Holbrook Neighbourhood Plan

HRA Report

Babergh & Mid Suffolk District Councils

Final report

Prepared by LUC

July 2022

Version	Status	Prepared	Checked	Approved	Date
1	Draft for client comment	C Clements	R Turner	J Pearson	30.06.22
2	Updated following client feedback	C Clements	R Turner	J Pearson	07.07.22

EMS566057 FS566056 OHS627041

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Contents

Screening assessment

Chapter 1

Introduction

1.1 LUC has been commissioned by Babergh & Mid Suffolk District Councils (the Councils) to carry out an updated Habitats Regulations Assessment (HRA) of the Holbrook Neighbourhood Plan 2021-2037. The Neighbourhood Plan was prepared by a group of local residents and Parish Councillors, in accordance with the requirements of the Government's Neighbourhood Planning Regulations. This iteration of the HRA report assesses the impacts of the Holbrook Neighbourhood Plan 2021-2037 (April 2022).

Previous HRA work

1.2 In December 2021, Place Services carried out an HRA of the Regulation 14 Pre-Submission Draft Consultation Holbrook Neighbourhood Plan (2020). This was submitted for comment to Natural England as a statutory consultee. Subsequently, the Councils identified potential shortcomings in the original HRA work and commissioned LUC to produce a new HRA of the Plan. LUC's assessment is entirely independent of the earlier HRA.

The requirement to undertake Habitats Regulations Assessment of development plans

1.3 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007 **[See reference 1]**; the currently applicable version is the Habitats Regulations 2017 **[See reference 2]**, as amended. Neighbourhood Plans, once approved at referendum, become part of the statutory development plan

therefore an HRA is required by law to be carried out by the 'competent authority (the Councils). The Councils can commission consultants to undertake HRA work on their behalf and this (the work documented in this report) is then reported to and considered by the Councils as the competent authority. The Councils consider this work and would usually **[See reference 3]** only progress a plan if it considers that the plan will not adversely affect the integrity **[See reference 4]** of any 'European site', as defined below. The requirement for authorities to comply with the Habitats Regulations when preparing a plan is also noted in the Government's online Planning Practice Guidance **[See reference 5]** (PPG).

1.4 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: Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). These were classified under European Union (EU) legislation but, since 1 January 2021, are protected in the UK by the Habitats Regulations 2017 (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 **[See reference 6]**) and species (Annex II); and
- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive **[See reference 7]**), and for regularly occurring migratory species not listed in Annex I.

1.5 The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites **[See reference 8]** and Ramsar sites (international designated under the Ramsar Convention). However, a Government Policy Paper **[See reference 9]** 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; and
- 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.

1.6 Although Ramsar sites do not form part of the new national site network, the Government Policy Paper **[See reference 10]** 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 **[See reference 11]** and practice guidance **[See reference 12]** currently still state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs.

1.7 The requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves. This report uses the term 'European sites' rather than 'national site network', which takes into account SAC, SPA and Ramsar sites, the latter which does not form part of the national site network.

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

Stages of Habitat Regulations Assessment

1.9 The section below summarises the stages involved in carrying out an HRA, based on various guidance documents **[See reference 13 and 14]**. This HRA presents the methodology and findings of Stage 1: Screening.

Stage 1: Screening (the 'Significance Test')

Tasks

- 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 **[See reference 15]**.
- 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 **[See reference 16]**.

Outcome

- 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')

Task

- Information gathering (development plan and data on European sites **[See reference 17]**).
- Impact prediction.
- Evaluation of development plan impacts in view of conservation objectives of European sites.
- Where impacts are considered to directly or indirectly affect qualifying features of European sites, identify how these effects will be avoided or reduced ('mitigation').

Outcome

- Appropriate Assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how these effects will firstly, be avoided and secondly, be reduced, including the mechanisms and 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

Task

- Identify and demonstrate ‘imperative reasons of overriding public interest’ (IROPI).
- Demonstrate no alternatives exist.
- Identify potential compensatory measures.

Outcome

- This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

Requirements of the Habitat Regulations Assessment

1.10 In assessing the effects of the Plan 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 above.] If so:

- 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 above.]
- 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.

1.11 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 or reduce 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.

1.12 The HRA should be undertaken by the ‘competent authority’, in this case Babergh & Mid Suffolk District Councils, and LUC has been commissioned to do this on their 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.

Case law changes

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

1.14 The People over Wind, Peter Sweetman v Coillte Teoranta (April 2018) 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."

1.15 In light of the above, the HRA screening stage does not rely upon avoidance or mitigation measures to draw conclusions as to whether the Neighbourhood Plan could result in likely significant effects on European sites. Instead, any such measures are considered at the Appropriate Assessment stage as relevant.

1.16 The approach to this HRA is also consistent with the Holohan v An Bord Pleanala (November 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.

1.17 In undertaking this HRA, LUC 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 that may be important in supporting the ecological processes of the qualifying features, has also been fully considered in this HRA.

1.18 The approach to the HRA also takes into consideration the 'Wealden' judgement and the 'Dutch Nitrogen Case' judgements from the Court of Justice for the European Union.

1.19 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 the annual average daily traffic (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.

1.20 In light of this judgement, the HRA therefore considers traffic growth based on the effects of development from the plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

1.21 The 2018 'Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu (Dutch Nitrogen)' judgement stated that:

> "...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."

1.22 The Dutch Nitrogen judgement also 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."

1.23 The HRA of the Holbrook Neighbourhood Plan 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.

Structure of this report

1.24 This chapter (Chapter 1) described the background to the production of the plan and the requirement to undertake HRA. The remainder of the report is structured as follows:

- Chapter 2: Holbrook Neighbourhood Plan summarises the content of the plan, which is the subject of this report.
- Chapter 3: Method sets out the approach used, and the specific tasks undertaken during the screening stage of the HRA.
- Chapter 4: Screening assessment describes the findings of the screening stage of the HRA.
- Chapter 5: Conclusions and next steps summarises the HRA conclusions for the Holbrook Neighbourhood Plan and describes the next steps to be undertaken.

Chapter 2

Holbrook Neighbourhood Plan 2021-2037

Vision

2.1 The following vision has been formulated for Holbrook to achieve through implementation of the Neighbourhood Plan.

> "Through fact-based investigations, public consultations and housing needs assessment, we seek to ensure that the Parish of Holbrook grows sustainably in the future, maintaining its vibrant community, protecting the AONB, wildlife, biodiversity and improving the infrastructure, while retaining its rural characteristics for generations to come"

2.2 The overarching vision is supported by a series of objectives, with identified policies under two topic areas:

- Housing and Development; and
- Natural and Historic Environment.

Objectives

2.3 The objectives for the Holbrook Neighbourhood Plan are as follows:

- Objective 1: To seek to establish and maintain for a sustainable future a balance between housing, recreational growth and the environment.

- Objective 2: To conserve and enhance the unique special character and landscape of the Parish and ensure that it does not coalesce with neighbouring villages/Parishes.
- Objective 3: The respect the existing Areas of Outstanding Natural Beauty, heritage and nature conservation assets that typify the character of the Parish.
- Objective 4: To determine the requirement of the right type of homes, of the right tenure, in the right place that meets the needs of our community, in areas that are the most appropriate in terms of their impact on the village, and that provide for potential number of homes that would satisfy the requirements in the emerging Babergh/Mid-Suffolk Joint Local Plan.
- Objective 5: Ensure that the rural employment base is, where possible, retained and the supporting infrastructure for rural working is considered.

Policies

2.4 The policies that underpin the above objectives within the Holbrook Neighbourhood Plan are as follows:

- Housing and Development:
  - HNP 01: Housing Development
  - HNP 02: Housing Mix
  - HNP 03: Infill Development
  - HNP 04: Royal Hospital School (RHS)
  - HNP 05: Design
- Natural and Historic Environment:
  - HNP 06: Protection of Important Views
  - HNP 07: Preservation of Dark Skies
  - HNP 08: Landscape Protection

- HNP 09: Protection of Woodlands
- HNP 10: Protection of Heritage Assets
- HNP 11: Gardens and Amenity
- HNP 12: Sustainable Drainage
- HNP 13: Biodiversity
- HNP 14: Local Green Spaces

Chapter 3

Method

Screening assessment

3.1 HRA Screening of the plan was undertaken in line with current available guidance and sought to meet the requirements of the Habitats Regulations. The tasks that were undertaken during the screening stage of the HRA and the conclusions reached are described in detail below. This section of the HRA report sets out policies and impact types for which likely significant effects are predicted or cannot be ruled out prior to mitigation and avoidance measures.

3.2 The purpose of the screening stage is to:

- Identify all aspects of the plan which would have no effect on a European site, so that that they can be eliminated from further consideration in respect of this and other plans;
- Identify all aspects of the plan which would not be likely to have a significant effect on a European site (i.e. would have some effect, because of links/connectivity, but which are not significant), either alone or in combination with other aspects of the same plan or other plans or projects, which therefore do not require ‘Appropriate Assessment’; and
- Identify those aspects of the plan where it is not possible to rule out the risk of significant effects on a European site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require Appropriate Assessment.

Identifying European sites that may be affected and their conservation objectives

3.3 As a first step in identifying European sites that could potentially be affected by a development, it is established practice in HRA to consider sites within the administrative area covered by the plan, and other sites that may be affected beyond this area.

3.4 A distance of 20km from the boundary of the plan area is used in the first instance to identify European sites with the potential to be affected by the proposals within a development plan. Consideration is then given to whether any more distant European sites may be connected to the plan area via effects pathways, for example through hydrological links or recreational visits by residents. The 20km distance has been agreed with Natural England for HRAs elsewhere in this region and is considered precautionary. All European sites within 20km were assessed in this HRA.

3.5 The assessment also takes into account areas that may be functionally linked to the European sites. The term ‘functional linkage’ is used to refer to the role or ‘function’ that land beyond the boundary of a European site might fulfil in terms of supporting the species populations for which the site was designated or classified. Such an area is therefore ‘linked’ to the site in question because it provides a (potentially important) role in maintaining or restoring a protected population at favourable conservation status.

3.6 While the boundary of a European site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time. Sometimes, the mobility of qualifying species is considerable and may extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all of the land or sea that may conceivably be used by the species **[See reference 18]**. HRA therefore

considers whether any European sites make use of functionally linked habitats, and the impacts that could affect those habitats.

3.7 European sites identified for inclusion in the HRA are listed below in Table 3.1 and Figure 2 in Appendix A. Detailed information about each European site is provided in Appendix B, described with reference to Standard Data Forms for the SPAs and SACs, and Natural England's Site Improvement Plans **[See reference 19]**. Natural England's conservation objectives **[See reference 20]** for the SPAs and SACs have also been reviewed. These state that site integrity must be maintained or restored by maintaining or restoring the habitats of qualifying features, the supporting processes on which they rely, and populations of qualifying species.

Table 3.1: European sites within 20km of Holbrook Neighbourhood Plan boundary

European Site	Closest Distance/Location from Neighbourhood Plan Area
Stour and Orwell Estuaries SPA and Ramsar site	Within Neighbourhood Plan Area
Hamford Water SAC	6.3km south
Hamford Water SPA and Ramsar site	6.3km south
Deben Estuary SPA and Ramsar site	11.2km east
Outer Thames Estuary SPA	14.1km east
Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site	16.2km south
Essex Estuaries SAC	16.2km south
Sandlings SPA	16.6km east
Alde-Ore Estuary SPA and Ramsar site	18.7km east
Orfordness-Shingle Street SAC	18.7km east
Alde-Ore & Butley Estuaries SAC	19.6km

Assessment of ‘likely significant effects’ of the plan

3.8 As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017 **[See reference 21]** (as amended), an assessment has been undertaken of the ‘likely significant effects’ of the plan. The assessment has been prepared in order to identify which policies or site allocations would be likely to have a significant effect on European sites. The screening assessment has been conducted without taking mitigation into account, in accordance with the ‘People over Wind’ judgment.

3.9 An HRA Screening of policies (detailed in Appendix B and summarised in Chapter 4) considered the potential for likely significant effects to result from each policy and site allocation in the plan.

3.10 An HRA Screening of impacts (set out in Chapter 4) considered the potential for the development proposed to result in significant effects associated with:

- Physical loss or damage to habitat;
- Non-physical disturbance (noise, vibration and light pollution);
- Non-toxic contamination;
- Air pollution;
- Recreational pressure; and
- Changes to hydrology, including water quantity and quality.

3.11 This thematic/impact category approach also allowed for consideration to be given to the cumulative effects of the site allocations rather than focussing exclusively on individual developments provided for by the plan. For some types of impacts, the potential for likely significant effects was determined on a proximity basis. This approach and the assumptions applied are described in Chapter 4.

3.12 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 unlikely, based on current knowledge and the information available, that a development plan policy or site allocation would have a significant effect on the integrity of a European site.

Interpretation of 'likely significant effects'

3.13 Relevant case law helps to interpret when effects should be considered as a likely significant effect, when carrying out HRA of a land use plan.

3.14 In the Waddenzee case **[See reference 22]**, 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).

3.15 A relevant opinion delivered to the Court of Justice of the European Union 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."

3.16 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 minimis; referring to such cases as those "that 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'.

3.17 The HRA screening assessment therefore considers whether the Holbrook Neighbourhood Plan could have likely significant effects either alone or in combination.

Mitigation provided by the plan

3.18 Some of the potential effects of the plan could be avoided or reduced (mitigated) through the implementation of other policies in the plan itself, for example the provision of green infrastructure within new developments could help mitigate increased pressure from recreation activities at European sites. However, in accordance with the 'People over Wind' judgment, mitigation measures cannot be relied upon at the Screening Stage, and therefore, where such measures exist, they were considered at the Appropriate Assessment stage for impacts and policies where likely significant effects, either alone or in-combination, could not be ruled out.

Assessment of potential in-combination effects

3.19 Regulation 105 of the Habitats Regulations 2017 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, where likely insignificant effects are identified for the plan alone, it is necessary to consider whether these may become significant effects in combination with other plans or projects.

3.20 Where the plan is likely to have an effect on its own (due to impact pathways being present) but that effect is not likely to be significant, the in-combination assessment at Screening stage needs to determine whether there may also be the same types of effect from other plans or projects that could combine with the plan to produce a significant effect. If so, this likely significant effect arising from the plan in combination with other plans or projects, would then need to be considered through the Appropriate Assessment stage to determine if the impact type would have an adverse effect on the integrity of the relevant European site. Where the screening assessment has concluded that there is no impact pathway between development proposed in the plan and the conditions necessary to maintain qualifying features of a European sites, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stage. This approach accords with recent guidance on HRA **[See reference** 23**]**.

3.21 If impact pathways are found to exist for a particular type of effect but it is not likely to be significant from the plan alone, the in-combination assessment will identify which other plans and programmes could result in the same impact on the same European site. This will focus on planned growth (including housing, employment, transport, minerals and waste) around the affected European site, or along the impact corridor. Assessment of the potential for in-combination effects will therefore focus on plans prepared by local authorities that overlap with European sites that are within the scope of this HRA. The

findings of any associated HRA work for those plans will be reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with the plan will also be identified and reviewed.

3.22 The HRA Handbook **[See reference** 24**]** suggests the following plans and projects may be relevant to consider as part of the in-combination assessment:

- Applications lodged but not yet determined, including refusals subject to an outstanding appeal or legal challenge;
- Project subject to periodic review e.g. annual licences, during the time that their renewal is under consideration;
- Projects authorised by not yet started;
- Project started but not yet completed;
- Known projects that do not require external authorisation;
- Proposals in adopted plans; and
- Proposals in draft plans formally published or submitted for final consultation, examination or adoption.

3.23 The need for in-combination assessment also arises at the Appropriate Assessment stage. This will be discussed in more detail if an Appropriate Assessment is required.

Chapter 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 plan on the scoped-in European sites. The detailed screening assessment, which sets out the decision-making process used for this assessment can be found in Appendix B and the findings are summarised below.

HRA Screening of policies

No 'likely significant effect' predicted

4.2 The Holbrook Neighbourhood Plan does not allocate any sites for residential development, though the principle of development will be supported subject to the application of other relevant policies in the Joint Local Plan. Should schemes which are supported by the Holbrook Neighbourhood Plan move forward, individual project-level HRAs should be carried out to determine any likely significant effects.

4.3 Since none of the policies of the Holbrook Neighbourhood Plan are expected to directly result in development, they will not result in significant effects on European sites. Therefore, no likely significant effects are predicted as a result of the plan.

HRA Screening of impacts

4.4 For some types of impacts, screening for likely significant effects was determined on a proximity basis, using GIS data to determine the distance of

potential development locations to the European sites that were 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 were applied in relation to assessing the likely significant effects on European sites that may result from the plan, as described below.

Physical damage and loss (on site)

4.5 Any development resulting from the plan would take place within the Holbrook neighbourhood plan area; therefore only European sites within the boundary of the Neighbourhood Plan area could be affected through physical damage or loss of habitat from within the site boundaries. There are two European sites, the Stour and Orwell Estuaries SPA and Ramsar site present within the Neighbourhood Plan area. These sites are present within the southern section of the Neighbourhood Plan area. Therefore, there is potential for these European sites to be susceptible to impacts from proposed development in the plan area. However, as there are no policies in the Holbrook Neighbourhood Plan that will result in any development, there is therefore no likely significant effect predicted in relation to physical damage and loss. As previously stated, any future development proposals should be subject to a project-level HRA to assess potential significant effects to the Stour and Orwell Estuaries SPA and Ramsar site.

Conclusion

4.6 No likely significant effects will occur from the plan as a result of physical damage and loss to onsite habitat, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Physical damage and loss (offsite)

4.7 Habitat loss from development in areas outside of the European site boundaries may result in likely significant effects where that habitat contributes towards maintaining the interest feature for which the European site is designated. This includes land that may provide offsite movement corridors or foraging and sheltering habitat for mobile species such as birds, bats and fish. European sites susceptible to the indirect effects of habitat loss are restricted to those sites with qualifying species that rely on offsite habitat. These were identified as:

- Stour and Orwell Estuaries SPA and Ramsar site
- Hamford Water SAC, SPA and Ramsar site
- Outer Thames Estuary SPA
- Colne-Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site
- Sandlings SPA
- Deben Estuary SPA and Ramsar site
- Alde-Ore Estuary SPA and Ramsar site

4.8 Therefore, these European sites were considered susceptible to impacts from proposed development in the plan area. However, as no policies will directly result in development, likely significant effects as a result of physical damage and loss to offsite habitat can be ruled out.

4.9 All other European sites were screened out of the assessment as they do not support qualifying features that are reliant on offsite functionally linked habitat.

Conclusion

4.10 No likely significant effects will occur from the plan as a result of physical damage and loss to offsite habitat, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Non-physical disturbance (noise, vibration and light)

4.11 Noise and vibration effects 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 has the potential to affect species where it occurs in close proximity to key habitat areas, such as key roosting sites of SPA birds.

4.12 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 **[See reference 25]**; however, it has been assumed (on a precautionary basis) that the effects of noise, vibration and light pollution are capable of causing an adverse effect if development takes place within 500 metres of a European site with qualifying features sensitive to these disturbances.

4.13 The Stour and Orwell Estuaries SPA and Ramsar site is present within the boundary of the Neighbourhood Plan area. Therefore, there is potential for these European sites to be susceptible to impacts from proposed development in the plan area. However, as there are no policies in the Holbrook Neighbourhood Plan that will result in any development, there is therefore no likely significant effect predicted in relation to non-physical disturbance. As previously stated, any future development proposals should be subject to a

project-level HRA to assess potential significant effects to the Stour and Orwell SPA and Ramsar site.

4.14 All other European sites were located over 500m from the Neighbourhood Plan area and therefore were not considered susceptible to impacts from development in the plan area. These European sites were screened out of the assessment.

Conclusion

4.15 No likely significant effects will occur from the plan as a result of non-physical disturbance, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Non-toxic contamination

4.16 Non-toxic contamination includes the creation of dust. This can smother terrestrial habitats preventing, natural processes or as increased sediment, can potentially affect the turbidity of aquatic habitats. Dust or sediment can also contribute to nutrient enrichment, which can lead to changes in the rate of vegetative succession and habitat composition.

4.17 The effects of non-toxic contamination are most likely to be significant if development takes place within 500m of a European site with qualifying features sensitive to these disturbances, such as riparian and wetland habitats, or sites designated for habitats and plant species. This is the distance that, in our experience, provides a robust assessment of effects in plan-level HRA and meets with the agreement of Natural England.

4.18 The Stour and Orwell Estuaries SPA and Ramsar site are present within the plan area and are therefore potentially susceptible to the adverse effects of non-toxic contamination. However, as there are no policies in the Holbrook

Neighbourhood Plan that will result in any development, there is therefore no likely significant effect predicted in relation to non-toxic contamination. As previously stated, any future development plans proposals should be subject to a project-level HRA to assess potential significant effects to the Stour and Orwell SPA and Ramsar site.

4.19 All other European sites were located over 500m from the neighbourhood plan area and therefore were not considered susceptible to impacts from development in the plan area. These European sites were screened out of the assessment.

Conclusion

4.20 No likely significant effects will occur from the plan as a result of non-toxic contamination, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Air pollution

4.21 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, which can then affect plant health, productivity and species composition.

4.22 In terms of vehicle traffic, nitrogen oxides (NOx, i.e. NO and NO2) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NOx can cause eutrophication of soils and water.

4.23 Based on the Highways England Design Manual for Road and Bridges (DMRB) LA 105 Air quality (which sets out the requirements for assessing and reporting the effects of highway projects on air quality), 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.

4.24 For highways developments within 200m of sensitive receptors, the DMRB provides the following screening criteria to ascertain whether there are likely to be significant impacts:

- 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
- There will be a change in speed band; or
- Road carriageway alignment will change by 5m or more.

4.25 Thus, where significant increases in traffic are possible on roads within 200m of European sites, traffic forecast data may be needed to determine if increases in vehicle traffic are likely to be significant. In line with the Wealden judgment **[See reference 26]**, the traffic growth considered by the HRA should be 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.

4.26 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.

4.27 Although there are no strategic roads present within the Holbrook Neighbourhood Plan area, local strategic roads that could be utilised by people

travelling to and from Holbrook include the A14, A12 and A137. The A14 directly passes through the Stour and Orwell Estuaries SPA and Ramsar site.

4.28 As there are no policies in the plan that will directly result in development no likely significant effect is predicted in relation to air pollution. Any future development proposals should be subject to a project-level HRA to assess potential significant effects to the Stour and Orwell Estuaries SPA and Ramsar site.

Conclusion

4.29 No likely significant effects will occur from the plan as a result of air pollution, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Recreation

4.30 Recreational activities and human presence can result in significant effects on European sites. European sites with qualifying bird species are likely to be particularly susceptible to recreational disturbances from walking, dog walking, angling, illegal use of off-road vehicles and motorbikes, wildfowling, and water sports. In addition, recreation can physically damage habitat as a result of trampling, fire or vandalism and also through erosion associated with terrestrial activities.

4.31 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.

4.32 Existing visitor survey work available for European sites is summarised in Table 4.1.

Table 4.1: Zone of Influence (ZOI) derived from existing visitor survey work

European Site	ZOI
Stour and Orwell Estuaries SPA and Ramsar site	13km **[See reference** 27**]**
Hamford Water SAC, SPA and Ramsar site	8km **[See reference** 25**]**
Deben Estuary SPA and Ramsar site	13km **[See reference** 25**]**
Essex Estuaries SAC	9.7km/20km*
Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site	9.7km
Sandlings SPA	13km
Alde-Ore Estuary SPA and Ramsar site	13km
Orfordness Shingle Street	13km

*Essex Estuaries SAC overlaps with Colne Estuary SPA and Ramsar site. Therefore both ZOIs have been included for Essex Estuaries SAC to account for those areas which overlap.

4.33 A review of the European sites and their recreational ZOIs set out in Table 4.1 determined that the following European sites do not have a recreational ZOI that extends into the neighbourhood plan area and can therefore be scoped out of further assessment:

- Essex Estuaries SAC
- Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site
- Sandlings SPA
- Alde-Ore Estuary SPA and Ramsar site

- Orfordness Shingle Street SAC

4.34 No policies will directly result in development and therefore likely significant effects as a result of recreation can be ruled out at this stage for the remaining European sites from Table 4.1 (Stour and Orwell Estuaries SPA and Ramsar site; Hamford Water SAC, SPA and Ramsar site; Deben Estuary SPA and Ramsar site).

Conclusion

4.35 No likely significant effects will occur from the plan as a result of recreation, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Reduced water quantity and quality

4.36 An increase in demand for water abstraction and treatment resulting from the growth proposed in the neighbourhood plan area could result in changes in hydrology at European sites. Depending on the qualifying features and particular vulnerabilities of the European sites, this could result in likely significant effects, for example, due to changes in environmental or biotic conditions, water chemistry and the extent and distribution of preferred habitat conditions.

4.37 All scoped-in European sites have been identified to support habitats and/or qualifying species, which are susceptible to impacts from changes in water quantity and quality.

4.38 No policies will directly result in development and therefore likely significant effects as a result of reduced water quantity or quality can be ruled out.

Conclusion

4.39 No likely significant effects will occur from the plan as a result of water quantity and quality, either alone or in-combination with other plans and policies, as a result of proposed development in the plan.

Summary of Screening Assessment

4.40 Table 4.2 below summarises the Screening conclusions reached in this HRA. Impact types for which a conclusion of No likely significant effect (No LSE) was reached are shown with no colour. No potential impacts were identified for which likely significant effects (potential LSE) could not be ruled out therefore it was not necessary to proceed to the Appropriate Assessment stage.

Table 4.2: Summary of screening assessment

European Site	Physical damage and loss	Non-physical disturbance	Non-toxic contamination	Air pollution	Recreation	Reduced water quality and quantity
Stour and Orwell Estuaries SPA and Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Hamford Water SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Hamford Water SPA and Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Deben Estuary SPA and Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Outer Thames Estuary SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Colne Estuary (Mid-Essex Coast Phase 2) SPA and Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE

European Site	Physical damage and loss	Non-physical disturbance	Non-toxic contamination	Air pollution	Recreation	Reduced water quality and quantity
Essex Estuaries SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Sandlings SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Alde-Ore Estuary SPA and Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Orfordness Shingle Street SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Alde-Ore Butley Estuaries SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE

Chapter 5

Conclusion and next steps

5.1 At the Screening stage of HRA, no likely significant effects are predicted on European sites, either alone or in-combination with other plans and proposals as a result of the Holbrook Neighbourhood Plan. However, it is expected that any windfall development which the Holbrook Neighbourhood Plan supports and is within the plan boundary will be required to undertake an individual project-level HRA to determine potential on the European sites scoped into this HRA.

Recommendations

5.2 No changes to Holbrook Neighbourhood Plan are assumed in reaching the conclusion of this HRA of no likely significant effects. However, to strengthen the protection for European sites provided by Holbrook Neighbourhood Plan policies, and in line with recommendations provided within the previous plan HRA, it is recommended that the following policy amendment is made:

Policy HNP 13 – Biodiversity

- Amendment: This policy and supporting text should be updated to include potential likely significant effects on the Deben Estuary SPA and Ramsar site as the ZOI for these sites overlaps with the plan area (see Table 3.1 and Table 4.1). At present, this policy only accounts for potential likely significant effects as a result of recreation on the Stour and Orwell Estuaries SPA and Ramsar site.

Next steps

5.3 An Appropriate Assessment is not required for the Holbrook Neighbourhood Plan as none of the policies will result in development and likely significant effects from the plan can therefore be ruled out. However, project-level HRAs of windfall development should be undertaken as these developments come forward.

5.4 HRA is an iterative process and as such, this assessment should be updated if further changes are made to the plan or any relevant, newly available evidence or comments from key consultees are received prior to the plan being finalised. It is recommended that this report is subject to consultation with Natural England and the Environment Agency to confirm that the conclusions of the assessment are considered appropriate at this stage of plan-making.

Appendix A

Figure A.1: Map of European Sites within 20km of the Holbrook Neighbourhood Plan Area

Habitat Risk Assessment Screening
for Babergh Mid Suffolk Neighbourhood Plans

LUC

European Designated Sites within 20km of Holbrook CP

- Neighbourhood Plan
- 20km buffer from Neighbourhood Plan
- Babergh District Council
- Other Local Authority
- RAMSAR
- SAC
- SPA

Sandlings
Orfordness-Shingle Street
Alde-Ore & Butley Estuaries
Alde-Ore Estuary
Deben Estuary
Stour and Orwell Estuaries
Holbrook CP
Hamford Water
Colne Estuary (Mid-Essex Coast Phase 2)
Essex Estuaries
Outer Thames Estuary

HARWICH INTERNATIONAL PORT to Hook of Holland (Netherlands) 8 hrs

0 5 10 km

Map scale 1:200,000 @ A3

CB:AHB EB:Hardie-Brown_A LUC FIG1_10994_r0_EuropeanSites_A3L 26/05/2022
Source: OS, NE

Appendix B

Attributes of European sites

This appendix contains information on the European sites scoped into the HRA. Site areas and designated features are drawn from SAC and SPA Standard Data Forms and Ramsar Site Information Sheets **[See reference 28]**. The overviews of sites and their locations are drawn from Natural England's Site Improvement Plans **[See reference 29]**. Site conservation objectives are drawn from Natural England's website and are only available for SACs and SPAs **[See reference 30]**.

Attributes of European sites

Stour and Orwell Estuaries SPA

Overview of site and its location

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.

Qualifying features

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 Habitats importance of the following migratory species:

- Over winter: Black-tailed Godwit; *Limosa limosa islandica*
- Over winter: Dunlin; *Calidris alpina alpina*
- Over winter: Grey Plover; *Pluvialis squatarola*
- Over winter: Pintail; *Anas acuta*
- Over winter: Redshank; *Tringa totanus*
- Over winter: Ringed Plover; *Charadrius hiaticula*
- Over winter: Shelduck; *Tadorna tadorna*
- Over winter: Turnstone; *Arenaria interpres*

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl including:

- 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*
- Knot; *Calidris canutus*
- Turnstone; *Arenaria interpres*

Conservation objectives

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; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

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 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 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 Habitats 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.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

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; and
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

Black-tailed Godwit; *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 small insects during the breeding season.

Dunlin; *Calidris alpina alpine*

- Habitat Preference – Tundra, moor, heath, and on migration estuaries and coastal habitat.
- Diet – Tundra, moor, heath, and on migration estuaries and coastal habitat.

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.

Pintail; *Anas acuta*

- Habitat Preference – Lakes, rivers, marsh and tundra.
- Diet – A variety of plants and invertebrates.

Redshank; *Tringa totanus*

- Habitat Preference – Rivers, wet grassland, moors and estuaries.
- Diet – Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries).

Ringed Plover; *Charadrius hiaticula*

- Habitat Preference – Sandy areas with low vegetation, and on migration estuaries.
- Diet – Mostly invertebrates, especially insects, molluscs and crustaceans.

Shelduck; *Tadorna tadorna*

- Habitat Preference – Coasts, estuaries and lakes.
- Diet – Mostly invertebrates, especially insects, molluscs and crustaceans.

Turnstone; *Arenaria interpres*

- Habitat Preference – On migration beaches and rocky coasts.
- Diet – Insects, crustaceans and molluscs.

Cormorant; *Phalacrocorax carbo*

- Habitat Preference – Larger lakes and coastal.
- Diet – Fish.

Great Crested Grebe; *Podiceps cristatus*

- 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.

Curlew; *Numenius arquata*

- Habitat Preference –Marsh, grassland and on migration mudflats.
- Diet – Worms, shellfish and shrimps.

Dark-bellied Brent Goose; *Branta bernicla bernicla*

- Habitat Preference – Tundra, and on migration marshes and estuaries.
- Diet – Vegetation, especially eel-grass.

Wigeon; *Anas Penelope*

- Habitat Preference – Marsh, lakes, open moor, on migration estuaries.
- Diet – Mostly leaves, shoots, rhizomes and some seeds.

Goldeneye; *Bucephala clangula*

- Habitat Preference – Lakes, rivers, and on migration seacoasts.
- Diet – Insects, molluscs and crustaceans.

Oystercatcher; *Haematopus ostralegus*

- Habitat Preference – Sandy, muddy and rocky beaches.
- Diet – Mussels and cockles on the coast, mainly worms inland.

Lapwing; *Vanellus vanellus*

- Habitat Preference – Pasture, arable land, wet meadow, on migration estuaries
- Diet – Worms and insects.

Red Knot; *Calidris canutus islandica*

- Habitat Preference – Tundra, and on migration coastal habitat.
- Diet – In summer, insects and plant material, and in winter inter-tidal invertebrates, esp 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.

Stour and Orwell Estuaries Ramsar site

Overview of site and its location

Refer to Stour and Orwell Estuaries SPA above.

Qualifying features

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.

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

Conservation objectives

None available.

Key vulnerabilities

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.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

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.

Hamford Water SAC

Overview of site and its location

Hamford Water is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud- and sand-flats.

Qualifying features

Qualifying features:

- Fisher's Estuarine Moth; *Gortyna borelii lunata.*

Conservation objectives

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; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

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.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

In general, the qualifying species of the SAC rely on:

- The sites ecosystem as a whole (see list of habitats below); and

- Maintenance of populations of species that they feed on (see list of diets below).

Fisher's Estuarine Moth; *Gortyna borelii lunata*

- Habitat Preference – Sea-walls and coastal grassland.
- Diet – Hog's Fennel.

Hamford Water SPA

Overview of site and its location

Refer to Hamford Water SAC above.

Qualifying features

Annex I species present as a qualifying feature:

- 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*

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*

Conservation objectives

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; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

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 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.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

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; and
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

Little Tern; *Sterna albifrons*

- Habitat Preference – Seacoasts, rivers and lakes.
- Diet – Small fish and invertebrates.

Avocet; *Recurvirostra avosetta*

- Habitat Preference – Mudflats, lagoons and sandy beaches.
- Diet – Aquatic insects and their larvae, crustaceans and worms.

Golden Plover; *Pluvialis apricaria*

- Habitat Preference – Tundra, wet moor, and on migration pasture and estuaries.
- Diet – Invertebrates, esp beetles, earthworms, this species feeds extensively at night.

Ruff; *Philomachus pugnax*

- Habitat Preference – Grassy tundra, lakes, farmland, on migration mudflat.

- Diet – Invertebrates, especially insects, and some plant material (especially in winter).

Ringed Plover; *Charadrius hiaticula*

- Habitat Preference – Sandy areas with low vegetation, and on migration estuaries.
- Diet – Summer, invertebrates, and in winter primarily marine worms, crustaceans and molluscs.

Black-tailed Godwit; *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 small insects during the breeding season.

Dark-bellied Brent Goose; *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.
- Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

Common Shelduck; *Tadorna tadorna*

- Habitat Preference – Coasts, estuaries and lakes.
- Diet – Mostly invertebrates, especially insects, molluscs and crustaceans.

Eurasian Teal (Non-breeding); *Anas crecca*

- Habitat Preference – Lakes, marshes, ponds and shallow streams.
- Diet – Omnivorous, mostly seeds in winter, feeds mostly at night in shallow water.

Common Redshank; *Tringa totanus*

- Habitat Preference – Rivers, wet grassland, moors and estuaries.
- Diet – Invertebrates, especially earthworms, cranefly larvae (inland) crustaceans, molluscs, marine worms (estuaries).

Hamford Water Ramsar site

Overview of site and its location

Refer to Hamford Water SAC above.

Qualifying features

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*

Conservation objectives

None available.

Key vulnerabilities

Refer to Hamford Water SPA above.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Refer to Hamford Water SPA above.

Deben Estuary SPA

Overview of site and its location

The Deben Estuary SPA extends for about 18km from the mouth of the estuary at Felixstowe, on the east coast of Suffolk to near the tidal limit above Wilford Bridge. It is a relatively narrow and sheltered estuary with a limited amount of freshwater input and intertidal areas constrained by sea walls. Saltmarsh and intertidal mud flats occupy to the majority of the site but there are also areas of reedswamp, unimproved neutral grassland and scrub. The estuary is largely surrounded by agricultural land.

Qualifying features

Annex I species:

- Dark-bellied Brent Geese; *Branta bernicla bernicla*
- Pied Avocet; *Recurvirostra avosetta*

In addition the site supports national important numbers of the following migratory waterfowl:

- Shelduck; *Tadorna tadorna*
- Grey Plover; *Pluvialis squatarola*
- Black-tailed Godwit; *Limosa limosa*
- Redshank; *Tringa tetanus*

Conservation objectives

The conservation objectives for the Deben Estuary SPA is to ensure that the integrity of the site is maintained or restored as appropriate and ensure that the site continues to achieving the aims of the Wild Birds Directive by maintaining or restoring the following:

- 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.

Key vulnerabilities

The saltmarsh and intertidal habitats are vulnerable to sea level rise and coastal squeeze. These issues are being addressed through the Environment Agency LEAP, the estuary Shoreline Management Plan and research into possible managed retreat in parts of the site.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The site also supports a notable assemblage of breeding and wintering wetland birds in addition to the species mentioned above. The estuary is more important for many species of waterfowl in years when severe weather reduces food resources available on the continent.

Breeding species include the following:

- Shelduck
- Gadwall; *Anas strepera*
- Teal; *A. crecca*
- Shoveler; *A. clypeata*
- Redshank
- Oystercatcher; *Haematopus ostralegus*
- Ringed Plover; *Charadrius hiaticula*
- Snipe; *Gallinago gallinago*

Wintering species include:

- Cormorant; *Phalacrocorax carbo*
- Teal

- Pintail; *Anas acuta*
- Wigeon; *A. Penelope*
- Goldeneye; *Bucephala clangula*
- Coot; *Fulica atra*
- Oystercatcher
- Ringed Plover
- Dunlin; *Calidris alpina*
- Snipe
- Curlew; *Numenuis arquata*
- Turnstone; *Areneria interpres*
- Twite; *Carduelis flavirostris*

Deben Estuary Ramsar site

Overview of site and its location

Refer to Deben Estuary SPA above.

Qualifying features

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*

Conservation objectives

None available.

Key vulnerabilities

Similar to Deben Estuary SPA (above).

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Refer to Similar to Deben Estuary SPA (above).

Outer Thames Estuary SPA

Overview of site and its location

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.

Qualifying features

The following Annex 1 species:

- Red-throated Diver; *Gavia stellata*
- Common Tern; *Sterna hirundo*
- Little Tern; *Sternula albifrons*

Conservation objectives

To ensure the site remains in or reaches favourable condition.

Key vulnerabilities

The following key vulnerabilities have been identified for the Outer Thames Estuary SPA:

- Shipping lanes, ports and marine constructions;
- Renewable abiotic energy use;
- Fishing and harvesting aquatic resources;
- Military use and civil unrest; and

- Marine water pollution

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Habitats found within the SPA include mud, sand and gravel alongside a range of mobile sediments and tidal current stream.

Colne Estuary (Mid-Essex Coast Phase 2) SPA

Overview of site and its location

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 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.

Qualifying features

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 Habitats importance of the following migratory species.

Over winter:

- Dark-bellied Brent Goose; *Branta bernicla bernicla*
- Redshank; *Tringa totanus*

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl.

Conservation objectives

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; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

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 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 Habitats Marine Site 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 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.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

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; and
- 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 ferina*

- Habitat Preference – Lakes and 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 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

Overview of site and its location

Refer to Colne Estuary (Mid-Essex Coast Phase 2) SPA above.

Qualifying features

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 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 possible future consideration under criterion 6.

Conservation objectives

None available.

Key vulnerabilities

Refer to Colne Estuary (Mid-Essex Coast Phase2) SPA above.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

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.

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 Habitats 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 steppe, and on migration mudflats.
- Diet – Insects, worms and snails, but also some plants, beetles, grasshoppers and other small insects during the breeding season.

Essex Estuaries SAC

Overview of site and its location

Large estuarine site in south-east England. The site comprises the major estuaries of the Colne, Blackwater, Crouch and Roach river.

Qualifying features

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*; and
- Mediterranean and Thermo-Atlantic Halophilous Scrubs.

Annex 1 habitats present as a qualifying feature:

- Sandbanks which are slightly covered by seawater all the time.

Conservation objectives

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;
- The populations of the qualifying features; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

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 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 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.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

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):

- Sandbanks which are slightly covered by sea water all the time; and
- Reef-building species such as *Sabellaria spinulosa* help to stabilise the sediment, allowing the colonisation of sessile animals.

Sandlings SPA

Overview of site and its location

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 being subject to successional changes, with the consequent spread of bracken, shrubs and trees, although recent conservation management work is resulting in their restoration. The heaths support both acid grassland and heather-dominated plant communities, with dependant invertebrate and bird communities of conservation value.

Qualifying features

The site qualifies under Article 4.1 of the Directive (79/409/EEC) as it is used regularly by the following Annex I species:

- Nightjar; *Caprimulgus europeaus*
- Woodlark; *Lullula arborea*

Conservation objectives

The conservation objectives for the Sandlings SPA are to 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 Bird 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.

Key vulnerabilities

None available.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Woodlark and nightjar utilise the open grassland and heather heaths for breeding. In recent times they have taken to nesting within open habitat associated with the system of rotational clear-felling within the conifer plantations, where areas of clear-fell and restocked plantation also provides ideal breeding conditions. Outside the confines of the forest nightjar and woodlark use both grasslands, arable land and other habitats for feeding.

Alde-Ore Estuary Ramsar

Overview of site and its location

The Alde-Ore Estuary Ramsar is located on the east coast of Suffolk, east of Woodbridge, stretching between Aldeburgh to the north and Bawdsey to the south.

The site comprises the estuary complex of the rivers Alde, Butley and Ore, including Havergate Island and Orfordness. There are a variety of habitats including, intertidal mudflats, saltmarsh, vegetated shingle (including the second-largest and best-preserved area in Britain at Orfordness), saline lagoons and grazing marsh. The Orfordness/Shingle Street landform is unique within Britain in combining a shingle spit with a cuspate foreland. The site supports nationally-scarce plants, British Red Data Book invertebrates, and notable assemblages of breeding and wintering wetland birds.

Qualifying features

Ramsar criterion 2a

The site supports a number of nationally-scarce plant species and British Red Data Book invertebrates.

Ramsar criterion 3b

The site supports notable assemblages of breeding and wintering wetland birds.

Ramsar criterion 3c

During the breeding season the site regularly supports internationally important populations of Lesser black-backed gull; *Larus fuscus graellsii*.

Over winter the site regularly supports internationally important populations of Pied avocet; *Recurvirostra avosetta* and Common redshank; *Tringa totanus tetanus*.

Conservation objectives

No information available.

Key vulnerabilities

The area is vulnerable to sea-level rise and coastal squeeze. These issues are being address through the Environment Agency Local Environment Action Plan, the estuary Management Plan and possibly managed retreat. Human disturbance from recreation is minimal as this is a reasonably robust system. Flood defence policy will need to take into account risks to the site from flooding and of flood control alleviation measures. Shooting is controlled through a management plan.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

The site supports nationally scarce plants, and consists of the following habitats:

- Sand/shingle shores (including dune systems);
- Tidal flats;

- Salt marshes;
- Coastal brackish/saline lagoons;
- Rivers/streams/creeks (permanent);
- Saline/brackish marshes (permanent);
- Freshwater marshes/pools (permanent); and
- Peatlands (including peat bogs, swamps and fens).

Alde-Ore Estuary SPA

Overview of site and its location

Please refer to Alde-Ore Estuary Ramsar site above.

Qualifying features

The site qualifies under Article 4.1 of the EC Birds Directive by sustaining nationally important numbers of the following Annex I species:

- Marsh Harrier (Breeding); *Circus aeruginosus*
- Avocet (Wintering and Breeding); *Recurvirostra avosetta*
- Ruff (Wintering); *Philomachus pugnax*
- Sandwich Tern (Breeding); *Sterna sandvicensis*
- Little Tern (Breeding); Sterna albifrons

Further Annex I species winter on site, including:

- Bittern; *Botaurus stellaris*
- Bewick's Swan; *Cygnus columbianus*

- Hen Harrier; *Circus cyaneus*
- Golden Plover; *Pluvialis apricaria*
- Short-eared Owl; *Asio flammeus*

The site qualifies under Article 4.2 of the EC Birds Directive by regularly supporting internationally important numbers of two migratory species. The Orfordness colony of breeding Lesser black-backed gull; *Larus fuscus graelisii*, and Redshank; *Tringa tetanus*.

Conservation objectives

None available.

Key vulnerabilities

Please see the Alde-Ore Estuary Ramsar site above.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Please see the Alde-Ore Estuary Ramsar site above.

Orfordness Shingle Street SAC

Overview of site and its location

Orfordness is an extensive shingle structure consisting of a foreland, a 15km-long spit and a series of recurves running from north to south. It supports some

of the largest and most natural sequences in the UK of shingle vegetation affected by salt spray. The southern end has a particularly fine series of undisturbed ridges, with zonation of communities determined by the ridge pattern. Pioneer communities with Sea pea; *Lathyrus japonicus* and False oat-grass; *Arrhenatherum elatius* grassland occur. Locally these are nutrient-enriched by the presence of a gull colony; elsewhere they support rich lichen communities.

Drift-line vegetation occurs on the sheltered, western side of the spit, at the transition from shingle to saltmarsh, as well as on the exposed eastern coast. The drift-line community is widespread and comprises Sea beet; *Beta vulgaris ssp. maritima* and *Orache Atriplex spp*.

The site also includes a series of percolation lagoons that have developed in the shingle bank adjacent to the shore at the mouth of the Ore estuary. The salinity of the lagoons is maintained by percolation through the shingle, although at high tides sea water can overtop the shingle bank. 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.

Qualifying features

The site is designated under Article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Annual vegetation of drift lines;
- Coastal lagoons; and
- Perennial vegetation of stony banks (coastal shingle vegetation outside the reach of waves).

Conservation objectives

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.

Key vulnerabilities

Key vulnerabilities at the Orfordness Shingle Street SAC include the following:

- Outdoor sports and leisure activities, recreational activities;
- Human induced changes in hydraulic conditions;
- Interspecific faunal relations; and
- Changes in abiotic conditions.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Not available.

Alde-Ore & Butley Estuaries SAC

Overview of site and its location

See Alde-Ore Estuary Ramsar above.

Qualifying features

Annex I habitats present:

- Estuaries – This estuary, made up of three rivers, is the only bar-built estuary in the UK with a shingle bar. This bar has been extending rapidly along the coast since 1530, pushing the mouth of the estuary progressively south-westwards. The eastwards-running Alde River originally entered the sea at Aldeburgh, but now turns south along the inner side of the Orfordness shingle spit. It is relatively wide and shallow, with extensive intertidal mudflats on both sides of the channel in its upper reaches and saltmarsh accreting along its fringes. The Alde subsequently becomes the south-west flowing River Ore, which is narrower and deeper with stronger currents. The smaller Butley River, which has extensive areas of saltmarsh and a reedbed community bordering intertidal mudflats, flows into the Ore shortly after the latter divides around Havergate Island. The mouth of the River Ore is still moving south as the Orfordness shingle spit continues to grow through longshore drift from the north. There is a range of littoral sediment and rock biotopes (the latter on sea defences) that are of high diversity and species richness for estuaries in eastern England. Water quality is excellent throughout. The area is relatively natural, being largely undeveloped by man and with very limited industrial activity. The estuary contains large areas of shallow water over subtidal sediments, and extensive mudflats and saltmarshes exposed at low water. Its diverse and species-rich intertidal sand and mudflat biotopes grade naturally along many lengths of the shore into vegetated or dynamic shingle habitat, saltmarsh, grassland and reedbed.

- Mudflats and sandflats not covered by seawater at low tide.
- Atlantic salt meadows.

Conservation objectives

Not available.

Key vulnerabilities

Key vulnerabilities for the Alde-Ore Butley Estuaries SAC are as follows:

- Outdoor sports and leisure activities, recreational activities;
- Fire and fire suppression;
- Changes in abiotic conditions; and
- Changes in biotic conditions.

Non-qualifying habitats and species upon which the qualifying habitats and/or species depend

Not available.

Appendix C

Detailed screening assessment of policies

Housing and development

Policy HNP 01: Location of new housing development

Potential likely significant effects

This policy seeks to focus new development within the defined Settlement Boundaries, where proposals will be supported in principle if they are in accordance with other policies within the Holbrook Neighbourhood Plan. This covers small windfall sites and infill plots of one or two dwellings (which are not specifically identified within the Holbrook Neighbourhood Plan). Developments outside of the Settlement Boundaries, including the conversion of existing buildings and new development, will only be permitted where they are in accordance with national and district level policies.

Discussion

Whilst this policy does set conditions for supporting development within a specific area it does not allocate land for development. Any such proposals would form part of separate project proposals that would be subject to individual HRA to determine any likely significant effects to European Sites.

Conclusion

No likely significant effected predicted.

Policy HNP 02: Housing Mix

Potential likely significant effects

None – this policy sets out all future housing development must contribute to meeting the existing and future needs of the Parish in order to facilitate a cohesive community.

Discussion

While this proposal does set conditions for supporting development it does not allocate land for development.

Conclusion

No likely significant effect predicted.

Policy HNP 03: Infill Development

Potential likely significant effects

None – this policy ensures that proposals for infill development, including replacement dwellings, within the settlement boundary will be supported

provided they meet certain criteria, including design sensitive to the AONB and SPA, Ramsar site, SSSI and CWS, among others.

Discussion

While this proposal does set conditions for supporting development it does not allocate land for development.

Conclusion

No likely significant effect predicted.

Policy HNP 04: Royal Hospital School (RHS)

Potential likely significant effects

None – this policy states that the principle of the expansion of the RHS will be supported subject to the proposal conforming to all other relevant policy considerations, including having regard to the historic significance of the site.

Discussion

While this proposal does set conditions for supporting the expansion of the RHS it does not allocate land for development.

Conclusion

No likely significant effect predicted.

Policy HNP 05: Design

Potential likely significant effects

None – this policy states that new development will be supported provided that the proposed design reflects Holbrook's local distinctiveness and character and seeks to enhance its quality.

Discussion

None.

Conclusion

No likely significant effect predicted.

Natural and historic environment policies

Policy HNP 06: Protection of Important Views

Potential likely significant effects

None – this policy states that proposed development should seek to retain the defined important views in and out of the built-up area and protect key landscape features visible from these vantage points/vistas.

Discussion

None.

Conclusion

No likely significant effect predicted.

Policy HNP 07: Preservation of Dark Skies

Potential likely significant effects

None – this policy seeks to ensure that new development proposals minimise the impact of lighting on the environment.

Discussion

None.

Conclusion

No likely significant effect predicted.

Policy HNP 08: Landscape Protection

Potential likely significant effects

None – this policy seeks to ensure that the valued landscapes and natural beauty within the Parish are conserved and enhanced for future generations. It further states that any application for development must be supported by a full Landscape and Visual Assessment (LVIA).

Discussion

Whilst this policy does set conditions for supporting development subject to certain conditions, it does not allocate land for development.

Conclusion

No likely significant effect predicted.

Policy HNP 09: Protection of Woodlands

Potential likely significant effects

None – this policy sets out that woodlands (including ancient woodland, veteran trees and trees protected by Tree Preservation Orders) will be protected from development that would have a significant adverse effect on their character, appearance and wildlife value.

Discussion

This policy provides protection for the natural environment and does not allocate land for development.

Conclusion

No likely significant effect predicted.

Policy HNP 10: Protection of Heritage Assets

Potential likely significant effects

None – this policy sets out criteria for protection of heritage assets within planning proposals.

Discussion

None.

Conclusion

No likely significant effect predicted.

Policy HNP 11: Gardens and Amenity

Potential likely significant effects

None – this policy sets out that development proposals within or adjacent to areas where the prevailing character of the area is of large front gardens exists, will be expected to continue with this characteristic.

Discussion

None.

Conclusion

No likely significant effect predicted.

Policy HNP 12: Sustainable Drainage and Flood Risk

Potential likely significant effects

None – this policy sets requirements for all new developments to use appropriate sustainable drainage systems, wetland and water features to protect against pollution, provide drainage and wider amenity, recreational and biodiversity benefits.

Discussion

None.

Conclusion

No likely significant effect predicted.

Policy HNP 13: Biodiversity

Potential likely significant effects

None – this policy states that development proposals will only be supported where they provide a net gain in biodiversity and avoid the loss of, or substantial harm to biodiversity habitats within the Parish. This policy further sets out mitigation in line with the Suffolk Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS) to avoid adverse in combination recreational disturbance on European sites.

Discussion

As the Holbrook Neighbourhood Plan will not directly result in development, the overall conclusion of the HRA Screening of no likely significant effects from the plan is not reliant on the mitigation provided by this policy.

Conclusion

No likely significant effect predicted.

Policy HNP 14: Local Green Spaces

Potential likely significant effects

None – this policy seeks to protect the green spaces and amenity areas within the Parish.

Discussion

None.

Conclusion

No likely significant effect predicted.

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3 The exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated; see paragraph 1.17.

4 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).

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15 Conservation objectives are published by Natural England for SACs and SPAs.

16 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.

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18 Chapman, C. & Tyldesley, D. (2016) Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects – a review of authoritative decisions. Natural England Commissioned Reports, Number 207.

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