats not covered by seawater at low tide	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and,	Similar to Alde-Ore-Estuary SPA (above). **Inappropriate coastal management** - Maintaining coastal defences at Bawdsey and Slaughden is leading to increased shingle recharge requirements at Slaughden, and loss of shingle beach at southern end of SAC at Bawdsey.	**Habitat -** The qualifying habitats of the SAC are reliant a range of coastal factors, including salinity, sedimentation, tide, sea level, turbidity and elevation, which influence the interdependent intertidal, subtidal and terrestrial habitats. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
			The distribution of the qualifying features within the site.		
Orfordness - Shingle Street SAC	888	Annual vegetation of drift lines Perennial vegetation of stony banks Coastal lagoons	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and,	Similar to Alde-Ore-Estuary SPA (above). **Inappropriate coastal management** - Maintaining coastal defences at Bawdsey and Slaughden is leading to increased shingle recharge requirements at Slaughden, and loss of shingle beach at southern end of SAC at Bawdsey.	**Habitats:** The lagoons at this site have developed in the shingle bank. The salinity of the lagoons is maintained by percolation through the shingle, although at high tides sea water. The fauna of these lagoons includes typical lagoon species, such as the cockle *Cerastoderma glaucum*, the ostracod *Cyprideis torosa* and the gastropods *Littorina saxatilis tenebrosa* and *Hydrobia ventrosa.* The nationally rare starlet sea anemone *Nematostella vectensis* is also found at the site. This spit has been selected as it supports some of the largest and most natural sequences in the UK of shingle vegetation affected by salt spray. Pioneer communities with sea pea *Lathyrus japonicus* and false oat-grass *Arrhenatherum elatius* grassland occur. Locally these are nutrient-enriched

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			The distribution of the qualifying features within the site.		by the presence of a gull colony; elsewhere they support rich lichen communities
Foulness is located on the coast of Essex, on the east coast of England north of the mouth of the Thames estuary. The site is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mud-flats, cockle-shell banks and sand-flats. It includes one of the three largest continuous sand-silt flats in the UK. The diversity of high quality coastal habitats present support important populations of breeding, migratory and wintering waterbirds, notably very important concentrations of Dark-bellied Brent Goose *Branta bernicla bernicla*. Foulness is an integral component of the phased Mid-Essex Coast SPA					
Foulness (Mid-Essex Coast Phase 5) SPA	10968.9	This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive: During the breeding season; Avocet *Recurvirostra avosetta*; Common Tern *Sterna hirundo*; Little Tern *Sterna albifrons*; Sandwich Tern *Sterna sandvicensis*; Over winter;	With regard to the individual species and/or assemblage of species for which the site has been classified: Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features;	Similar to Colne Estuary SPA (above).	Avocet *Recurvirostra avosetta* Habitat Preference – coastal lagoons on the east coast in summer and the Exe estuary in winter. Diet - Invertebrates, especially insects, crustaceans, worms, also small fish. Habitat preference – coastal habitats. Common tern *Sterna hirundo* Diet – Fish such as sandeels, sprats and whiting Habitat preference – breeds along coasts with shingle beaches and

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Avocet *Recurvirostra avosetta*; Bar-tailed Godwit *Limosa lapponica;* Golden Plover *Pluvialis apricaria*; Hen Harrier *Circus cyaneus*. This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species: On passage; Redshank *Tringa tetanus*. Over winter; Dark-bellied Brent Goose *Branta bernicla bernicla;* Grey Plover *Pluvialis squatarola*; Knot *Calidris canutus*;	The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.		rocky islands, on rivers with shingle bars, and at inland gravel pits and reservoirs, feeding along rivers and over freshwater. Diet – fish Habitat Preference – Seacoasts, rivers and lakes. Diet – Small fish and invertebrates. Hen harrier (Non-breeding); *Circus cyaneus* Habitat Preference – Moor, marsh, steppe and fields. Diet – Mainly small birds and mammals. Ringed plover (Breeding); *Charadrius hiaticula* Habitat Preference – Sandy areas with low vegetation, and on migration estuaries. Diet – In summer, invertebrates and in winter primarily marine

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Oystercatcher *Haematopus ostralegus*. Assemblage qualification: A wetland of international importance. The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl Over winter, the area regularly supports 107,468 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Redshank *Tringa tetanus*; Curlew *Numenius arquata*; Black-tailed Godwit *Limosa limosa islandica*; Dunlin *Calidris alpina alpine*; Lapwing *Vanellus vanellus*; Wigeon *Anas Penelope*; Shelduck *Tadorna tadorna*;			worms, crustaceans and molluscs. Brent goose *Branta bernicla* Habitat Preference – Tundra, and on migration marshes and estuaries. Diet – Vegetation, especially eel-grass. Oystercatcher *Haematopus ostralegus* Habitat Preference – Sandy, muddy and rocky beaches. Diet - Mussels and cockles on the coast, mainly worms inland. Grey plover *Pluvialis squatarola* Habitat Preference – Tundra, and on migration pasture and estuaries. Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Little Grebe *Tachybaptus ruficollis*; Knot *Calidris canutus*; Grey Plover *Pluvialis squatarola*; Oystercatcher *Haematopus ostralegus*; Dark-bellied Brent Goose *Branta bernicla bernicla*; Bar-tailed Godwit *Limosa lapponica*; Golden Plover *Pluvialis apricaria*; Avocet *Recurvirostra avosetta*.			Knot *Calidris canutus* Habitat Preference – Coastal habitat. Diet - Insects and plant material during the summer; and inter-tidal invertebrates, especially molluscs during the winter. Bar-tailed godwit *Limosa lapponica* Habitat preference – Estuaries and coastlines. Diet – Mainly shellfish, marine snails and worms and shrimps. Redshank *Tringa tetanus* Habitat Preference – Rivers, wet grassland, moors and estuaries. Diet - Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries). Shelduck *Tadorna tadorna*

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
					Habitat Preference – Coasts, estuaries and lakes. Diet - Mostly invertebrates, especially insects, molluscs and crustaceans. Dunlin (Non-breeding); *Calidris alpina alpine* Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat. Diet – Insects, snails and worms. Curlew *Numenuis arquata,* Habitat Preference – Marsh, grassland and on migration mudflats. Diet - Worms, shellfish and shrimps.
Foulness (Mid-Essex Coast Phase 5) Ramsar	10932.95	Ramsar criterion 1 This site qualifies by virtue of the extent and diversity of saltmarsh habitat present. This and four other sites in the Mid-Essex Coast	None available.	Similar to Colne Estuary SPA (above).	**Habitat -** Saltmarsh habitat is reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Ramsar site complex, include a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. Ramsar criterion 2 The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates. Ramsar criterion 3 The site contains extensive saltmarsh habitat, with areas supporting full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. Ramsar criterion 5 Assemblages of international importance: Species with peak counts in winter:			These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. **Invertebrates -** These species are reliant on the saltmarsh habitat and characteristic flora and fauna that are present within the European site. Key sources of food range from flowering plants, organic matter and other invertebrate species. **Birds -** Refer to Foulness (Mid-Essex Coast Phase 5) SPA above for details on qualifying bird species.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		82148 waterfowl (5 year peak mean 1998/99-2002/2003) Ramsar criterion 6 – species/populations occurring at levels of international importance. Qualifying Species/populations (as identified at designation): Species with peak counts in spring/autumn: Dark-bellied brent goose, *Branta bernicla bernicla;* Eurasian oystercatcher, *Haematopus ostralegus ostralegus*; Grey plover, *Pluvialis squatarola*; Red knot, *Calidris canutus islandica;* Bar-tailed godwit, *Limosa lapponica lapponica*			
The Sandlings SPA lies near the Suffolk coast between the Deben Estuary and Leiston. In the 19th century, the area was dominated by heathland developed on glacial sandy soils. During the 20th century, large areas of heath were planted with blocks of commercial conifer forest and others were converted to arable agriculture. Lack of traditional management has resulted in the remnant areas of heath which have survived successional changes and the consequent spread of bracken *Pteridium aquilinum*, shrubs and trees. The recent conservation management work, however, is resulting in their restoration. The heaths support both acid grassland and heather-dominated plant					

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
communities with dependent invertebrate and bird communities of conservation value. Woodlark *Lullula arborea* and Nightjar *Caprimulgus europaeus* have also adapted to breeding in the large blocks of conifer forest, using areas that have recently been felled and recent plantation, as well as areas managed as open ground.					
Sandlings SPA	3391.8	*Caprimulgus europaeus*: European nightjar *Lullula arborea*: Woodlark	With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified (the 'Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and,	**Changes in species distribution** – Woodlark and Nightjar populations on the Suffolk coast have declined by 65% and 66% respectively since notification in 2001. **Inappropriate scrub control** – Scrub encroachment is reducing habitat suitability for Woodlark and Nightjar. Regular management is essential to maintain and restore the supporting heathland habitat to favourable condition. **Deer** – A large deer population exerting grazing pressure on habitats will affect quality of nesting habitat. There is also potential for deer to trample nests. **Air Pollution: impact of atmospheric nitrogen deposition** - Nitrogen deposition exceeds site relevant critical loads. **Public Access/Disturbance** - The need to understand recreational pressure and implement appropriate management is an ongoing issue. Recreational pressure could be increased by new housing developments in the area and by the potential displacement of visitors during the construction of Sizewell C.	Nightjars *Caprimulgus europaeus* Habitat Preference – heathlands, moorlands, in open woodland with clearings and in recently felled conifer plantations Diet - Insects - moths and beetles. Woodlarks *Lullula arborea* Habitat Preference – grassland, woodland, heathland and moorland Diet - Seeds and insects.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
			The distribution of the qualifying features within the site.		
The River Crouch and the River Roach are between the Dengie Peninsula and Southend-on-Sea in Essex, south-east England					
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA	1735.58	Site regularly supports over winter: Dark-bellied brent goose, *Branta bernicla bernicla;*	With regard to the individual species and/or assemblage of species for which the site has been classified: Avoid the deterioration of the habitats of the qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely;	Similar to Colne Estuary SPA (above).	Brent goose Branta bernicla Habitat Preference – Tundra, and on migration marshes and estuaries. Diet - Vegetation, especially eel-grass.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
			The populations of the qualifying features; The distribution of the qualifying features within the site.		
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	1735.58	Supports an appreciable assemblage of rare, vulnerable or endangered including 13 nationally scarce plant species: slender hare's ear *Bupleurum tenuissimum*; divided sedge *Carex divisa*; sea barley *Hordeum marinum*; golden-samphire *Inula crithmoides*; laxflowered sea-lavender *Limonium humile*; curved hard-grass *Parapholis incurve*; Borrer's saltmarsh grass *Puccinellia fasciculate*; stiff saltmarsh grass *Puccinellia rupestris*; spiral tasselweed *Ruppia cirrhosa*;	None available.	Similar to Colne Estuary SPA (above).	**Habitat -** The habitats with the site are reliant a range of coastal factors, in particular sedimentary and tidal processes which influence the pattern and development of vegetation. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast. **Invertebrates -** These species are reliant on the wetland habitats and characteristic flora and fauna that are present within the European site. Key sources of food range from flowering plants, organic matter and other invertebrate species. **Birds -** Refer to Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA above for

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		one-flowered glasswort *Salicornia pusilla*; small cord-grass *Spartina maritime*; shrubby seablite *Suaeda vera*; sea clover *Trifolium squamosum*. Several important invertebrate species also present including: scarce emerald damselfly *Lestes dryas*; the shorefly *Parydroptera discomyzina*; the rare soldier fly *Stratiomys singularior*; the large horsefly *Hybomitra expollicata;* beetles *Graptodytes bilineatus, Malachius vulneratus*; the ground lackey moth *Malacosoma castrensis* and *Eucosoma catoprana*. Also supports the following internationally important waterbird assemblage:			details on qualifying bird species.

Site Name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity	Non-qualifying habitats and species upon which the qualifying habitats and/or species depend
		Dark-bellied brent goose, *Branta bernicla bernicla.*			
Staverton Park and The Thicks, Wantisden is broad-leaved deciduous woodland.					
Staverton Park and The Thicks, Wantisden SAC	84.28	Old acidophilous oak woods with Quercus robur on sandy plains	With regard to the SAC and the natural habitats and/or species for which the site has been designated (the 'Qualifying Features' listed below), and subject to natural change; 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; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which qualifying natural habitats rely.	**Forestry and woodland management** – Dense bracken in places prevents regeneration. **Disease** – Acute Oak Dieback is found at the site, other tree disease may be present **Public Access/Disturbance** – The site is accessed illegally, leading to an increased risk of damage and fires on the site. **Deer** – Deer browsing prevents regeneration in parts of the wood. **Hydrological Change** - A change in the water table could be leading to stress in the older trees. **Air Pollution: impact of atmospheric nitrogen deposition** – Nitrogen deposition exceeds site relevant critical loads. The impact is unclear, but this could be a contributing factor to the observed thick bracken which prevents regeneration of the wood.	**Habitats:** The ancient oaks have rich invertebrate and epiphytic lichen assemblages. The epiphytic lichen flora of this site includes rare and Atlantic species, such as *aemotomma elatinum, Lecidea cinnabarina, Thelotrema lepadinum, Graphis elegans* and *Stenocybe septata*. Part of the site includes an area of old holly *Ilex aquifolium* trees that are probably the largest in Britain.

Appendix 2
Screening Matrix

Local Plan Policy	Likely activities (operations) to result as a consequence of the proposal	Likely effect if proposal is implemented	European site/s potentially affected	Could the proposal have likely significant effects
SPL 1: Managing Growth	None – this policy manages the sustainable management of growth but will not result directly in development.	This policy promotes the sustainable growth and as such may provide mitigation for areas with important environmental features.	N/A	None.
SPL 2: Sustainable Development Boundaries	None – this policy manages the sustainable growth of settlements but will not directly result in development.	This policy promotes the sustainable growth and as such may provide mitigation for areas with important environmental features.	N/A	None.
SPL 3: Sustainable Design	None – this policy sets out sustainable design criteria but does not directly result in development.	N/A	N/A	None.
HP 1: Improving Health and Wellbeing	None – this policy relates to health and wellbeing, and therefore will not directly result in development.	N/A	N/A	None.
HP 2: Community Facilities	None – this policy promotes the provision of community facilities but will not directly result in development.	N/A	N/A	None
HP 3: Green Infrastructure	Green infrastructure development	This policy makes provision for green infrastructure, which may provide mitigation for impacts relating to recreation.	N/A	None

HP4: Safeguarded Local Greenspace	None	This policy safeguards greenspace which may have a mitigatory role in reducing recreational effects	N/A	None
HP5: Open space, sports and recreation facilities	None	This policy makes provision for open space, which may provide mitigation for impacts relating to recreation.	N/A	None
LP 1: Housing supply	12,001 houses proposed Increase in vehicle use Increase in recreational activities Increase in demand for water abstraction and treatment	Physical loss/damage Non-physical disturbance Non-toxic contamination Increased air pollution Disturbance from recreation. Change in water quantity and increased water pollution.	See Screening assumptions summary table.	Uncertain
LP 2: Housing choice	None – this policy relates to types of housing requirements and will not directly result in development.	N/A	N/A	None.
LP 3: Housing density and standards	None – this relates to housing density and will not directly result in development.	N/A	N/A	None.
LP 4: Housing layout	None – this policy relates to housing design and will not result directly in development.	N/A	N/A	None.
LP 5: Affordable and Council Housing	None – this policy promotes the development of affordable and council housing but will not result directly in development.	N/A	N/A	None.

LP 6: Rural exception sites	None – this policy sets out criteria for the provision of affordable housing in rural settlements and will not directly result in development.	N/A	N/A	None.
LP 7: Self-build and custom built homes	None – this policy sets out criteria for self-build homes outside of the settlement development boundaries but will not directly result in development.	N/A	N/A	None.
LP 8: Backland residential development	None – this policy sets out criteria for backland sites but does not directly result in development.	N/A	N/A	None.
LP 9: Traveller sites	Gypsy and Traveller development Increase in vehicle use Increase in recreational activity Increase demand for water abstraction and treatment	Physical damage/loss Non-physical disturbance Non-toxic contamination Increased air pollution. Disturbance from recreation. Change in water quantity and increased water pollution.	See Screening assumptions summary table.	Uncertain
LP 10: Care, independent and assisted living	None – this policy supports the provision of care homes but does not directly result in development.	N/A	N/A	None.
LP 11: HMO and Bedsits	None – this policy sets out criteria for HMO and bedsits but does not directly result in development.	N/A	N/A	None.
PP 1: New retail development	Retail development	No effect as the policy promotes the development within town centres away from the European sites. The policy is unlikely to	N/A	No LSE.

	Increased vehicle use Increased demand for water abstraction and treatment	increase the number of people visiting the Borough.		
PP 2: Retail Hierachy	None – this policy identifies key locations for retail development but does not directly result in development.	N/A	N/A	None.
PP 3: Village and neighbourhood centres	Retail development Increased vehicle use Increased demand for water abstraction and treatment	No effect as the policy promotes the development within town centres away from the European sites. The policy is unlikely to increase the number of people visiting the Borough	N/A	None.
PP 4: Local impact threshold	None – this policy defines thresholds for retail development but will not directly result in development.	N/A	N/A	None.
PP 5: Town centre uses	None – this policy sets criteria for town centre development but will not directly result in development.	N/A	N/A	None.
PP 6: Employment sites	None – this policy seeks to protect existing employments sites and will not result in development.	N/A	N/A	None.
PP 7: Employment allocations	Employment development Increased vehicle traffic Increased demand for water abstraction and treatment	Increased air pollution. Non-physical disturbance Non-toxic contamination Change in water quantity and increased water pollution.	See Screening assumptions summary table.	Uncertain

PP 8: Tourism	Increase in vehicle use Increase in recreational activity (e.g. marinas and attractions) Increase demand for water abstraction and treatment	Physical damage/loss Non-physical disturbance Non-toxic contamination Increased air pollution. Disturbance from recreation. Change in water quantity and increased water pollution.	See Screening assumptions summary table.	Uncertain
PP 9: Hotels and guesthouses	None – this policy supports the proposal for hotels and guesthouses but will not result in direct development.	N/A	N/A	None.
PP 10: Camping and touring caravan sites	Increase in vehicle use Increase in recreational activity Increase demand for water abstraction and treatment	Physical damage/loss Non-physical disturbance Non-toxic contamination Increased air pollution. Disturbance from recreation. Change in water quantity and increased water pollution.	See Screening assumptions summary table.	Uncertain
PP 11: Holiday parks	Increase in vehicle use Increase in recreational activity Increase demand for water abstraction and treatment	Physical damage/loss Non-physical disturbance Non-toxic contamination Increased air pollution.	See Screening assumptions summary table.	Uncertain

		Disturbance from recreation. Change in water quantity and increased water pollution.		
PP 12: Improving education and skills	None – this policy supports educational related development but will not directly result in development.	N/A	N/A	None.
PP 13: The rural economy	None – this policy sets out criteria for rural development but will not directly result in development.	N/A	N/A	None.
PP 14: Priority areas for regeneration	None – this policy identifies key areas for regeneration but will not directly result in development.	N/A	N/A	None.
PPL 1: Development and flood risk	None – this policy sets out criteria to ensure development is avoided in area with risk of flooding.	This policy promotes development away from areas with flood risk, this may provide mitigation for European sites supporting coastal habitats.	N/A	None.
PPL 2: Coastal protection belt	None.	This policy protects coastal areas vulnerable to erosion, which may provide mitigation for impacts relating to physical loss and recreation.	N/A	None.
PPL 3: The rural landscape	None.	This policy protects rural environments, including estuaries, rivers, and undeveloped coast, which may provide mitigation for impacts relating to physical loss and recreation.	N/A	None.
PPL 4: Biodiversity and geodiversity	None.	This policy protects European sites from development and will therefore provide	N/A	None.

		mitigation for impacts relating to development.		
PPL 5: Water conservation, drainage and sewerage	None.	This policy makes provision for SUDs, which may provide mitigation for impacts relating to water quality and quantity.	N/A	None.
PPL 6: Strategic green gaps	None.	This policy is designed to prevent urban sprawl, which may mitigate for impacts relating to physical loss.	N/A	None.
PPL 7: Archaeology	None – this policy relates to the protection of archaeological features and will not result in development.	N/A	N/A	None.
PPL 8: Conservation areas	None.	This policy sets out protection for conservation areas, which may provide mitigation for impacts relating to development.	N/A	None.
PPL 9: Listed buildings	None – this policy relates to protection of listed buildings and will not result in development.	N/A	N/A	None.
PPL 10: Renewable energy generation	Development of renewable infrastructure	This policy promotes sustainable development, which may mitigate for impacts relating to development.	N/A	None.
PPL 11: The Avenues area of special character, Frinton-on-Sea	None – This policy safeguards the character and appearance of Frinton-on-Sea but will not directly result in development.	N/A	N/A	None.
PPL 12: The Gardens area of	None – This policy safeguards the character and appearance of Clacton-	N/A	N/A	None.

special character, Clacton-on-Sea	on-Sea but will not directly result in development.			
PPL 13: Ardleigh reservoir catchment area	None.	This policy relates to protection of Ardleigh Reservoir, which may mitigate for impacts relating water quality in this area.	N/A	None.
PPL 14: Safeguarding of civil technical site, North-east of Little Clacton/South of Thorpe-Le-Soken	None – this policy relates to the functioning of a civil aviation beacon and will not result in development.	N/A	N/A	None.
PPL 15: Safeguarding of hazardous substance site, site east of great Oakley/south west of Harwich	None	N/A	N/A	None.
CP 1: Sustainable transport and accessibility	None	The policy promotes the provision of sustainable modes of transport and as such may provide mitigation for the impacts of other policies in relation to increased car and the associated air pollution.	N/A	None.
CP 2: Improving the transport network	None	This policy makes provision to improve transport networks, which may provide mitigation for impacts to air pollution.	N/A	None.
CP 3: Improving the telecommunications network	None	This policy promotes sustainability through improving telecommunications, which may mitigate for impacts relating to air pollution.	N/A	None.

SAMU1 DEVELOPMENT AT EDME MALTINGS, MISTLEY	12,001 houses proposed Increase in vehicle use Increase in recreational activities Increase in demand for water abstraction and treatment	Physical loss/damage Non-physical disturbance Non-toxic contamination Increased air pollution Disturbance from recreation. Change in water quantity and increased water pollution.	See Screening assumptions summary table.	Uncertain
SAMU2 DEVELOPMENT AT HARTLEY GARDENS, CLACTON	As above	As above	As above	As above
SAMU3 DEVELOPMENT AT OAKWOOD PARK, CLACTON	As above	As above	As above	As above
SAMU4 DEVELOPMENT AT ROUSES FARM, JAYWICK LANE, CLACTON	As above	As above	As above	As above
SAMU5 DEVELOPMENT SOUTH OF THORPE ROAD, WEELEY	As above	As above	As above	As above
SAH1 DEVELOPMENT AT GREENFIELD FARM DOVERCOURT	As above	As above	As above	As above

SAH2 DEVELOPMENT LOW ROAD, DOVERCOURT	As above	As above	As above	As above
SAH3 DEVELOPMENT ROBINSON ROAD, BRIGHTLINGSEA	As above	As above	As above	As above
SAE1 CARLESS EXTENSION HARWICH	As above	As above	As above	As above
SAE2 LAND SOUTH OF LONG ROAD, MISTLEY	As above	As above	As above	As above
SAE3 LANSWOOD PARK, ELMSTEAD MARKET	As above	As above	As above	As above
SAE7 STANTON MARINE PARK	As above	As above	As above	As above
DI1 INFRASTRUCTURE DELIVERY AND IMPACT MITIGATION	None- this policy supports the provision of development control and mitigation	N/A	N/A	None.

Appendix 3

Review of other plans and projects for in-combination effects

Plans, Policies and Programmes with the Potential for In-Combination Effects with the Tendring District Local Plan Section 2

North Essex Authorities Shared Strategic Plan[42]	
Plan Owner/ Competent Authority:	Braintree District Council, Colchester Borough Council, Tendring District Council
Related work HRA/AA:	None available
Notes on Plan documents:	The Shared Strategic Plan will be included as Section 1 for the three individual Local Plans for each District/Borough. Provides for a minimum of 43,765 net additional homes over the relevant plan periods, of which 14,365 will be delivered in Braintree District (2016-2033), 18,400 in Colchester Borough (2013-2033), and 11,000 in Tendring District (2013-2033). Provides for 139.1 ha of employment land up to 2033, of which 43.3 ha will be in Braintree District (2016-33), 55.8 ha in Colchester Borough (2016-2033), and 40 ha in Tendring District (2016-2033). Includes improvements to A12, A120 and A133 including junction improvements and dualling of A120 between the A12 junction and Braintree, increased rail capacity, and support for sustainable transport. Three new garden communities are proposed: East of Colchester on the border of Colchester Borough and Tendring District, to deliver up to 2,500 homes within the plan period as part of an overall total of between 7,000 and 9,000 homes; West of Colchester on the border of Colchester Borough and Braintree District, to deliver up to 2,500 homes within the plan period as part of an overall total of between 15,000 and 20,000 homes; and West of Braintree in Braintree District, potentially on the border of Uttlesford District, to deliver up to 2,500 homes within the plan period as part of an overall total of between 10,000 and 13,000 homes.
Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan Not applicable.	

Colchester Core Strategy Review[43]	
Plan Owner/ Competent Authority:	Colchester Borough Council
Related work HRA/AA:	HRA of Core Strategy HRA Screening of Focused Review reported within SA Scoping Report, March 2013
Notes on Plan documents:	Core Strategy was adopted in 2008 and was subject to a Focused Review in July 2014 which made minor changes for compliance with the NPPF. The Core Strategy provides for 19,000 new homes during 2001-2021, focused on regeneration areas within Colchester Town and greenfield urban extensions to the north and south west of the town; over 80% will be on previously developed land. Provision is also made to accommodate 14,200 new jobs, focused on Colchester Town Centre/ Town Centre Fringe and Urban Gateways plus Strategic Employment Zones at University of Essex, North Colchester and Stanway.
Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan Appropriate assessment was carried out for the adopted Core Strategy and concluded that Colchester Borough Council's DPDs would not have an adverse effect on the integrity of a European site. As part of the appropriate assessment of the Core Strategy, Colchester Borough Council committed to implementing a long term survey and monitoring programme to gain a better understanding of visitors to European sites in Colchester and Tendring. This will enable the Council, Natural England and any other relevant stakeholders to implement site management measures to avoid or mitigate visitor impacts. This enabled the Council to conclude that its spatial plans will not adversely affect the integrity of European sites. The HRA Screening of the Focused Review identified the potential for an increase in visitors to European sites but the Council concluded that as only small scale development would be acceptable in rural areas and policy ENV1 provides an appropriate safeguard to ensure that development adversely affecting Natura 2000 sites will not be permitted the Council, the Focused Review would not adversely affect European sites.	

[42] http://www.babergh.gov.uk/planning-and-building/planning-policy/local-babergh-development-framework/core-strategy-and-policies-dpd/

[43] http://www.colchester.gov.uk/article/13303/Core-Strategy

Braintree District Local Plan[44]	
Plan Owner/ Competent Authority:	Braintree District Council
Related work HRA/AA:	HRA Screening Report for Braintree District Local Plan
Notes on Plan documents:	Proposed Submission Local Plan for public consultation during June-August 2016. The Local Plan provides for 14,365 new homes and 43.3 ha of employment land between 2013-2037.

Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan

The HRA Screening found that the Braintree District Local Plan Section 2 alone will not give to rise to likely significant effects on any European sites alone.

However, the HRA Screening found that there is the potential for likely significant effects in-combination with the Section 1 North Essex Authorities Shared Strategic Plan, with respect to human disturbance of the network of Essex Estuarine Maritime Sites, comprising: Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar; Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar; Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar; Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar; and Essex Estuaries SAC.

It was therefore recommended that an HRA Screening assessment of Section 1 North Essex Authorities Shared Strategic Plan is undertaken, to consider the potential for likely significant effects on European sites, particularly the Essex Estuarine Maritime sites, either alone or in-combination with the Section 2 Local Plans for each of the three local authorities.

Babergh Core Strategy & Policies (2011-2031) Local Plan[45]	
Plan Owner/ Competent Authority:	Babergh District Council
Related work HRA/AA:	Core Strategy Submission Draft HRA Screening Report September 2011[46]
Notes on Plan documents:	Local Plan was adopted in February 2014. Provision for 5,975 new dwellings and employment space to accommodate 9,700 new jobs during 2011-2031. Employment and housing growth will be accommodated within Babergh's existing settlement pattern and in new mixed and balanced communities on the edges of the towns and the Babergh Ipswich Fringe.

Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan

The HRA screening suggests that Babergh will primarily need to ensure the impacts on the Stour and Orwell estuaries are monitored, as other European sites which could potentially be affected will be monitored by other councils

The following types of potential likely significant effect were identified:

Water resources and quality: Provided the recommendations of the Water Cycle Study are incorporated into the Core Strategy, likely significant effects as a result of changes in water resources or quality are not predicted.

Wind turbines: Provided the recommendations are followed to make it clear that development supported by Policy CS9 must still meet other requirements for sustainability, including protection of European sites, likely significant effects are not predicted.

Coastal processes: Coastal squeeze has been identified as an issue at some locations along the Stour and Orwell Estuaries SPA / Ramsar site in Natural England monitoring records; however development close to the coast is not suggested outside existing built up areas. Therefore indirect effects through increased coastal squeeze are not predicted as a result of the Core Strategy.

Recreational pressure: Recreational use of the estuaries can result in disturbance of wintering birds. Babergh District Council is contributing to the wider mitigation strategy under the Haven Gateway Green Infrastructure Strategy and has made provision for new public open space at key sites close to the estuaries. As a precautionary approach is proposed this provides Babergh Council with the opportunity to take additional action if unexpected increases in disturbance occur. Therefore, subject to the mitigation strategy likely significant effects would not be predicted.

[44] https://www.braintree.gov.uk/info/200230/planning_policy/701/new_local_plan/4

[45] http://www.babergh.gov.uk/planning-and-building/planning-policy/local-babergh-development-framework/core-strategy-and-policies-dpd/

[46] http://www.babergh.gov.uk/planning-and-building/planning-policy/local-babergh-development-framework/core-strategy-and-policies-dpd/core-strategy-consultations/

Suffolk Coastal District Preferred Options Site Allocations and Area Specific Policies	
Plan Owner/ Competent Authority:	Suffolk Coastal District Council
Related work HRA/AA:	Habitat Regulation Screening Assessment of Suffolk Coastal District Preferred Options Site Allocations and Area Specific Policies[47]
Notes on Plan documents:	Preferred Options Site Allocations and Area Specific Policies document was submitted for examination in June 2016. The document is designed to implement the Core Strategy. Development provided for includes up to 7900 new houses between 2010 and 2027 and 8000 new jobs between 2001 and 2027. In addition to this, Suffolk Coast District Council are undertaking a Local Plan Review, with the Ipswich Policy Area local planning authorities (Ipswich Borough, Mid Suffolk, Babergh and Suffolk Coastal).
Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan The HRA of the Site Allocations document identified potential likely significant effects in relation to Alde-Ore Estuary SPA and Ramsar, with Preferred Policies SSP3 (land to the rear of Rose Hill, Saxmundham Road, Aldeburgh) and SSP31 (Snape Maltings) likely to have a significant effect by causing an increase in disturbance to SPA/Ramsar qualifying birds using the estuary. For both policies, further information and / or study might be able to inform a subsequent conclusion of no adverse effect upon the integrity of the European site. No Likely significant effects were identified in relation to other plans and projects.	

Maldon District Local Development Plan	
Plan Owner/ Competent Authority:	Maldon District Council
Related work HRA/AA:	Maldon District Council Pre-Submission Local Development Plan 2014 - 2029 Sustainability Appraisal Report incorporating Strategic Environmental Assessment and Habitats Regulations Assessment
Notes on Plan documents:	The Maldon District Local Development Plan was submitted to the Secretary of State for Examination-in-Public on 25 April 2014. Development provided for in the Draft Plan includes at least 4,410 dwellings during 2014-2029.
Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan A number of individual polices were identified as having potential likely significant effects: • *S2 Strategic Growth*: Potential pressure from housing growth on water resources and water quality could affect condition of Blackwater Estuary SPA and Ramsar site and Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site but adequate protection judged to exist from the Environment Agency's abstraction and effluent discharge consenting regimes. Potential recreational pressure from additional housing to the south of Maldon town and north of Heybridge but unlikely to significantly increase existing recreational pressure from these settlements and mitigation provided in the form of additional open space. • *Policy H7 Agricultural and Essential Workers' Accommodation:* The provision of accommodation for agricultural workers has the potential to have a likely significant effect on the international sites depending on the location of these developments. The creation of new development could cause damage to habitats if located within the international sites, or noise and visual disturbance from the proximity of the buildings to the international sites. Whilst locations are not known at this time it is considered that the predominantly estuarine nature of the international sites means they are not suitable for development due to access, risk of flooding and lack of suitable land. In addition, this development is intended to accommodate small numbers of people, therefore the associated noise and visual disturbance on the international sites would be minimal. It is therefore considered that this policy is not likely to have a significant effect on the sites. • *Policy N1 Green Infrastructure Network*: Through the creation of a green infrastructure network across the District there is the potential that this policy could result in increased numbers of people along the estuaries, causing a visual and noise disturbance., Concluded that there will not be any significant adverse effects on the integrity of European sites alone or in-combination from the Maldon District LDP.	

Chelmsford City Council Core Strategy and Development Control Policies DPD	
Plan Owner/ Competent Authority:	Chelmsford City Council

[47] http://www.eastsuffolk.gov.uk/assets/Planning/Suffolk-Coastal-Local-Plan/Site-Allocations-and-Area-Specific-Policies/Preferred-Options-Consultation/Site-Allocations-Plan-HRA-issue-13-Oct-15.pdf

Chelmsford City Council Core Strategy and Development Control Policies DPD	
Related work HRA/AA:	Appropriate Assessment of the Chelmsford Core Strategy and Development Control Policies Submission Document DPD November 2006 Core Strategy and Development Control Policies Focused Review Sustainability Appraisal Report and HRA Screening Final Report February 2013
Notes on Plan documents:	2008 Chelmsford Core Strategy and Development Control Policies Document plus 2013 'Focused Review' which made changes to the DPD to improve compatibility with the NPPF. Development provided for includes 16,170 new houses during 2001-2021.

Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan

The HRA Screening of the Submission DPD identified likely significant effects from four development control policies:

- *DC3: Managing development density in different locations*, due to the proximity of housing development provided for at South Woodham Ferrers to Crouch and Roach Estuaries SPA and Ramsar site and consequent potential for recreational disturbance.
- *DC54: Promotion of employment clusters,* due to the proximity of employment development provided for at South Woodham Ferrers to Essex Estuaries SAC and Crouch and Roach Estuaries SPA and Ramsar site and consequent potential for water pollution, direct habitat loss and recreational disturbance.
- *DC55: Location of business development,* due to the proximity of employment development provided for at Battlesbridge and South Woodham Ferrers to Essex Estuaries SAC and Crouch and Roach Estuaries SPA and Ramsar site and consequent potential for water pollution, direct habitat loss and recreational disturbance.
- *DC56: Industrial and warehouse development,* due to the proximity of employment development provided for at South Woodham Ferrers to Essex Estuaries SAC and Crouch and Roach Estuaries SPA and Ramsar site and consequent potential for water pollution, direct habitat loss and recreational disturbance.

Recommended policy changes requiring protection of internationally designated nature conservation sites were deemed sufficient to address these potential effects.

The HRA Screening of the 2013 'Focused Review' of the Core Strategy did not identify any likely significant effects on European sites from the policy changes alone. The contribution of the policy changes to potential in-combination effects with other plans and projects was considered not significant.

Essex Minerals Local Plan	
Plan Owner/ Competent Authority:	Essex County Council
Related work HRA/AA:	Essex County Council Replacement Minerals Local Plan: Pre Submission Draft Habitats Regulations Assessment Report November 2012
Notes on Plan documents:	The Essex Minerals Local Plan was adopted on 8 July 2014Plan sets out the broad locations where future mineral extraction and associated development will be preferred, and the areas where mineral extraction is discouraged, preferred sites and development management policies.

Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan

Air quality: Likely significant effects from increased heavy goods vehicle traffic on roads in proximity to European sites ruled out following amendment of the Plan to include supporting text requiring an air quality analysis where any proposal would result in an increase of more than 200 HGV movements per day within 200 m of a European site.

Predation: Following completion of mineral extraction it is common for minerals sites to be used for landfill. Landfill sites can attract large number of birds such as gulls or crows which can have an adverse predation effect on nesting birds at wildlife sites within 5 km of the landfill (particularly ground nesting species). Preferred minerals sites allocated by the Plan include ones within 5 km of Abberton Reservoir SPA and Ramsar site (wintering and passage waterfowl and cormorant populations sensitive to predation) and Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site (little tern population particularly sensitive to predation). Likely significant predation effects were ruled out on the basis that the Plan adopt recommendations to prevent putrescible waste being sent for landfill at the relevant, preferred minerals sites.

Essex Waste Local Plan	
Plan Owner/ Competent Authority:	Essex County Council
Related work HRA/AA:	Essex Waste Development Document – Preferred Approach Habitat Regulations Assessment – Screening Report, September 2011 Essex Waste Development Document – Potential Sites - Habitat Regulations Assessment Screening Report, September 2011
Notes on Plan documents:	Essex Replacement Waste Local Plan, The Preferred Approach 2013

Essex Waste Local Plan	
	The Waste Local Plan comprises the Waste Core Strategy, setting out the long-term direction for waste development and the plan to deliver this strategy; Development Management Policies for waste planning particularly when considering applications; Strategic Site Allocations for waste-related development; Non-Strategic Site Allocations for other preferred sites for waste processing plus any associated safeguarding and a Policies (previously Proposals) Map.

Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan

The HRA of Preferred Approaches ruled out likely significant effects on any European site, particularly due to the need to comply with a policy requirement for all waste management developments to avoid unacceptable impacts on internationally designated biodiversity sites.

The HRA of potential waste sites was unable to rule out the following likely significant effects:

Noise: Unable to rule our likely significant noise disturbance effects from waste recycling and storage operations at site W12 Ballast Quay/Fingringhoe and site W14 Alresford Quarry on wildfowl interest of Colne Estuary SPA/Ramsar site. Recommended that sites are either not taken forward or is subject to project level HRA. Noise effects on Colne Estuary SPA/Ramsar site were deemed less likely for sites L1 Towerfield/Fingringhoe, L2 Holmwood Farm/Fingringhoe, and L13R Wellwick, St Osyth but project level HRA was nevertheless recommended on a precautionary basis to rule out likely significant effects.

Water quality: Unable to rule out likely significant water quality effects on European sites from increased shipping movements or dredging associated with site W12 Ballast Quay/Fingringhoe.

Essex Local Transport Plan 3 2011-2026 (LTP3)	
Plan Owner/ Competent Authority:	Essex County Council
Related work HRA/AA:	HRA Screening Report June 2011
Notes on Plan documents:	Essex Transport Strategy: the Local Transport Plan for Essex, June 2011 Transport priorities for the Thames Gateway, the part of Essex in which Basildon is located, are: • Providing for and promoting access by sustainable modes of travel to new development areas; • Improving public transport links within and between the Thames Gateway towns (including the A13 Passenger Transport Corridor and South Essex Rapid Transport (SERT) schemes); • Improving the availability of sustainable travel choices and raising public awareness of these through travel planning; • Addressing maintenance, signing and broken links in the cycle network to improve conditions for cyclists and create a safer atmosphere for cycling. • Improving the attractiveness and ease of use of public spaces to support regeneration; • Improving journey time reliability on strategic inter-urban routes including the A127, A129, A130 and the A13; • Improving access to London Gateway port and Southend Airport.

Conclusions on potential effects of relevance to European sites within scope of HRA of Braintree Local Plan

The protective approach specified by Policy 9 of the LTP3, the provision of policies which promote a modal shift away from private car use (Policies 4, 7, 8, 14 and 15), and the flexibility inherent in the Essex LTP3 which allows for manipulation of future plans and projects to avoid impacts on N2K sites, means that the ecological integrity of all Natura 2000 sites located within the zone of influence of the Essex LTP3 would not be adversely affected by the LTP3 or its policies.

Appendix 4 - Figures

Figure 3.1 European sites within 20km of Tendring District

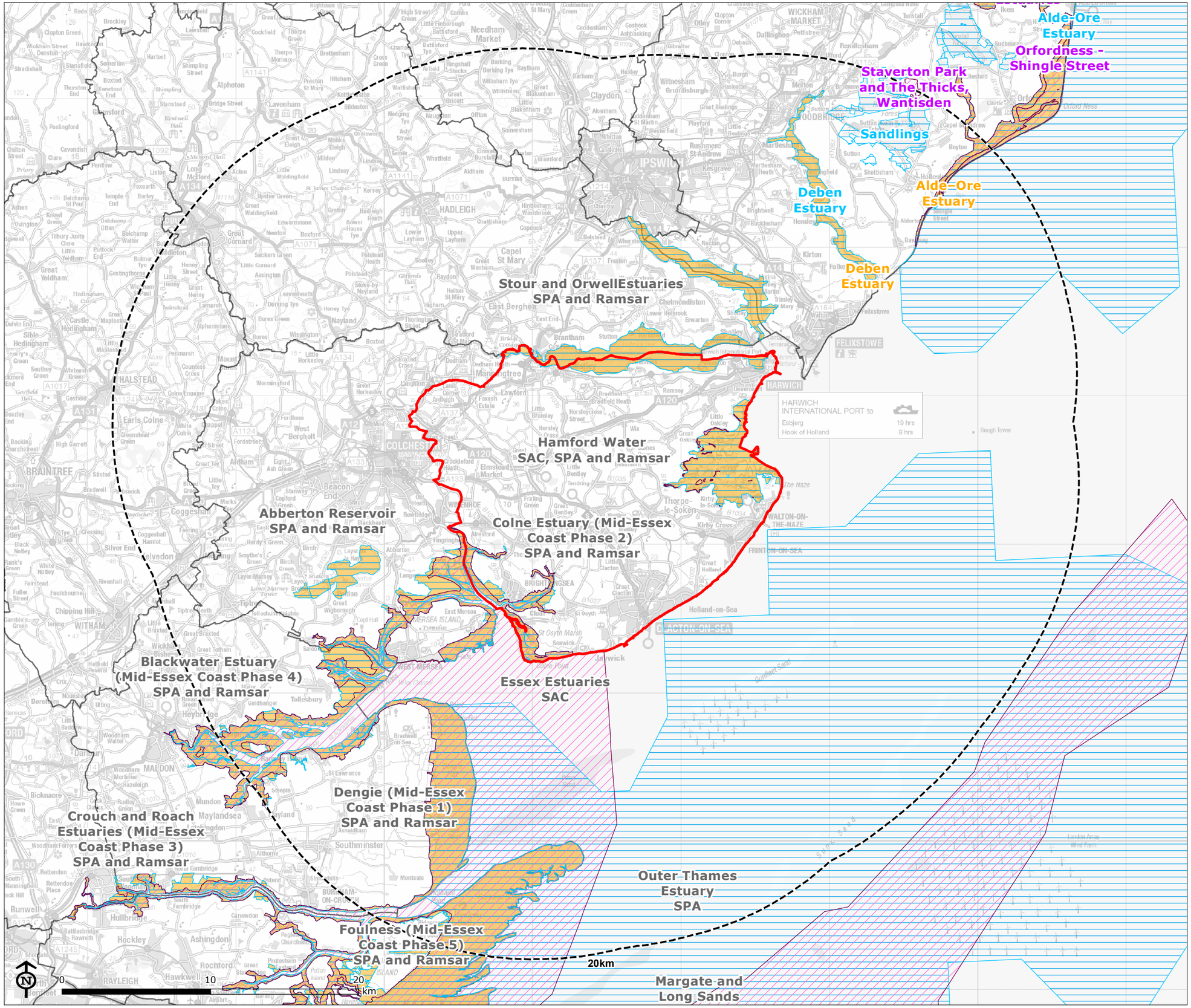

Figure 3.1: European sites within 20km of Tendring District

- Tendring District
- 20km from Tendring District
- Surrounding Local Authorities

European Sites

- SAC
- SPA
- Ramsar

Map Scale @ A3: 1:250,000

LUC

CB:nunn_j EB:nunn_j LUCLON 6271-10_001_Tendring_European_sites_within_20km_A3L 14/12/2016 Source: JNCC, OS