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Tendring Colchester Borders Garden Community: Development Plan Document (DPD) Submission Version Plan

Habitats Regulations Assessment including Appropriate Assessment

May 2023

Essex County Council

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Glossary of Acronyms

AA	Appropriate Assessment
AEOI	Avoid Adverse Effect On site Integrity
BOD	Biochemical Oxygen Demand
CCC	Colchester City Council
CEMP	Construction Environmental Management Plan
DC	District Council
DPD	Development Plan Document
EA	Environment Agency
EC	European Commission
EU	European Union
Ha	Hectare
HRA	Habitats Regulations Assessment
IRZ	Impact Risk Zones (for SSSIs)
Km	Kilometre
LPA	Local Planning Authority
NE	Natural England
NPPF	National Planning Policy Framework
PRoW	Public Right of Way
RAMS	Recreational disturbance Avoidance and Mitigation Strategy
RIS	Ramsar Information Sheet
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Specific Scientific Interest
TDC	Tendring District Council
TCB	Tendring Colchester Borders
WFD	Water Framework Directive
WRC	Water Recycling Centres
ZOI	Zone of Influence

Summary

A Habitats Regulations Assessment has been prepared by Place Services for the Tendring Colchester Borders Garden Community Development Plan Document Submission Version Plan Options to comply with Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

As the policies contained in the Development Plan Document (DPD) Submission Version Plan cannot rule out Likely Significant Effects on Habitats (European) Sites at Stage 1 HRA Screening, there is a need for further assessment of impacts and Stage 2 Appropriate Assessment is necessary.

This report aims to consider the elements of the DPD which need to be screened in as having the potential for Likely Significant Effect (LSE) and hence requiring further assessment of their potential to result in adverse effects on the integrity of one of more Habitats (European) sites.

There are a wide range of potential impacts upon Habitats sites which could arise as a result of components of the DPD; in line with HRA of the Shared Strategic Section 1 Plan.

The following have been considered most likely to cause a Likely Significant Effect:

- Habitat loss and fragmentation / land take by development;
- Loss of functionally linked land (land outside the SPAs and Ramsar sites);
- Increase of any type of disturbance;
- Changes in water availability, or water quality;
- Changes in atmospheric pollution levels.

The following Habitats sites have been screened in as it has been identified that they may be affected by impacts relating to the Tendring Colchester Borders Garden Community Development Plan Document – Submission Version Plan.

- Colne Estuary SPA
- Colne Estuary Ramsar site
- Essex Estuaries SAC
- Stour and Orwell Estuaries SPA
- Stour and Orwell Estuaries Ramsar site
- Blackwater Estuary SPA
- Blackwater Estuary Ramsar site
- Dengie SPA
- Dengie Ramsar site
- Hamford Water SPA

- Hamford Water Ramsar site
- Hamford Water SAC

The Screening of Likely Significant Effects stage of the DPD Submission Version Plan has been included in Chapter 3 of this report, with the complete list of policies screened in for further assessment set out within 'Appendix 1. HRA Screening Policies'. This includes seven policies proceeding to Appropriate Assessment stage.

The Appropriate Assessment stage of the DPD Submission Version Plan is set out in Chapter 4 of this report. This concludes that mitigation has been adequately embedded into the Part 1 Plan. Therefore, an Adverse Effect on site Integrity upon the above Habitats sites has been ruled out and no further recommendations have been proposed (see Appendix 3).

1. Introduction

1.1 The Purpose of This Report

1.1.1 This report is to provide a Habitats Regulations Assessment (HRA) for the Tendring Colchester Borders (TCB) Garden Community: Development Plan Document (DPD) Submission Version Plan in accordance with Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended).

1.1.2 The Conservation of Habitats and Species Regulations 2017 (as amended) require the competent authorities (in this instance Colchester City Council and Tendring District Council) to undertake a HRA before making a decision about permission for any plan or project that may result in an adverse effect on the integrity of a European Site[1] as defined in the National Planning Policy Framework (NPPF, 2021).

1.1.3 In line with the Court judgement (CJEU People Over Wind v Coillte Teoranta C- 323/17), mitigation measures cannot be taken into account when carrying out a HRA Screening assessment to decide whether a plan or project is likely to result in significant effects on a Habitats (Natura 2000) Site. As the TCB Garden Community DPD Submission Version Plan contains land within the Zone of Influence (ZOI) for a number of Habitats sites, it is not possible to rule out Likely Significant Effects, without mitigation in place.

1.1.4 The Court judgement (CJEU Holohan C- 461/17) now imposes more detailed requirements on the competent authority at Appropriate Assessment stage:

> […] 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.
>
> […] 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

[1] Habitats site: Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 (as amended) for the purpose of those regulations and those listed in paragraph 181 of the NPPF (2021). This includes potential Special Protection Areas and possible Special Areas of Conservation; listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on Habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the site.

[…] 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.

1.1.5 This report therefore provides an updated (plan level) Stage 1 HRA Screening and Stage 2 Appropriate Assessment as required by Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

1.1.5 The Conservation of Habitats and Species Regulations 2017 (as amended) are commonly known as the 'Habitats Regulations'. Requirements are set out within Regulations 63 and 64 of the Habitats Regulations, where a series of steps and tests are followed for plans or projects that could potentially affect Habitats sites. The steps and tests set out within Regulations 63 and 64 are commonly referred to as the 'Habitats Regulations Assessment' process. The Government has produced core guidance for competent authorities and developers to assist with the HRA process. This can be found on the Defra website[2].

1.1.6 It demonstrates how the Plan or Project is compatible with UK obligations, which includes the need to undertake a HRA and forms a plan level HRA as required by Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

1.1.7 Plans and projects should only be permitted when it has been proven that there will be no adverse effects on the integrity of Habitats sites. The legal process can allow projects that may result in negative impacts on the integrity of a site if the competent authority is satisfied that, there are no alternative solutions, the plan or project must be carried out for Imperative Reasons of Overriding Public Interest (IROPI) (Regulation 64). However, this will require suitable compensation to ensure that the overall coherence of the series of such sites is retained.

1.1.8 The HRA should be undertaken by the 'competent authorities' - in this case Colchester City Council and Tendring District Council - and Place Services has been commissioned to complete this on behalf of the Councils. The HRA also requires close working with Natural England as the statutory nature conservation body.

1.1.9 This HRA report aims to:

- Consider the elements of the Plan screened in as having potential for Likely Significant Effect (LSE) for further assessment of their potential to result in adverse effects on the integrity of the Habitats sites.

[2] http://www.defra.gov.uk/habitats-review/implementation/process-guidance/guidance/sites/

- Assess the potential for effects from the Plan alone
- Assess the potential for in-combination effects from other projects and plans in the area.
- Identify if there are any outstanding issues that need further investigation.

1.1.10 It is not considered that there are any significant limitations to this HRA.

2.2 Overview of the Tendring Colchester Borders Garden Community

1.2.1 The Garden Community will be on a large area of land east of Colchester, bordering Tendring District and adjacent to the University of Essex. It is intended to meet the needs of a growing population within Tendring District Council and Colchester City Council over the next 30 to 40 years, for housing, employment and associated community facilities and infrastructure.

1.2.2 The Development Plan Document sets out the detail of a new Garden Community proposed for land crossing the Tendring and Colchester border, which is being prepared by Tendring District Council and Colchester City Council, in partnership with Essex County Council.

2.3 Habitats (European) Sites

1.3.1 Habitats sites is the term used in the NPPF (2021) to describe the network of sites of designated for the purpose of nature protection under European legislation. The aim of the network is to assure the long-term survival of Europe's most valuable and threatened species and Habitats. The sites are designated under the European Union (EU) Birds Directive (Council Directive 79/409/EEC on the Conservation of Wild Birds) and the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora), and the Conservation of Habitats and Species Regulations 2017 (as amended).

1.3.2 The Birds Directive requires the establishment of Special Protection Areas (SPAs). The Habitats Directive similarly requires Special Areas of Conservation (SACs) to be designated for other species, and for Habitats. Sites identified under the terms of the 1971 Ramsar Convention on Wetlands of International Importance (Ramsar sites) are also part of the Habitats (Sites) network. This is because all SPAs and SACs are comprised of Sites of Special Scientific Interest (SSSIs) and all Ramsar sites in England are SSSIs. Together, SPAs, SACs and Ramsar sites make up the Habitats sites in England and have been embedded into UK law via the Conservation of Habitats and Species Regulations 2017 (as amended). The following offers a description and explanation of SPAs, SACs and Ramsar sites.

1.3.3 The following table (Table 1) offers a description and explanation of SPAs, SACs and Ramsar sites.

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

Special Protection Areas (SPAs)
SPAs are areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within EU countries. Example: Stour and Orwell Estuaries SPA. straddle the eastern part of the Essex/Suffolk border and include extensive mudflats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches *Legislation: Conservation of Habitats and Species Regulations 2017 (as amended)*
Special Areas of Conservation (SACs)
SACs are areas designated to protect habitat types that are in danger of disappearance, have a small natural range, or are highly characteristic of the region; and to protect species that are endangered, vulnerable, rare, or endemic. Example: Essex Coast SAC. undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks, with rare flora and fauna. *Legislation: Conservation of Habitats and Species Regulations 2017 (as amended)*
Ramsar Sites (Wetlands of International Importance)
Ramsar Sites are designated to protect the biological and physical features of wetlands, especially for waterfowl Habitats. For example, Stour and Orwell Estuaries Ramsar site is important due to the extent and diversity of saltmarsh which supports 7 species of nationally scare plants. Ramsar sites often overlap with SACs and SPAs and UK planning policy determines that they should be accorded the same importance when developments are proposed. *Legislation: Ramsar Convention (1971) – Wetlands of International Importance.*

2. Method and Approach

2.1.1 HRAs are a statutory requirement and should be undertaken by the competent authority to ensure that plans and projects comply with the Conservation of Habitats and Species Regulations 2017 (as amended).

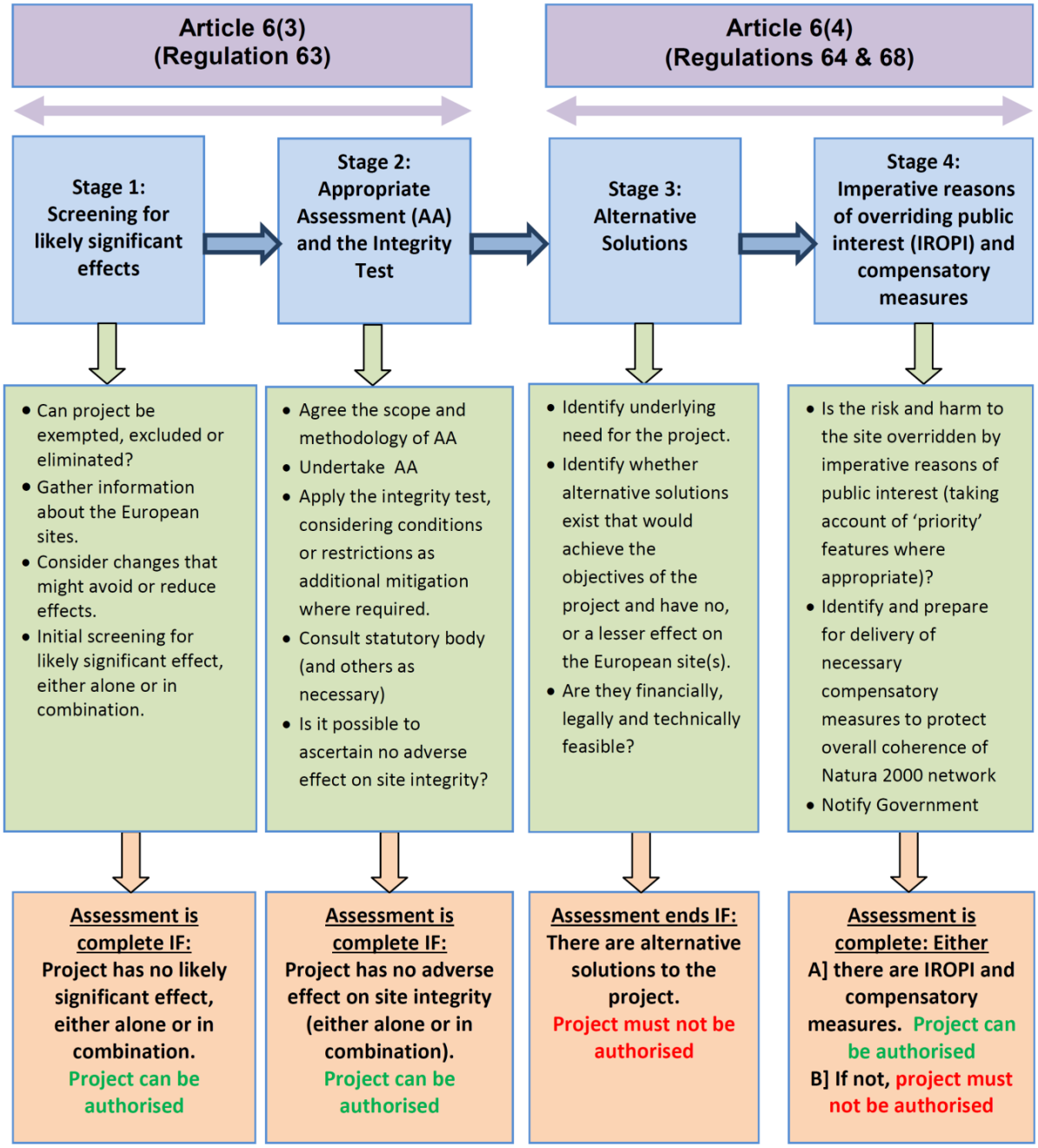
2.1.2 HRA is the process by which the requirements of the Conservation of Habitats and Species Regulations 2017 (as amended) are implemented and ensures that plans or projects will not adversely affect Habitats sites.

2.1.3 The legal process does not require a fixed method, but case law has shaped the way it should be undertaken. The HRA is a sequential process and it is generally divided into four stages, which are set out below in Table 2. Each of the stages contains a number of sequential steps, comprising the tests or procedures required by the Habitats Directive. This report addresses Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended). which covers the first stage, *i.e.* HRA Screening.

2.1.4 Figure 1 below shows the recommended approach taken in the DTA Publications Handbook[3]. This has been used in the approach of this HRA, as shown in Table 2.

[3] The DTA Publications Handbook can be found at www.dtapublications.co.uk

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



Extract from *The Habitats Regulations Assessment Handbook*, www.dtapublications.co.uk
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2.1.5 Plans should not contain proposals that would be vulnerable to failure under the Habitats Regulations at project assessment stage, as this would be regarded as 'faulty planning'.

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

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

2.1.8 A risk-based approach involving the application of the precautionary principle has been used in the assessment. A conclusion of 'no significant effect' was only reached where it was considered very unlikely, based on current knowledge and the information available, that a proposal in the DPD would have a significant effect on the integrity of a Habitats site.

2.1.9 Key advice guidance and information has also come from the following sources:

- DTA Publications Handbook: **https://www.dtapublications.co.uk/**
- Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) Strategy
- HRAs of neighbouring authorities Local Plans
- Extensive experience of producing other HRAs
- Government information regarding Habitats sites and their 'zones of influence' or 'Impact Risk Zone', *e.g.* www.magic.gov.uk

2.1 Assessment of Likely Significant Effects

2.1.10 The screening stage identifies whether the DPD Submission Version Plan may result in a Likely Significant Effect to any Habitats site, alone or in combination with other plans or projects. The screening process should identify all aspects of the DPD that are:

- Exempt from assessment
- Excluded from assessment
- Eliminated from further assessment
- Judged to have no Likely Significant Effects, alone or in combination with other plans or projects and can therefore be screened out
- Screened in as it is not possible to rule out Likely Significant Effects.

2.1.11 In line with the 2018 Court judgment (CJEU People Over Wind v Coillte Teoranta C-323/17) mitigation measures cannot be taken into account when carrying out a screening assessment. Consequently, any aspect of the Development Plan Document Submission Version Plan which cannot be ruled out as having Likely Significant Effects should continue to Stage 2 Appropriate Assessment.

2.1.12 Habitats sites that have been included for assessment are those which are within the ZOI for the underpinning Site of Special Scientific Interest (SSSIs) as identified on MAGIC www.magic.gov.uk.

2.1.13 It has been established that this Plan requires an HRA for the following reasons:

- Can the plan be exempt? - No, the Development Plan is not directly connected with or necessary to management of any Habitats sites.
- Can the plan be excluded? - No, the Development Plan cannot be excluded as it falls within the definition of being a plan within the Habitats Regulations.
- Can the plan be eliminated? - No, the Development Plan as a whole cannot be eliminated as it proposes a number of policies which may have a Likely Significant Effect on one or more Habitats site. However, individual polices can be eliminated.

2.2 Identifying Habitats sites, their Conservation Objectives and Qualifying Features

2.2.1 The qualifying features and conservation objectives of the Habitats sites, together with current pressures on and potential threats, was drawn from the Standard Data Forms for SACs and SPAs and the Information Sheets for Ramsar Wetlands as well as Natural England's Site Improvement Plans (SIP) and the most recent conservation objectives. An understanding of the designated features of each Habitats site and the factors contributing to its integrity has informed the assessment of the potential Likely Significant Effects of the Development Plan Document.

2.2.2 Key sources of the Habitats sites information were found at:

- JNCC: http://jncc.defra.gov.uk/
- Site Designation features and Conservation Objectives- Designated Sites View: https://designatedsites.naturalengland.org.uk/
- Site Improvement Plans, *e.g.*: http://publications.naturalengland.org.uk/publication/6270737467834368
- MAGIC (the Multi Agency Geographic Information website): www.magic.gov.uk
- "Managing Natura 2000 sites- The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC"http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_._nov_2018_endocx.pdf

2.2.3 The list of Habitats sites, their qualifying features and conservation objectives can be found in Appendix 3 including web links to further information.

2.2.4 The list of key vulnerabilities / factors affecting site integrity can be found in Appendix 4, including links to further information.

2.2.5 A distance of 20km was used to identify Habitats sites likely to be affected by impacts relating to Tendring Colchester Borders Garden Community: Development Plan Document. There are 14 Habitats sites which lie within 20 km of the Tendring Colchester Borders Garden Community site boundary. However, the SSSI Impact Risk Zones (IRZ) can be reviewed on Magic.defra.gov.uk, which help identify whether a development is likely to impact upon a SSSI, which also underpin a Habitats site. Zones of Influence (ZOI) should also be reviewed, as listed on Magic.defra.gov.uk, as residential applications within a Habitats site's ZOIs will likely result in adverse effects to site integrity. In addition, impact pathways must be reviewed within the scoping assessment, irrespective of whether the plan area is within an IRZ of a Habitats site or ZOI of underpinning SSSI.

2.2.6 The Habitats sites within 20km have been scoped out from further assessment if IRZs of the underpinning SSSIs of the Habitats sites do not fall within the district boundaries, or if Habitats sites ZOI do not fall within the district boundaries, unless there is a direct impact pathway which could potentially result in a Likely Significant Effect. The sites scoped in and out are shown in Table 2.

Table 2. Habitats sites within 20 km of the Tendring Colchester Borders Garden Community

Site	Location	Scoped in or out
Abberton Reservoir Ramsar Site	Reservoir in Essex located to the south of Colchester	**Scoped in** The TCB Garden Community site boundary falls outside of the IRZ of these Habitats sites. However, the HRA for the Section 1 Plan concluded that Likely Significant Effects from loss of offsite functional land for qualifying features could not be ruled out.
Blackwater Estuary SPA & Ramsar site	Estuary in Essex located from Maldon to Mersea Island	**Scoped in** The TCB Garden Community site boundary falls within the IRZ as identified on MAGIC. The HRA for the Section 1 Plan concluded that Likely Significant Effects from loss of functionally linked land and recreational disturbance could not be ruled out. Therefore, Likely Significant Effects from the development plan must be considered for these Habitats sites.

Site	Location	Scoped in or out
Colne Estuary SPA & Ramsar site	Estuary located in north Essex, situated from Colchester to East Mersea.	**Scoped in** The TCB Garden Community site boundary falls within the IRZ as identified on MAGIC. The HRA for the Section 1 Plan concluded that Likely Significant Effects from water quality, loss of functionally linked land and recreational disturbance could not be ruled out. Therefore, Likely Significant Effects from the development plan for water quality, loss of functionally linked land for qualifying features must be considered for these Habitats sites.
Dengie SPA & Ramsar site	A coastal peninsula located between the Blackwater Estuary and the Crouch and Roach Estuary	**Scoped in** The TCB Garden Community site boundary falls within the IRZ as identified on MAGIC. Although the HRA for the Section 1 Plan ruled out any Likely Significant Effects on Dengie SPA and Ramsar in relation to recreational pressures due to distance, the site lies within the overall ZOI for the Essex Coast RAMS. Therefore, Likely Significant Effects from the development plan must be considered for these Habitats sites for recreational disturbance
Essex Estuaries SAC	Estuaries from Clacton on Sea to Southend	**Scoped in** The TCB Garden Community site boundary falls within the IRZ as identified on MAGIC. The HRA for the Section 1 Plan concluded that Likely Significant Effects from water quality recreational disturbance could not be ruled out Therefore, Likely Significant Effects from the development plan must be considered for these Habitats sites.
Hamford Water SAC, SPA & Ramsar site	Estuary situated to the north-east of Essex.	**Scoped In** TCB Garden Community site boundary falls outside of the IRZ as identified on MAGIC. The HRA for the Section 1 Plan concluded that Likely Significant Effects from loss of functionally linked land and recreational disturbance as the site lies within the overall ZOI for the Essex Coast RAMS could not be ruled out for Hamford Water SPA and Ramsar. No LSE was predicted for Hamford Water SAC. Therefore, Likely Significant Effects from the development plan must be considered for Hamford Water SPA and Ramsar only.
Stour & Orwell Estuaries SPA & Ramsar site	Two estuaries to the south of Suffolk. The Orwell Estuary is located from Ipswich to Shotley. The Stour Estuary is located	**Scoped in** This Habitats site falls partly within Tendring District and the Garden Community is within the IRZ of the underpinning SSSIs, as well as the ZOI of the Habitats sites. In addition, there is atmospheric impact pathways, as well potential impacts which would result in disturbance

Site	Location	Scoped in or out
	from Manningtree to Shotley	and loss of functionally linked land. Therefore, Likely Significant Effects from the development plan must be considered for these Habitats sites.
Outer Thames Estuary SPA (Marine)	Covers most marine areas near to Essex coast	**Scoped out** There is an impact pathway from the Colne Estuary to this Habitat site. However, the Habitat site is considered to be located a sufficient distance away from the Garden Community and the proposals are unlikely to impact upon the qualifying features (Red-throated diver (Non-breeding), Common tern (Breeding) and Little tern (Breeding)) of the SPA, with the only vulnerabilities / factors affecting site integrity relating to commercial fishing practices.

2.2.7 A map of all 15 Habitats sites with the 20 km radius of the Tendring Colchester Borders Garden Community can be found in Appendix 4.

2.3 Screening and Impact Pathways

2.3.1 2.3.1 During the Screening stage each policy has been screened for Likely Significant Effects. Where it is not possible to rule out Likely Significant Effects we have moved straight to Appropriate Assessment.

2.3.2 There are a wide range of potential impacts and the following impacts summarised below, were considered most likely to cause a Likely Significant Effects:

- Loss of functionally linked land (land outside the SPA and Ramsar site). Impact on site features (species) that travel outside the protected sites may be relevant where development could result in , for example, the loss of feeding grounds for an identified species
- Increase of any type of disturbance, for example from recreational use resulting from new housing development and / or improved access due to transport infrastructure projects
- Changes in water quality as a result of new development and greater pressure on water treatment services
- Changes in water quantity as a result of increased surface runoff or increased groundwater extraction

- Changes in atmospheric pollution levels due to increased traffic, waste management facilities etc. Pollution discharges from developments such as industrial developments, quarries and waste management facilities

2.3.3 The ZOIs and IRZ for the underpinning SSSIs, which are provided on the MAGIC website **www.magic.gov.uk,** have been used as a starting point in determining Likely Significant Effect on Habitats sites and spatial data has been used to determine the proximity of potential development locations to the Habitats sites. There are many uncertainties associated with using trigger distances as there are very few standards available as a guide to how far impacts will travel. Therefore, during the screening stage a number of assumptions based on professional judgement have been applied in relation to assessing impact pathways which may cause a Likely Significant Effects on Habitats sites as a result from the DPD Submission Version Plan, as described below.

Loss of Functionally Linked Land (Land outside the SPA and Ramsar Site)

2.3.4 Loss of land may have the potential to result in Likely Significant Effects to Habitats sites where the habitat affected contributes towards maintaining the interest feature for which the Habitats site is designated.

2.3.5 Mobile interest features listed in the relevant Habitats sites - *i.e.* the birds - may use off-site habitat (*i.e.* land outside of the SPA and Ramsar site boundary) for feeding, roosting, foraging and loafing, especially large fields comprising arable and pastoral land uses and coastal habitats.

2.3.6 The Shared Section 1 Local Plan requires wintering bird surveys to ascertain if the TCB Garden Community site provides any functionally linked land to any Habitats site within scope. The HRA of the Section 1 Local Plan recommended this mitigation measure on a precautionary basis. Accordingly, wintering bird surveys have been undertaken alongside the HRA of the DPD Submission Version Plan.

Wintering Bird Survey Results

Methods

2.3.7 The survey methodology included daytime surveys, which involved a walkover of the parts of the survey area (and some adjoining fields) considered suitable to support species associated with the Habitats sites, as assessed during the October 2021 survey. Each field was observed from different viewpoints with binoculars. During each survey, the numbers and locations of all key species were recorded on field maps, with notes about their behaviour – feeding, roosting, bathing, etc. Key species are defined as:

- Species identified as Qualifying Features for the Habitats sites scoped in

- Other waterbirds that could contribute to an assemblage of international significance on the Habitats sites scoped in (includes non-native species)

2.3.8 In addition, nocturnal surveys were carried out in December 2021, and January and February 2022 covering those parts of the survey area to the south of the A133 where Features of Interest had been recorded during the daytime surveys, together with a number of other fields to the north of the A133. These surveys involved fixed point observation with a Pulsar Helion2 XP50 Pro thermal imaging camera. In December and January, surveys were carried out in the evening after dusk and in the morning pre-dawn and in February an evening survey was completed. Numbers and, where possible, species of birds were recorded

Results – Daytime surveys

Table 2. Illustrates the numbers of key bird species recorded on each of the daytime survey visits.

Survey date	**18/10/2021**	**15/11/2021**	**13/12/2021**	**10/01/2022**	**14/02/2022**
Species					
Barnacle Goose		2	2		
Black-headed Gull	3	305	405	299	277
Canada Goose		19			
Chaffinch		40	35	22	16
Common Gull		3		1	10
Coot	8	16	21	66	35
Cormorant			1	1	
Curlew		4	10	4	
Egyptian Goose	2			8	
Gadwall			2	12	
Golden Plover			1		
Great Crested Grebe		1	1		
Green Sandpiper		1			
Greylag Goose		218	299		50
Herring Gull			1		
Kestrel	1		2	1	1
Lapwing		3			
Little Grebe	7	6	1		
Mallard	43	94	43	82	25
Moorhen			9	6	3
Mute Swan	2	3	2	1	3
Pochard				*1*	
Shoveler		5			
Tufted Duck	15	18	25	63	31

White-fronted Goose		1	1		
Wigeon		6	75	119	132
Yellowhammer	2	1	2	1	2

**Species names in bold type are those identified as Features of Interest for one of the scoped in Habitats Sites*

Results – Nocturnal surveys

2.3.9 On 23rd December 2021, a flock of 60 plovers was observed on a field to the south of the A133 at 6.30pm. Some individuals were feeding, but the majority appeared to be roosting. Specific identification wasn't possible due to the limitations of the equipment and the distance of the observation, which was necessary to avoid disturbance. A return visit at 6.30am on the morning of 24th December 2021 revealed a group of eight Lapwing leaving the same field, identified by their flight pattern. No other plovers remained in the field as it became light.

2.3.10 On 17th January 2022, no plovers were located before dawn 5.30-6.00am, but at 7.30pm, after dark, six plovers were observed roosting in the same field to the south of the A133. It was noted that the ground was frozen at first light, and a frost was already forming during the evening survey. Other fields visible form the public highway to the north of the A133 were also surveyed, but no other plovers were located.

2.3.11 On 14th February 2022, no plovers were seen within the survey area after 7.30pm, the survey including all fields to the south of the A133 and a sample of fields to the north. It was noted that the height of winter wheat by this time may have affected the suitability of the fields for foraging plovers.

Summary of Results

2.3.12 The summary of results for Qualifying Features of the Habitats sites within scope is shown below:

- Curlew; the latest five-year averages for the Colne and Stour Estuaries are below the level of national importance. The presence of birds feeding in the same location in three consecutive months is of interest and there seems a clear link to the Colne Estuary population, but the numbers are very low (max. 10) and the habitat in which they have been recorded is unremarkable. This is less than the threshold of significance (*i.e*. >1% of the associated Habitats site) so the TCB Garden Community site is not considered to act as functionally linked land for Curlew population of any Habitats site within scope of this assessment.

- Gadwall; the latest five-year average for the Stour Estuary is below the level of national importance. The small number present (max. 12) is of no significance, with no obvious link to the population in the Stour Estuary. The TCB Garden Community site is therefore not considered to act as functionally linked land for Gadwall of any Habitats site within scope of this assessment.

- Golden Plover; although there is likely to be a clear link to the population present on the Colne Estuary at the time, only one bird was recorded on one survey visit. The available habitat is unremarkable and widespread in the area. Golden Plover is specifically listed in the HRA for the Section 1 Plan for assessment of cumulative impacts which could adversely affect the integrity of the SPA/Ramsar sites. However, a single bird is less than the threshold of significance (*i.e.* >1% of the associated Habitats site) so the TCB Garden Community site is not considered to act as functionally linked land for Golden Plover population of any Habitats site within scope of this assessment.

- Great Crested Grebe; the latest five-year average for the Stour Estuary is below the level of national importance. The single bird present is likely to be resident on the lake and so not linked to the Stour Estuary wintering population. The TCB Garden Community site is therefore not considered to act as functionally linked land for Great Crested Grebe population of any Habitats site within scope of this assessment.

- Lapwing; the latest five-year averages for the Colne and Stour Estuaries are below the level of national importance. The birds present, including a flock of 60 during the nocturnal survey in December, are likely to be associated with the population on the Colne Estuary, but are most likely from the Upper Colne Marshes SSSI at Hythe Lagoons, which is outside of the SPA boundary. The habitat on which they were feeding is unremarkable and widespread in the area. This flock represent 4.5% of the five-year average peak count for the Colne Estuary SPA, which is more than the threshold of significance for this Habitats site (*i.e*., >1% of the associated Habitats sites). Lapwing is a qualifying feature of the Colne Estuary SPA and the species is specifically listed in the HRA for the Section 1 Plan for assessment of cumulative impacts which could adversely affect the integrity of the SPA and Ramsar site.

- Mute Swan; the latest five-year average for the Stour Estuary is below the level of national importance. The birds present are likely to be resident and so not associated with the estuary. The TCB Garden Community site is therefore not considered to act as functionally linked land for Mute Swan of any Habitats site within scope of this assessment.

- Wigeon; the latest five-year averages for the Colne and Stour Estuaries are below the level of national importance. The number present on the Allens Farm lake in December are not inconsequential, amounting to 5% of the latest five-year average for the Colne Estuary. There is clear potential for these birds to be linked to the Colne Estuary population, although it is likely that they remain in this location unless there is a significant period of freezing weather, in which case the lake and its adjacent field of winter wheat would be unusable. Nevertheless, Wigeon is not listed as a qualifying feature of the Colne Estuary SPA and Ramsar site and would be covered under the overall Waterbird assemblage for this designated site. The

species is listed as a qualifying feature of the Stour and Orwell Estuaries SPA, but it is considered highly unlikely that the Wigeon populations are associated with this designated site due to the distance to the Habitats site and the associated geography between the Allen's Farm lake and the Colne Estuary. Therefore, the TCB Garden Community site is t not considered to act as functionally linked land for any Habitats site within scope of this assessment.

- Waterbird assemblage; The peak count for overall waterbird assemblage was an average of 742, with a peak count of 1162 birds recorded in November. The average waterbirds present represents 2.9% of the total waterbird assemblage recorded at the Colne Estuary SPA & Ramsar site (25,603 individuals, 5-year peak mean - 2013/14 - 2017/2018) (BTO, 2018) or 1.55% of the total waterbird assemblage recorded at the Stour and Orwell Estuaries SPA and Ramsar (47,966 individuals, 5-year peak mean 2010/11 – 2014/15) (Frost et al., 2017). This is more than the threshold of significance for both Habitats Sites (*i.e*., >1% of the associated Habitats sites), albeit the majority of the birds are considered associated with the Colne Estuary SPA & Ramsar site due to the distance of the Stour and Orwell Estuaries and geography of the Garden Community to the Colne Estuary. As a result, it is considered highly unlikely that there is a significant waterbird assemblage associated with the Stour and Orwell Estuary SPA and Ramsar site at the proposed garden community area. Furthermore, the majority of the waterbird assemblage recorded as part of the wintering bird surveys was recorded at Allen's Farm Lake. This habitat will be retained as part of future works associated with the TCB Garden Community DPD Submission Version Plan, so it is unlikely that the proposals will affect the overall waterbird assemblage associated with the Colne Estuary SPA & Ramsar site.

2.3.13 In line with the HRA of the Section 1 Plan, the requirement for wintering bird surveys for master planning relates to the site's individual importance for Golden Plover and Lapwing to inform mitigation proposals. Based on the results of the wintering bird surveys undertaken, the loss of functionally linked land is considered within the scope of the HRA screening, with specific consideration for Lapwing which contained a significant population of the species present.

2.3.14 The HRA of the Section 1 Plan considered the Tendring Colchester Borders Garden Community site and larger housing allocations on the edge of Clacton-on-Sea were identified as providing suitable offsite foraging habitat for Golden Plover and Lapwing in the form of arable fields and short grazed pasture. The potential for the loss of offsite habitat to adversely affect these species related primarily to the cumulative effect of reducing the extent of feeding areas. The likelihood of this occurring was considered low given the quality of the habitat affected and the small amount of habitat affected as a proportion of that available around each of the Habitats sites.

2.3.15 Given the dependency of these species on offsite arable fields and grasslands, inclusion and a commitment to implementation of appropriate safeguards and mitigation, as well as phasing of the Tendring Colchester Borders Garden Community has been included in the Shared Strategic Part 1 for Local Plans. This is necessary to provide certainty that there will be no adverse effect on the integrity of the Stour and Orwell SPA/Ramsar, Hamford Water SPA/Ramsar, Colne Estuary SPA/Ramsar, Blackwater Estuary SPA/Ramsar, and Abberton Reservoir SPA/Ramsar. Wintering bird surveys and a commitment to mitigation and phasing of the Tendring Colchester Borders Garden Community was considered precautionary, appropriate and effective.

2.3.16 Given its size, the Tendring Colchester Borders Garden Community development is likely to be capable of mitigating for its own impact on-site if necessary, and therefore these measures were recommended to provide certainty that the cumulative effect of habitat loss would not result in significant adverse effects. In the unlikely, but possible event, that cumulative numbers of individual SPA birds affected are likely to exceed thresholds of significance (i.e., >1% of the associated Habitats site), appropriate mitigation in the form of habitat creation and management in perpetuity, either on-site or through provision of strategic sites for these species elsewhere, will be required. If required, mitigation will need to create and manage suitably located habitat which maximises feeding productivity for these SPA species, and such mitigatory habitat would need to be provided and fully functional prior to development which would affect significant numbers of SPA birds.

2.3.17 As a result, the loss of functionally linked land as a result of housing and employment development within the North Essex Authorities is on the scope of HRA screening, due to the potential impacts upon the qualifying SPA/Ramsar bird species from the loss of foraging habitat outside of the relevant Habitats sites.

Water Quality

2.3.18 An important determinant of the nature of wetland, river or estuarine Habitats sites and the species that they support is the quality of the water that feeds them. Poor water quality can have a range of environmental impacts.

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

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

accompanies eutrophication deoxygenates water further, increasing the oxygen-depleting effects of eutrophication.

2.3.21 Sewage discharges contribute to increased nutrients levels in Habitats sites, particularly to phosphate levels in watercourses leading into them. Some components of sewage effluent, pesticides, and industrial chemicals, are suspected to interfere with hormones, possibly having negative effects on the reproduction and development of aquatic life. Diffuse pollution, including that from urban run-off, is considered to be a major factor in the unfavourable condition of some Habitats sites. Tidal mudflats, on which many SPA bird species depend, are vulnerable to smothering by increased macroalgal growth due to treated effluent discharge and scouring by increased flow volumes.

2.3.22 Furthermore, greater pressure on water treatment services due to new development, especially housing, may increase the risk of effluent entering aquatic environments. This is because the proposal of large numbers of new homes in certain locations may result in the capacity of existing available infrastructure being exceeded, a situation that could potentially cause service failures to water and wastewater customers.

2.3.23 The North Essex Garden Communities Integrated Water Management Strategy (Stage 1) has identified that the growth for TCB Garden Community would be best served by the Colchester Wastewater Recycling Centre (WRC) due to capacity and proximity of the WRC to the proposed site boundary. This would require approximately 5.2 km of new pipeline and a new pumping station, with pipeline route crossing the River Colne and the A133 dual carriage road, as well as the B1028, the B1027 and a number of minor roads. Alternatively, it was proposed that the TCB Garden Community could be served by the construction of a new WRC, but this may be attributed to high costs and further investigations to determine a suitable location.

2.3.24 The Colchester WRC is managed by Anglian Water and the Anglian Water Services Draft Drainage and Wastewater Management Plan (DWMP)[4] for the period of 25 years (2025 – 2050) outlines that no upgrades will be required to cope with the capacity of the garden community for this period, with consideration of the site allocations outlined in Colchester City and Tendring District Council's Section 2 Plans. However, the Draft Water Recycle Management Plan (WRMP)[5] does outline that investments will be required between 2020 – 2045 to balance the supply and demand for water recycling services. As a result, investment to increase drainage capacity through SuDS and upsizing, investigation of Combined Sewer Overflows (CSO) and providing additional WRC flow capacity will be required to ensure that sufficient infrastructure is provided to cope with the garden community and to minimise the occurrence of storm overflow events.

[4] https://www.anglianwater.co.uk/siteassets/household/about-us/dwmp-draft.pdf

[5] https://www.anglianwater.co.uk/siteassets/household/about-us/wrmp/draft-wrmp24-main-report.pdf

2.3.25 The TCB Garden Community Integrated Water Management Strategy Phase 2 Main Report has provided an independent assessment of the Colchester WRC headroom capacity. This outlines that the Colchester WRC existing permitted headroom is sufficient to accommodate the growth proposed in the Local Plan up to 2033 and the proposed TCB Garden Community growth up to 2033. However, once the TCB Garden Community growth beyond 2033 has been applied to the WRC, the WRC does not have sufficient headroom to receive the growth and would exceed its maximum permitted Dry Weather Flow under its existing discharge permit. As a result, an application for a new or revised discharge permit from the Environment Agency is expected to be required by Anglian Water to serve the TCB Garden Community growth.

2.3.26 The Tendring Colchester Borders Garden Community Integrated Water Management Strategy Phase 2 Main Report has also carried out a water quality assessment to determine whether theoretically achievable quality conditions can be applied to a revised discharge permit. This confirmed that Water Framework Development Status of the River Colne will not deteriorate as a result of the TCB Garden Community with current conventional treatment technology, with no increases of ammonia and Biochemical Oxygen Demand (BOD). As a result, it is predicted that an application for a new or revised discharge permit from the Environment Agency will not result in impacts upon the Colne Estuary SPA and Ramsar site or the Essex Estuaries SAC.

2.3.27 However, as SUDs, investigations of CSO and additional WRC flow capacity will be required to cope with the new TCB Garden Community. There is a possibility that likely significant effect upon the Colne Estuary SPA and Ramsar site or the Essex Estuaries SAC will be caused without mitigation embedded at application stage. As a result, impacts from adverse water quality upon these Habitats sites is therefore within scope of the HRA screening.

Water Quantity

Surface Water Flooding

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

2.3.29 Magic.gov.uk indicates that the TCB Garden Community is within the 5km IRZ for high levels water discharge for the for the Colne Estuary SPA and Ramsar site and Essex Estuaries SAC. This includes consideration of any discharge of water or liquid waste of more than 5m³/day to ground (*i.e.* to seep away) or to surface water. Therefore, impacts from Surface Water Flooding will be required to be determined upon the Habitats sites.

2.3.30 Change in water quantity related to surface water flooding is therefore within scope of the HRA screening.

Reduced Water Resources

2.3.31 Housing growth is likely to increase regional water abstraction rates, which can have serious negative impacts on Habitats sites. This is because over-abstraction can reduce water levels in rivers, causing reduced flow velocity. This can have wide ranging effects on river and wetland habitat parameters, including increased temperatures and nutrient concentrations and reduced oxygen concentrations. Such impacts can be significantly detrimental to rivers' floristic characteristics and to notable species.

2.3.32 Increased use of water sources by a proposal also has the potential to affect terrestrial habitats. Excessive abstraction from underlying aquifers could cause a lowering of the water table and affect the water quality of sensitive wetland habitats.

2.3.33 Reduced water resources as an impact pathway has been scoped out as no sensitive habitats are considered likely to be affected.

Air Quality

2.3.34 There are number of atmospheric pollutants which can result in direct or indirect impacts to Habitats sites. These impacts are usually caused when the qualifying features are plants, soils and wetland habitats. However, some species may also be indirectly impacted from air pollution causing changes in habitat composition. The primary contributor to atmospheric pollution is transport related activities. Therefore, the main pollutants to atmospheric pollution are considered to be oxides of nitrogen (NOx) or sulphur dioxide (SO2) from traffic emissions. However, high intensities of agricultural practices are also considered to have a significant impact to air pollution. Potential impacts from pollutants and their sources have been highlighted within Table 4.

Table 4: Main sources and effects of air pollutants on Habitats sites

Pollutants	Source	Effects on habitats and species
Acid Deposition	SO_2, NO_x and ammonia all contribute to acid deposition. Although future trends in sulphur emissions and subsequent deposition to terrestrial and aquatic ecosystems will continue to decline, it is likely that increased nitrogen emissions may cancel out any gains produced by reduced sulphur levels	Can affect habitats and species from acid rain, as well as dry deposition. Some habitats will be more susceptible depending on soil type, geology, weathering rate and buffering capacity.

Pollutants	Source	Effects on habitats and species
Ammonia (NH_3)	Ammonia is released following decomposition and volition of animal wastes. It is naturally occurring trace gas, but levels have increased considerably within increased agricultural practices (primarily pig or poultry farming). Ammonia reacts with acid pollutants such as the products of SO_2 and NO_x emissions to produce fine ammonium (NH_4) containing aerosol which may be transferred much longer distances (Can therefore be a significant trans-boundary issue).	Adverse effects are as a result of nitrogen deposition leading to eutrophication. As emissions mostly occur at ground level in the rural environment and NH_3 is rapidly deposited, some of the most acute problems of NH_3 are for small relict nature reserves located near to intensive agricultural landscapes.
Nitrogen oxides (NO_x)	Nitrogen oxides are mostly primarily produced in combustion processes, such as coal fire power stations.	Deposition of nitrogen compounds (nitrates, nitrogen dioxide and nitrous oxide), can lead to both soil and freshwater acidification. In addition, nitrogen compounds can cause eutrophication of soils and water. This alters the species composition of plant communities and can eliminate sensitive species.
Nitrogen deposition (N)	The pollutants that contribute to nitrogen deposition are derived mainly from NO_x and NH_3 emissions. These pollutants cause acidification (see also acid deposition) as well as eutrophication.	Species-rich plant communities with relatively high proportions of slow growing perennial species and bryophytes are most at risk from nitrogen eutrophication, due to its promotion of competitive and invasive species which can respond readily to elevated levels of N. N disposition can also increase the risk of damage from abiotic factors *e.g.* drought and frost.
Ozone (O_3)	A secondary pollutant generated by photochemical reactions from NO_x and volatile organic compounds. These are mainly released by the combustion of fossil fuels in the UK has led to a large increase in background ozone concentration, leading to an increased number of days when levels across the region are above 40ppb. Reducing ozone pollution is believed to require action at international level to reduce	Concentrations of O_3 above 40 ppb can be toxic to humans and wildlife and can affect buildings. Increased ozone concentrations may lead to a reduction in growth of agricultural crops decreased forest production and altered species composition in semi-natural plant communities.

Pollutants	Source	Effects on habitats and species
	levels of the precursors that form ozone.	
Sulphur Dioxide SO_2	Main sources of sulphur dioxide emission are electricity generation, industry and domestic fuel combustion. May also arise from shipping and increased atmospheric concentrations in busy ports. Total sulphur dioxide emissions have decreased substantially in the UK since the 1980's.	Wet and dry depositions of sulphur dioxide acidify soils and freshwater, and alters the species composition of plant and associated animal communities. The significance of impacts depends on levels of deposition and the buffering capacity of soils.

2.3.35 Nitrogen deposition (*i.e*. primarily NO_x and NH_3 emissions) has been included as a key vulnerability/ factor affecting site integrity for the Site Improvement Plans for the Stour and Orwell Estuaries SPA because nitrogen deposition exceeds relevant 'critical loads' for these sites. Critical Loads are defined as: "*a quantitative estimate of exposure to one or more pollutants below which* significant *harmful effects on specified sensitive elements of the environment do not occur according to present knowledge"* [6].

2.3.36 Therefore, where nitrogen deposition exceeds relevant critical loads there is a possibility that eutrophication, acidification and changes to habitat type will be caused, which could affect qualifying features of a Habitats site. Critical loads for nitrogen deposition are in units of kilogrammes of nitrogen per hectare per year (kg N/ha/year) and vary with habitat sensitivity[7].

2.3.37 The leading cause of increased nitrogen deposition at these Habitats sites has been identified locally intensive agricultural practices, *i.e*., land spreading, outdoor pigs, high nutrient inputs on fields. This may result in protected habitats being altered, which may in turn, may impact the qualifying features (*e.g*., overwintering birds) which rely on these specific habitats.

2.3.38 In addition, the creation of new housing and infrastructure within the districts could result in increases of traffic on roads, which may result in increases in air pollution (NH and NO_x) from traffic emissions upon Habitats sites, if increases of traffic are caused within 200m

[6] Air Pollution Information System. Critical Loads and Critical Levels - a guide to the data provided in APIS. Available from http://www.apis.ac.uk/critical-loads-and-critical-levels-guide-data-provided-apis#_Toc279788052 [Accessed October 2022].
[7] IAQM (June 2019). Available from https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2019.pdf [Accessed October 2022].

as referenced within the Highways Agency Design Manual for Road and Bridges (DMRB)[8].

2.3.39 No other pollutants listed above have been identified as a factor affecting site integrity and the DPD Submission Version Plan will not relate to agricultural practices. Nevertheless, Air Quality has been scoped in for the HRA screening and a summary of the potential impacts for nearby Habitats sites has been outlined below:

Stour and Orwell Estuaries SPA:

2.3.40 Nitrogen levels exceed the relevant critical loads at the Stour and Orwell Estuaries SPA for ecosystem protection and hence there is a risk of harmful effects. However, the sensitive features are currently considered to be in favourable condition on the site. The sensitive habitat features on site include intertidal mudflats, coastal saltmarsh and vegetated shingle.

2.3.41 Although the APIS database[9] considers that mudflats are sensitive to nitrogen deposition, there are no comparable habitats with established critical load estimates available and therefore no critical loads for intertidal mudflats are listed. In addition, there is no habitat terminology which meets definition of vegetated shingle, however coastal dunes will exceed relevant critical loads at 10-20 kg N ha-1 year-1. In terms of saltmarsh, this habitat will exceed relevant critical loads if nitrogen deposition exceeds 20-30 kg N ha^{-1} $year^{-1}$. Furthermore, it is highlighted that impacts upon vegetated shingle and saltmarsh both require professional judgement to identify and will be noticeable if there is a productivity increase in late successional species and graminoids.

2.3.42 In terms of the individual qualifying features of the Stour and Orwell Estuaries SPA, the APIS database indicates that only wintering Great Crested Grebe (*Podiceps cristatus*) would be sensitive to increases in nitrogen deposition, if the relevant critical loads are exceeded for saltmarsh. However, it is uncertain how this species could be affected from increases of nitrogen deposition upon saltmarsh, as the species forages over open water during the wintering period. As a result, based on expert judgement, the only possible indirect link would be if nitrogen deposition upon saltmarsh changed fish stock levels in the estuary, which Great Crested Grebe feed upon during the winter period.

2.3.43 The APIS database indicates that the concentration and deposition values across the whole site the Stour and Orwell Estuary is 11.232 - 15.658 (kg N/ha/yr), which does not exceed the relevant critical loads upon saltmarsh. However, this data is measured from a desk study using 5km squares across the Stour and Orwell Estuary and is not specific

[8] Design Manual for Roads and Bridges (DMRB) (2019). Sustainability & Environment Appraisal LA 105 Air quality. Available at: https://www.standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90 [Accessed April 2023]

[9] APIS. Available from http://www.apis.ac.uk/ [Accessed April 2023].

enough to justify whether relevant critical loads is currently being exceeded within specific locations.

2.3.44 However, it is highlighted that the nitrogen concentration and deposition values across the whole Stour and Orwell Estuaries site exceed the relevant critical loads for coastal dune habitats and the breeding terns it supports, as outlined in the Stour and Orwell Estuaries SPA 'Key vulnerabilities / factors affecting site integrity'. Nevertheless, the location of shingle dunes is located on the southern section of the Stour within the Tendring District, Essex[10]. However, it is highlighted that breeding terns are not listed as a qualifying feature of the Stour and Orwell Estuaries SPA & Ramsar, or of the underpinning Sites of Special Scientific Interest and they are not listed within the Site Improvement Plans. As a result, no further considerations are necessary for this species as part of this Habitats Regulations Assessment.

Essex Estuaries SAC / Colne Estuary SPA:

2.3.45 Adverse air quality is not listed as a 'Key vulnerabilities / factors affecting site integrity'. However, three qualifying features of the Essex Estuaries SAC (Sandbanks which are slightly covered by sea water all the time (H1110), Mudflats and sandflats not covered by seawater at low tide (H1140)'and 'Estuaries (H1130)), which are considered fully or at least partly in unfavourable condition with no change[11]. Therefore, whilst these habitats are in unfavourable condition this is not likely due to adverse air quality, albeit there could be some level of in-combination impact from plans and projects that are relevant to the local area.

It is also highlighted that nitrogen levels do not exceed the relevant critical loads at the Essex Estuaries SAC and Colne Estuary SPA and the average nitrogen Deposition (per km^2) is lower than 10 kg N ha-1 year-1. Therefore, as stated above, there is no information on the critical loads for intertidal mudflats and saltmarsh will only exceed relevant critical loads if nitrogen deposition exceeds 20-30 kg N ha^{-1} $year^{-1}$. In terms of the Colne Estuary SPA, there are no expected negative impact on the qualifying features due to increased acidification on the species' broad habitat, based on the individual impacts of species on the APIS Database. Therefore, no additional considerations are required at a species level from nitrogen deposition.

Disturbance

2.3.46 Disturbance concerns species, rather than habitats *e.g.* wetland birds. It may be limited in time (noise, source of light etc.). The intensity, duration and frequency of repetition of

[10] The Suffolk Coast & Heaths AONB (2018). The Suffolk Coast & Heaths AONB Management Plan 2018-2023. Available from https://www.suffolkcoastandheaths.org/wp-content/uploads/2021/01/SCH-AONB-Management-Plan-2018-23.pdf [February 2023].

[11] https://designatedsites.naturalengland.org.uk/Marine/MarineFeatureCondition.aspx?SiteCode

disturbance are therefore important parameters. The following factors can be regarded as significant disturbance.

2.3.47 Any event, activity or process contributing to the:

- The long-term decline of the population of the species on the site.
- The reduction, or to the risk of reduction, of the range of the species within the site.
- The reduction of the size of the available habitat of the species.

2.3.48 Factors such as noise, light, dust and vibration, litter are capable of causing significant disturbances for species, *e.g.* wintering waterfowl populations.

2.3.49 *Managing Natura 2000 Sites* states that: "Disturbance of a species occurs on a site from events, activities or processes contributing, within the site, to a long-term decline in the population of the species, to a reduction or risk of reduction in its range, and to a reduction in its available habitat. This assessment is done according to the site's conservation objectives and its contribution to the coherence of the network."

2.3.50 Recreation can create increased pressure on the qualifying features of the Habitats sites scoped in. They all have bird interest and / or associated habitats which have the potential to be adversely affected by increased recreational pressure.

2.3.51 The Site Improvement Plans identify the following as potentially disturbing activities: visual and noise disturbance of bird populations by walkers, especially those with dogs; marine activities such as angling, jet skiing and kite surfing, bait digging, powerboating and recreational boating. Localised damage to vegetation and soils by frequent pedestrian traffic, mountain bikes and trail bikes could also result in adverse effects, particularly if there are qualifying habitats, and have been included as part of the consideration of recreational pressures.

2.3.52 Habitats Regulations Assessments for a number of Local Plans in Essex have established that proposed housing developments may cause a likely significant effect arising from recreational disturbance either alone, or in combination with other housing developments. The subsequent appropriate assessments have resulted in the development of the Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) to assess the potential impacts caused by housing growth in Essex and has involved extensive research, including visitor surveys. This is considered the most effective strategic solution to deliver mitigation to avoid adverse effects on site integrity for the TCB Garden Community DPD Submission Version Plan.

2.3.53 The Essex Coast RAMS provides evidenced Zones of Influence (ZOI) for recreational disturbance, and those relevant to the Development Plan are set out in Table 5 below. Although the TCB Garden Community site boundary lies outside of the 8km ZOI for recreational disturbance for Hamford Water SPA and Ramsar, these Habitats sites have been included within Table 5. This is because there are predicted effects in combination with other plans and projects which includes all of the coastal Habitats sites within the

adopted Essex Coast RAMS and SPD. Given the predicted and considerable draw of the coast to the new residents of the TCB Garden Community, it is considered precautionary to include these sites within scope for this assessment as future visitor surveys may evidence an increased Zone of Influence for Habitats sites including Hamford Water SPA & Ramsar sites.

Table 5. Zones of Influence for Recreational disturbance (from Essex Coast RAMS)

European Designated Site	Underpinning SSSIs	Zone of Influence (km)
Blackwater Estuary SPA and Ramsar site	Blackwater Estuary SSSI	22
Dengie SPA and Ramsar site	Dengie SSSI	20.8
Colne Estuary SPA and Ramsar site	Colne Estuary SSSI	9.7
Essex Estuaries SAC	Blackwater Estuary SSSI Colne Estuary SSSI Crouch and Roach Estuaries SSSI Dengie SSSI Foulness SSSI	*
Stour Estuary SPA and Ramsar site	Stour Estuary SSSI	13

*The Essex Estuaries comprise the Colne Estuary, Blackwater Estuary, Dengie, Crouch and Roach Estuaries and Foulness Estuary and so follow the respective ZOIs throughout

2.3.54 Natural England's involvement in the Section 1 Local Plan and preparation of the Essex Coast RAMS supported the HRA process and resulted in a Statement of Common Ground at Examination.

2.3.55 On behalf of the Councils, LUC prepared a HRA report in May 2017 to support the submitted Section 1 Local Plan. That HRA report concluded that through the iterative process of HRA and the appropriate assessment stage, it was likely it would be possible to ensure that no adverse effects on integrity of Habitats sites within scope would occur. The HRA report provided key recommendations and mitigation requirements, and these have been incorporated into the Section 1 Local Plan. The Councils and LUC liaised with Natural England throughout the preparation of the Section 1 Local Plan and took account of comments from Natural England throughout the process. Natural England agreed with the Councils conclusion of no adverse effects on integrity of Habitats sites from the plan either alone or in-combination with other plans and projects and stated that provided each of the recommended safeguards are fully incorporated into the relevant policies, they agreed that the Section 1 Local Plan is unlikely to have an adverse effect on the integrity of Habitats sites. During the Section 1 Local Plan examination, the Councils agreed a Statement of Common Ground with Natural England.

2.3.56 The Councils worked closely with Natural England on the Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS). The need for a RAMS was identified at an early stage in the iterative HRA process for the Section 1 Local Plan. The Essex Coast RAMS report, which will ensure that the RAMS is delivered in perpetuity, was finalised in January 2019 and a RAMS Supplementary Planning Document (SPD) was consulted on in January-February 2020. The Strategy report and SPD have been adopted by the twelve local authority partners, including Colchester City Council and Tendring District Council. Natural England are part of the RAMS steering group and have confirmed that they endorse the Strategy report and SPD.

2.3.57 The Section 1 Local Plan Inspector concluded in his Final Report (December 2020) that subject to the Main Modifications, the Plan is therefore capable of being adopted in compliance with the Conservation of Habitats and Species Regulations 2017 (as amended). The Section 1 Local Plan Inspector concluded that the RAMS provision for monitoring its effectiveness, which it is intended will feed back into the mitigation measures in an iterative fashion, enabling adjustments and improvements to be made in response to evidence of how successful the measures are, is a strength of the RAMS approach. The Section 1 Local Plan Inspector concluded that: "requiring adequate wastewater treatment capacity to be provided before dwellings are occupied, will ensure that no adverse impact on any European site will occur as a result of changes in water quality."

2.3.58 The adopted Section 1 Local Plan includes Policy SP2: Recreational disturbance Avoidance and Mitigation Strategy (RAMS). This policy and the Essex Coast RAMS SPD, which has been adopted by all partner LPAs, including Colchester and Tendring, requires mitigation for predicted recreational disturbance.

2.3.59 The TCB Garden Community DPD Submission Version Plan will therefore need to secure appropriate mitigation to ensure that it is sound. In line with People Over Wind EU Court Ruling, this mitigation needs to be considered at Stage 2 Appropriate Assessment.

2.4 Screening categorisation

2.4.1 Screening is set out in Chapter 3 of this report and Appendix 1 considers each policy in the Local Plan and the results of the screening exercise recorded, using the precautionary principle. Each policy and land allocation included in the Local Plan has been categorised. A 'traffic light' system has been used to record the potential for policies and allocated sites to have a Likely Significant Effect, using the system of colours in Table 6 below.

Table 6. Habitats Regulations Assessment Screening Categorisation

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

2.5 Appropriate Assessment and the Integrity Test

2.5.1 Where the DPD Submission Version Plan for the TCB Garden Community may cause Likely Significant Effects, the second stage is to undertake an 'Appropriate Assessment' of the implications of the plan (either alone or in combination with other plans or projects) and establish whether there may be an Adverse Effect on Integrity (AEOI) of any Habitats sites in view of their Conservation Objectives. The process undertaken for the Appropriate Assessment is set out in Chapter 4 of this report.

2.5.2 Some policies of the DPD Submission Version Plan can be used to mitigate some of the potential Likely Significant Effects which have been identified. These can be considered at Appropriate Assessment. This stage thus becomes an iterative process as avoidance and reduction measures can be incorporated in order to be able to ascertain that there is *no Adverse Effect on Integrity* on any Habitats site, before making a final assessment.

2.5.3 The Appropriate Assessment should be undertaken by the competent authority and should assess all aspects of the DPD Submission Version Plan which can alone, or in-combination with other plans and projects, affect the sites' Conservation Objectives. The

assessment must consider the implications for each qualifying feature of each potentially affected Habitats site. Key vulnerabilities are set out in Appendix 3 and the Site Improvement Plans were used to obtain this information. Site Improvement Plans have been developed for each Habitats site in England as part of the 'Improvement Programme for England's Natura 2000 sites (IPENS)'. The plan provides a high-level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features These can be found at:

http://publications.naturalengland.org.uk/category/5458594975711232.

2.5.4 In order to identify potential in-combination effects, other plans and projects which may affect the Habitats sites need to be identified. The list of county and district level plans which provide for development in Colchester City Council and Tendring District Council as well as Nationally Strategic Infrastructure Projects (NSIPs) to be considered will be identified in liaison with the Sustainability Appraisal.

2.5.5 In accordance with the requirements of the Habitats Regulations, Natural England should be formally consulted on the Appropriate Assessment document.

3. Screening of Likely Significant Effects

3.1 Screening Policies for Likely Significant Effect

3.1.1. This chapter summarises the potential for Likely Significant Effects identified, based upon Chapter 2 and using Categories A, B and C above. It advises as to where Likely Significant Effects can be ruled out. The need for an 'Appropriate Assessment' is triggered where the HRA Screening stage identifies policies which may have a Likely Significant Effect on any Habitats sites (see Appendix 1).

3.1.2. A number of impact pathways have been identified in Chapter 2 above and these have been screened in below. Fourteen Habitats sites have been scoped in for HRA screening. Where this is likely to result in a significant effect, or where there is uncertainty, in line with the precautionary approach being applied in the HRA, until significant effects can be ruled out, they are treated as giving rise to Likely Significant Effects.

3.1.3. Criteria from relevant development management policies from Tendring DC and Colchester City's Section 2 Local Plans have been included in this draft DPD Submission Version Plan. These have already been considered in the HRA report to support examination (LUC, 2017).

3.1.4. Other draft DPD policies and Preferred Options for allocating land are screened out where they would not result in development because they either set out criteria relating to development proposed under other policies, are very general in nature or they seek to protect the natural environment.

3.1.5. A summary of the assessment is set out in Appendix 1. Conclusions take into account the potential effects of other plans and projects. Each policy was considered in the context of the policy Screening criteria above.

3.1.6. The Habitats sites whose IRZ or ZOI which falls partly within the TCB Garden Community site that are within scope are listed below:

- Abberton Reservoir SPA
- Abberton Reservoir Ramsar Site.
- Colne Estuary SPA
- Colne Estuary Ramsar site
- Essex Estuaries SAC
- Stour and Orwell Estuaries SPA
- Stour and Orwell Estuaries Ramsar site
- Hamford Water SPA
- Hamford Water SAC
- Hamford Water Ramsar site

- Blackwater Estuary SPA
- Blackwater Estuary Ramsar site
- Dengie SPA
- Dengie Ramsar site

3.1.7. The HRA Appropriate Assessment for the North Essex Authorities Shared Strategic Section 1 Plan identified a number of avoidance and mitigation measures to be implemented, to ensure that development proposals in the Plan will not result in adverse effects on the integrity of any Special Area of Conservation, Special Protection Area or Ramsar site, and are HRA compliant.

3.1.8. These are for changes in water quantity/quality, recreational disturbance and for loss of functionally linked land.

3.1.9. An initial assessment has been undertaken to identify whether the DPD Submission Version Plan policies have the potential to have any Likely Significant Effects on any Habitats sites. The notes in the RIS for Ramsar sites of factors affecting site's ecological character are not considered as necessary for HRA screening purposes and noteworthy features are not treated as qualifying features in the application of HRA tests. The assessment under the provisions of the Habitats Regulations is strictly limited to the qualifying features which meet the Ramsar site criteria.

3.1.10. Table 7, below, lists the policies to consider if any have the potential to cause a Likely Significant Effect, before taking mitigation into account and therefore require Appropriate Assessment.

Table 3. Policies that may Cause a Likely Significant Effect

Policy	Loss of Functionally Linked Land	Disturbance	Water Quality	Water Quantity	Air Pollution	In-combination Effects	Screening Categorisation
Policy 1: Land uses and Spatial Approach	Yes	No if suitable SANG embedded in DPD under Policy 3 Part A Green Infrastructure	Yes	No - if suitable SuDS are embedded in DPD	No	Yes	**Category C**

Policy	Loss of Functionally Linked Land	Disturbance	Water Quality	Water Quantity	Air Pollution	In-combination Effects	Screening Categorisation
Policy 2: Requirements for all new development	Yes	No	Yes	No - if suitable SuDS are embedded in DPD	No	Yes	**Category C**
Policy 3: Nature	No	No	No	No	No	No	Category A
Policy 4: Buildings, Place and Character	Yes	No	No	No	No	Yes, includes student accommodation and gypsy & travellers pitches	**Category C**
Policy 5: Economic Activity and Employment	Yes	No	Yes	No - if suitable SuDS are embedded in DPD	Yes	No	**Category C**
Policy 6: Community and Social Infrastructure	Yes	No	Yes	No - if suitable SuDS are embedded in DPD	Yes	No	**Category C**
Policy 7: Movement and Connections	Yes	No	Yes	No - if suitable SuDS are embedded in DPD	Yes	No	**Category C**
Policy 8: Sustainable infrastructure	No	No	No	No	No	No	Category A

Policy	Loss of Functionally Linked Land	Disturbance	Water Quality	Water Quantity	Air Pollution	In-combination Effects	Screening Categorisation
Policy 9: Infrastructure Delivery and Impact Mitigation	No	No	No	No	No	No	Category A

3.2 Policies carried forward to Appropriate Assessment Stage

3.2.1. All polices are shown in the HRA Screening Table in Appendix 2 and those marked red or amber are screened in as having the potential for Likely Significant Effects, alone or in combination with other plans and projects, before taking mitigation into account and therefore require Appropriate Assessment.

3.3 Habitat Sites Screened in for Appropriate Assessment

3.3.1 The potential impact pathways, between Habitats sites and DPD Submission Version Plan polices, identified at HRA Screening stage, are shown in Table 8 below.

Table 4. Habitats Sites, Impact Pathways and Examples of LSE Identified at Screening Stage

Nature of potential impact	Which Habitats Site(s) could the Tendring Colchester Borders Garden Community DPD affect (alone or in combination with other plans and project)?	How the Tendring Colchester Borders Garden Community DPD (alone or in combination with other plans and projects) could affect a Habitats site?	Likely to result in Significant Effect and therefore require further assessment?
Habitat loss / Land take by development	None	N/A	No
Impact on features (protected species) outside the protected site boundary	Stour and Orwell Estuaries SPA and Ramsar Colne Estuary SPA and Ramsar	The wintering bird surveys identified that the site is functionally linked to the Colne Estuary and Stour Estuary. Although, the majority of the populations present were not considered significant, the HRA of the Section 1 plan requires mitigation for cumulative impacts for Lapwing (and Golden Plover). The mitigation measures recommended in the HRA of the Section 1 Plan are considered precautionary, appropriate and effective. Given its size, the Tendring and Colchester Borders Garden Community would likely be capable of mitigating for its own impact on-site if necessary, and therefore the above measures have been recommended to provide certainty that the cumulative effect of habitat loss would not result in significant adverse effects. As a result, the potential for the loss of functionally linked land to adversely affect these species related primarily to the cumulative effect of reducing the extent of feeding areas. The	Yes

Nature of potential impact	Which Habitats Site(s) could the Tendring Colchester Borders Garden Community DPD affect (alone or in combination with other plans and project)?	How the Tendring Colchester Borders Garden Community DPD (alone or in combination with other plans and projects) could affect a Habitats site?	Likely to result in Significant Effect and therefore require further assessment?
		likelihood of this occurring is considered low given the quality of the habitat affected and the small amount of habitat affected as a proportion of that available around each of the Habitats sites. Nevertheless, despite the above, uncertainty remains under the precautionary principle as to whether the loss of feeding sites will cumulatively adversely affect the integrity of the SPA/Ramsar sites in relation to Lapwing and Wigeon. Given the dependency of wintering birds on offsite arable fields and grasslands, inclusion and implementation of appropriate safeguards and mitigation has been recommended for inclusion in the DPD Submission Version Plan. Therefore, Likely Significant Effects cannot be ruled out from cumulative parcels of land coming forward.	
Recreational disturbance	Stour and Orwell Estuaries SPA and Ramsar Colne Estuary SPA and Ramsar Hamford Water SPA, SAC and Ramsar site Essex Estuaries SAC	Predicted impacts in-combination on coastal Habitats sites listed in Essex Coast RAMS and SPD.	Yes

Nature of potential impact	Which Habitats Site(s) could the Tendring Colchester Borders Garden Community DPD affect (alone or in combination with other plans and project)?	How the Tendring Colchester Borders Garden Community DPD (alone or in combination with other plans and projects) could affect a Habitats site?	Likely to result in Significant Effect and therefore require further assessment?
	Blackwater Estuary SPA and Ramsar site Dengie SPA & Ramsar		
Other Disturbance	None	N/A	No
Water quality (pollution)	Colne Estuary SPA and Ramsar	Changes in water quality from wastewater. It is a Local Plan policy requirement (SP9 paragraph F.17) that provision of improvements to waste water treatment including an upgrade to the Colchester Wastewater Treatment Plan and offsite drainage improvements aligned with the phasing of the development will be necessary. A Stage 2 Integrated Water Management Strategy is in preparation to support the DPD and ensure additional capacity is available ahead of occupation of dwellings.	Yes
Water Quantity	None	N/A	No
Air Quality	Stour and Orwell Estuaries SPA and Ramsar Colne Estuary SPA and Ramsar Blackwater Estuary SPA and Ramsar site	Potential impacts from the development alone and in combination with other plans and project due to increased vehicle emissions and other construction activities.	Yes

Nature of potential impact	Which Habitats Site(s) could the Tendring Colchester Borders Garden Community DPD affect (alone or in combination with other plans and project)?	How the Tendring Colchester Borders Garden Community DPD (alone or in combination with other plans and projects) could affect a Habitats site?	Likely to result in Significant Effect and therefore require further assessment?
	Essex Estuaries SAC		

3.3.2 Potential effects listed for the above Habitats sites cannot be ruled out from being likely to be significant and the pathways require further consideration. The Table summarises the main ways in which the DPD Submission Version Plan could cause Likely Significant Effects. Some of the potential Likely Significant Effects could be mitigated through the implementation of other policies in the DPD Submission Version Plan itself and the adopted Section 1 Local Plan.

3.4 HRA Screening Conclusion and Considering the Next Stage

3.4.1 The range of potential impacts on Habitats sites has been considered and assessed. In line with the *recent Court judgment (CJEU People Over Wind v Coillte Teoranta C-323/17)*, mitigation measures can no longer be taken into account when carrying out a HRA screening assessment to decide whether a plan or project is likely to result in Likely Significant Effects on a Habitats site. Consequently, HRA screening has concluded that it is not possible to rule out the potential for Likely Significant Effects without further assessment and possible mitigation for the indicated polices.

3.4.2 An Appropriate Assessment is therefore required under the UK Conservation of Habitats and Species Regulations 2017 (as amended). The TCB Garden Community DPD Submission Version Plan may only be adopted after having ascertained that it will not result in adverse effect on integrity of the Habitats sites within scope of this assessment.

3.4.3 This stage is an iterative process as measures can be incorporated in order to be able to ascertain that there is no significant adverse effect on the integrity, before re-screening and making a final assessment.

4. Appropriate Assessment and Considering Adverse Effects on Integrity of Habitats sites

4.1 Introduction and Outline Methodology

4.1.1 As some of the DPD Submission Version Plan's policies have been screened in as having the potential to cause Likely Significant Effects without considering mitigation measures, Colchester City Council and Tendring District Council, as the competent authorities, need to undertake further assessment.

4.1.2 This should involve an 'Appropriate Assessment' of the implications of the Development Plan, either alone or in combination with other plans or projects, in order to establish whether there may be an Adverse Effect on the Integrity of any Habitats sites in view of their Conservation Objectives. This stage is to undertake objective scientific assessment of the implications of the Development Plan on the Qualifying Features of the listed Habitats sites using the best scientific knowledge in the field. It should apply the best available techniques and methods to assess the extent of the effects of the Development Plan on the integrity of the Habitat Sites. The description of the site's integrity and the impact assessment should be based on the best possible indicators specific to the Habitat Sites' qualifying features, which can also be useful in monitoring the impact of implementation of the DPD Submission Version Plan.

4.1.3 The Appropriate Assessment should assess all aspects of the DPD Submission Version Plan which can either alone, or in combination with other plans and projects, affect the Conservation Objectives of one or more Habitats sites although these are not set for Ramsar sites. The assessment must consider the implications for each qualifying feature of each potentially affected Habitats site. The focus of the appropriate assessment is therefore on the species and / or the habitats for which the Habitats site is designated.

4.1.4 The best scientific knowledge[12] should be used when carrying out the Appropriate Assessment in order to enable the competent authority to conclude with certainty that there will be no Adverse Effect on the Integrity of any Habitats site. This will therefore support a conclusion that is "beyond scientific doubt".

4.1.5 It is important that the Appropriate Assessment provides a better understanding of potential effects and can therefore assist in the identification of mitigation measures where possible to avoid, reduce or cancel significant effects on Habitats sites which could be applied when undertaking the 'integrity test'. All mitigation measures built into the DPD Submission Version Plan can be taken into account. The Appropriate Assessment is an iterative process, re-assessing changes and new or different mitigation measures before

[12] Waddenzee ruling (C-127/02 paragraphs 52-54, 59)

making its final conclusion. It must be clear which mitigation measures are being replied upon in order to meet the integrity test.

4.1.6 The integrity test must apply the precautionary principle. However, plan assessments are less precise than project assessments, and so it is important for the assessment process to eliminate the prospect of adverse effects integrity insofar as it is possible, given the level of specificity of this DPD Submission Version Plan.

4.1.7 In order to fulfil the above requirements, this Appropriate Assessment will therefore use the following process, and will be structured by the potential impact pathways.

4.1.8 It is also highlighted that advice has been provided from the European Court of Justice regarding the 'tiering' of HRAs where there are multiple levels of plan-making, recognising that the purpose of a high-level plan is to set out broad policies and intentions without going into any detail. When the UK was first required to undertake HRA of plans, Advocate-General Kokott commented on the apparent tension between the requirements of the Habitats Directive and the intentionally vague nature of high-level strategic plans. She responded that to address this apparent tension 'It would …hardly be proper to require a greater level of detail in preceding plans [rather than lower tier plans or planning applications] or the abolition of multi-stage planning and approval procedures so that the assessment of implications can be concentrated on one point in the procedure. Rather, adverse effects on areas of conservation must be assessed at every relevant stage of the procedure to the extent possible on the basis of the precision of the plan [emphasis added]. This assessment is to be updated with increasing specificity in subsequent stages of the procedure' [*i.e.* for planning applications or lower tier plans] (Opinion of Advocate-General Kokott, 2005).

4.1.9 Explicitly enshrining the requirement for project-level HRA in the plans – since it is not possible to rule out adverse effects on the integrity of many Habitats sites due simply to the high-level nature of the plan policies, 'down-the-line' assessment becomes essential.

4.1.10 A monitoring and Iterative Plan Review (IPR) provision therefore needs to be embedded in the DPD Submission Version Plan. Monitoring is not mitigation; however, where there is a lack of detail over the precise effects of a plan (because, as in this case, the purpose of the plan is to set over-arching policy, not present specific proposals), an Iterative Plan Review process enables the delivery of development to be managed and the plan (and its HRA) to be updated in future reviews. It involves recognising the fact that development associated with policies in the plan will not be delivered all at once but piecemeal over the entire plan timetable. This process will involve a phased and iterative approach to plan-implementation which is linked to ongoing project developments and their associated monitoring work and with the findings from such project-level work feeding back into the next phases of plan-implementation. This is done so that results from monitoring data from consented projects and on-going research programmes can be fed into subsequent developments in order for lessons to be learnt and evidence gaps filled, thus reducing potential impacts to Habitats sites.

Policies / Allocations and Habitats sites within Scope

4.1.11 The Likely Significant Effects considered at screening stage have been carried forward for consideration at Appropriate Assessment. The policies and their potential to have adverse effects on any Habitats site through a variety of impact pathways are now considered in more detail, for example disturbance, direct and indirect effects; extent of the effects (habitat area, species numbers or areas of occurrence); importance and magnitude (*e.g.* considering the affected area or population in relation to the total area and population size).

4.1.12 The policies and allocations listed in Table 7 have the potential to cause a likely significant effect and the Table lists their impact pathways.

4.1.13 Table 8 lists the Habitats sites identified at screening stage and shows the potential impact pathways and key Likely Significant Effects identified.

4.1.14 Key vulnerabilities of each Habitats site are set out in Appendix 3 using the relevant Site Improvement Plans. Site Improvement Plans have been developed for each Habitats (Natura 2000) Site in England as part of the 'Improvement Programme for England's Natura 2000 sites (IPENS)' but they do not include Ramsar sites. Each Site Improvement Plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features These can be found at: **http://publications.naturalengland.org.uk/category/5458594975711232**.

4.2 Court Judgements and their consideration in this Report

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

4.2.1 As previously mentioned, in line with the Court judgement (CJEU People Over Wind v Coillte Teoranta C-323/17), mitigation measures cannot be taken into account when carrying out a screening assessment to decide whether a plan or project is likely to result in significant effects on a Habitats site. This HRA Appropriate Assessment therefore considers mitigation measures for the assessment of Likely Significant Effects resulting from the Colchester Tendring Borders Garden Community: DPD Submission Version Plan.

4.2.2 In accordance with this Judgement, all mitigation measures already built into the DPD Submission Version Plan can now be taken into account for the Appropriate Assessment. At this stage other policies of the Plan can be considered in order to mitigate some of the potential Likely Significant Effects which have been identified. This stage is an iterative process as avoidance and reduction measures can be incorporated in order to be able to avoid the potential impacts identified in the Appropriate Assessment or reduce them to a level where they will no longer adversely affect the site's integrity.

4.2.3 An example may include a requirement for Sustainable Drainage Schemes (SuDS) for new housing and employment sites which can help to mitigate for surface water flooding and prevent water pollution.

4.2.4 Where there may still be adverse effects on the ecological integrity of Habitats sites, in view of the Site's conservation objectives, additional mitigation measures may also need to be proposed. Generic mitigation is used where possible. This should help to address water quality, air pollution, noise, and other (non-recreational) forms of disturbance.

CJEU Holohan C- 461/17

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

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

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

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

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

4.2.7 Therefore, it is considered reasonable to assess the designated features of the Stour Estuary SSSI and the Colne Estuary SSSI, given that they underpin nearby Habitats sites which have been screened in due to potential impacts upon functionally linked land and water quality.

4.2.8 In regard to designated features of the Stour Estuary SSSI, it is not considered that there will be any additional impacts on the qualifying features that have not already been addressed within the Stour and Orwell Estuaries SPA and Ramsar site. In regard designated features of the Colne Estuary. There are number of additional features which have not been included within the Colne Estuary SPA and Ramsar site or the Essex Estuaries SAC. These include further reference to important assemblages of overwintering bird species (Black-tailed Godwit, Dunlin, Sanderling, Grey Plover, Shelduck and Golden Eye), as well as reference to a number of plants and invertebrates, which are relevant to Saltmarsh, sand and shingle spits, seawalls and burrow dykes.

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

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

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

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

…

6. Article 6(3) of Directive 92/43 must be interpreted as meaning that an 'appropriate assessment' within the meaning of that provision may not take into account the existence of 'conservation measures' within the meaning of paragraph 1 of that article, 'preventive measures' within the meaning of paragraph 2 of that article, measures specifically

adopted for a programme such as that at issue in the main proceedings or 'autonomous' measures, in so far as those measures are not part of that programme, if the expected benefits of those measures are not certain at the time of that assessment.

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

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

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

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

Regulation 63(1) provides that the trigger for making an appropriate assessment is that the relevant plan or project 'is likely to have a significant effect on a European site.

Regulation 63(3) envisages consultation with the appropriate nature conservation body taking place at the stage of the appropriate assessment and accordingly after the initial view that there is likely to be significant effect has been formed. The conclusion as to whether the integrity of the relevant site will be adversely affected is to be made 'in the light of the conclusions of the assessment'

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

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

4.3 Applying the Integrity Test

4.3.1 Following the Appropriate Assessment and the consideration of all mitigation measures, the competent authority needs to make a judgement on whether any of the policies will have an Adverse Effect on Integrity on any Habitats site, either alone or in combination with other plans and projects. This will be set out in Chapter 5 and summarised in Appendix 3. This test incorporates the precautionary principle.

4.4 In-combination Effects with other Plans and Projects

4.4.1 The Appropriate Assessment also includes a comprehensive identification of all the potential effects of the DPD Submission Version Plan likely to be significant, taking into account the combination of the effects of the DPD Submission Version Plan in combination with those of other plans or projects.

4.5 Embedding Mitigation into the Development Plan Document

4.5.1 Colchester City Council and Tendring District Council, as the competent authorities, should consider the manner in which the Development Plan is to be implemented and any mitigation measures which could be relied upon when deciding whether it would have an Adverse Effect on Integrity, including when and how they can be embedded into the Local Plan. It needs to ensure that mitigation is embedded into the Plan through amendments to policies where necessary. It is not sufficient to rely on a general policy aimed at protecting Habitats sites. Instead, explicit caveats need to be included where there may be conflicts between a general policy to protect Habitats sites from development and another policy.

4.5.2 Each impact is assessed *e.g.* air quality, water quality, disturbance, and has a summary of the additional mitigation measures required to avoid adverse effect on site integrity (AEOI) and the recommendations are set out to embed the mitigation into the Local Plan.

4.6 Re-applying the Integrity Test

4.6.1 At this stage the integrity test should be re-applied. Where there may still be adverse effects on the ecological integrity of Habitats sites, in view of the site's conservation objectives, additional mitigation measures should be considered.

4.6.2 This AA provides tables for each potential impact pathway where it considers individual policies, how they might be mitigated and whether embedded mitigation is sufficient to avoid Adverse Effect on Integrity.

4.7 Consulting Natural England

4.7.1 Natural England will be informally and formerly consulted on the DPD Submission Version Plan during the public consultation process.

4.8 Loss of Functionally Linked Land / Impact on Features on Land outside Habitats sites

4.8.1 This section of the report considers the potential for adverse effects to Habitats sites through changes to functionally linked land as a result of development.

4.8.2 This includes land which is used by birds for feeding, roosting, foraging and loafing, especially large fields comprising arable and pastoral land uses and coastal habitats.

4.8.3 At screening stage it was identified that a flock of 60 Lapwing was present during the nocturnal survey in December. This consisted of 4.5% of the five-year average peak count for the Colne Estuary, Lapwing is a qualifying feature of the Colne Estuary SPA, which is more than the threshold of significance (i.e., >1% of the associated Habitats site). However, the associated agricultural land on which they were feeding on was unremarkable and widespread in the area. Therefore, any the loss of this agricultural land will likely have a de-minus effect upon the Lapwing population at the Colne Estuary SPA, due to the availability of other suitable foraging available within the wider landscape. Nevertheless, there is a need to take into account the cumulative numbers of SPA birds affected as parcels of land come forward for development and ensure appropriate safeguards to account for any changes of waterbird assemblages which may result in an adverse effect on site integrity to the Colne Estuary SPA and Ramsar site.

Policies/Allocations and Habitats sites within scope

4.8.4 At Screening stage, the following Habitats sites were listed as having the potential for Likely Significant Effects as a result of Functionally Linked Land issues:

- Stour and Orwell Estuaries SPA
- Stour and Orwell Estuaries Ramsar site
- Colne Estuary SPA
- Colne Estuary Ramsar site
- Abberton Reservoir SPA
- Abberton Reservoir Ramsar Site.

4.8.5 At Screening stage the following policies were listed as having the potential for Likely Significant Effects as a result of Functionally Linked Land issues:

- Policy 1: Land uses and Spatial Approach
- Policy 2: Requirements for all new development
- Policy 4: Buildings, Place and Character
- Policy 5: Economic Activity and Employment
- Policy 6: Community and Social Infrastructure
- Policy 7: Movement and Connections

4.8.6 These Policy were screened in at a precautionary basis as they were promoting development which will impact upon functionally linked land, even though no significant effects upon individual waterbirds or the waterbird assemblage are considered likely based on the results of the over-wintering bird surveys completed to support the Tendring Colchester Borders Garden Community: DPD Submission Version Plan.

Use of Mitigation Measures

4.8.7 Each phase of development must be supported by up-to-date over-wintering bird surveys to determine the usage of the phases by individual waterbirds and the importance of their assemblages. If any over-wintering bird surveys at application stage identifies that the proposals will result in impacts upon the individual waterbirds or the waterbird assemblage associated within the Colne Estuary SPA and Ramsar site or the Stour and Orwell Estuaries SPA and Ramsar site, then bespoke mitigation measures must be secured either by legal agreement or a condition of any consent with landowners located in Tendring District Council and Colchester City Council within close proximity of the relevant Habitats sites.

Applying the Integrity Test

4.8.8 With the measures required as part of each phase of development, we are satisfied that the policies of the DPD Submission Version Plan reviewed at Appropriate Assessment stage will not result in any in direct Adverse Effects On site Integrity to Colne Estuary SPA and Ramsar or the Stour and Orwell Estuaries SPA and Ramsar site via the loss of functionally linked land.

4.9 Air Quality

Policies / Allocations and Habitats sites within Scope

4.9.1 At Screening stage, the following Habitats sites were listed as having the potential for Likely Significant Effects as a result of Air Quality related issues:

- Stour and Orwell Estuaries SPA
- Stour and Orwell Estuaries Ramsar site
- Colne Estuary SPA

- Colne Estuary Ramsar site
- Blackwater Estuary SPA
- Blackwater Estuary Ramsar site
- Essex Estuaries SAC

4.9.2 At Screening stage, the following policies were listed as having the potential for Likely Significant Effects as a result of potential Air Quality related issues:

- Policy 5: Economic Activity and Employment
- Policy 6: Community and Social Infrastructure
- Policy 7: Movement and Connections

4.9.3 None of the screened in Habitats sites are located within 200 metres of the garden community and therefore the scheme will not directly impact upon any Habitats sites from adverse air quality in line with the guidance set out within the Highways Agency Design Manual for Road and Bridges (DMRB).

4.9.4 However, given that the proposals will result in 7,000-9,000 new homes and associated infrastructure, increased traffic along roads within 200 metres of the coastal Habitats sites could result in direct effects from adverse air quality from the provision of the new garden community. As a result, impacts from air quality from the development alone was screened in to Appropriate Assessment stage, as well as potential impacts in combination with other plans and projects. This matter was raised through correspondence with Natural England following discussions regarding the likely impacts from the garden community from adverse air quality at coastal Habitats sites.

4.9.5 As a result, the above policies were screened in at a precautionary basis, as they include details relating to the delivery of new strategic road networks, local transport infrastructure and promotion of new business uses which will result in an increased vehicle usage at the garden community.

4.9.6 The Highways Agency Design Manual for Road and Bridges is specifically used to consider the impacts of the delivery of motorway and all-purpose trunk road projects (A-roads). However, the increase traffic emissions from B-roads or unregistered roads should be considered, even if impacts are subsequently ruled out. As a result, a map of relevant roads within 200 metres of the above coastal Habitats sites has been outlined in Appendix 5.

4.9.7 Appendix 5 demonstrates that there are no Motorways present immediately adjacent to the Coastal Habitats sites, but there are two instances where A-roads are present immediately adjacent to the Stour and Orwell Estuaries SPA and Ramsar site. This includes the A137 Bridge adjacent to Cattawade Marshes (A1) and the A120 in Harwich (A2).

4.9.8 As part of the Babergh and Mid Suffolk Joint Local Plan, baseline air quality monitoring for NOx concentrations and nitrogen deposition has been completed at location A1 over

a 12-month period from September 2021. This was necessary to inform impacts from increased traffic and vehicle emissions as a result of impacts in-combination with other plans and projects of the Babergh and Mid Suffolk Joint Local Plan. In addition, a further caveat has been secured within Policy SP09 – Enhancement and Management of the Environment, which indicates that the Councils will commit to an immediate review of the planning policies if the baseline monitoring identifies that Adverse Effects On site Integrity upon the relevant Habitats sites. As a result, whilst the result of this baseline monitoring is not yet available, a detailed assessment has been carried out which could be used to confirm the likely impacts Garden Community following the provision traffic scoping modelling for the Garden Community.

4.9.9 Place Services are not aware that air quality monitoring for NOx concentrations and nitrogen deposition or traffic input modelling has been completed at location A2. However, the location A2 is situated just within a 20km radius from the garden community boundary, and it is considered unlikely that increased traffic will be generated from the garden community (from the development alone or in combination with other plans and projects) which will affect the Stour and Orwell Estuaries and its qualifying features.

4.9.10 In addition, to the two A-roads, a further seven road locations were identified which required further consideration, as they were located within 200 metres of the Colne Estuary SPA and Ramsar site, the Blackwater Estuary SPA and Ramsar site and the Essex Estuaries SAC. This included four B-roads and three unregistered roads. B1 is a section of road on the B1029, situated near Alresford Creek; B2 is a section of road on the B1027, situated near Flag Creek; B3 is a section of road on the B1029 near Brightlingsea Creek; B4 is The Stroud crossing located on the B1025, situated between the Colne Estuary and Blackwater Estuary; U1 relates to Point Clear Rd, which is the only access to Point Clear and Point Clear Bay; U2 is also located on Point Located on Point Clear Rd and relates to the bridge that is adjacent to St Osyth Creek; and U3 relates to Meadow Way which is the main route through Jaywick which is situated immediately adjacent to the Essex Estuaries SAC.

4.9.11 The likelihood of increased traffic being generated as a result of Garden Community impacting the qualifying features for the B-Roads and unregistered road locations is considered an extremely low risk, as the roads do not consist of motorways or all-purpose trunk roads. However, it is recommended that a precautionary approach is undertaken for the Garden Community given the concerns raised by Natural England and the need to demonstrate that impacts will be avoided beyond reasonable scientific doubt.

Use of Mitigation Measures

4.9.12 Each relevant phase of development for the garden community should be supported by traffic scoping modelling to fully determine whether further mitigation measures to avoid adverse impacts from air quality are required. The assessment methodology will be in line with the Highways Agency Design Manual for Road and Bridges and must be completed

by a competent expert for traffic. Therefore, the methodology at a minimum will need to calculate the annual average daily traffic (AADT) and heavy duty vehicle (HDV) AADT traffic flows at the sensitive receptors identified, with the exception of A2, B3 and U1. This is because it is unlikely that A2 will generate increase traffic from garden community and because B1 is located on the same road as B3 and U2 on the same road as U1, therefore recording AADT at both locations will not provide any additional information.

4.9.13 If AADT is greater than >1000 vehicles and >200 HDV then this will trigger for need for further air quality monitoring to determine whether adverse air quality is likely to be caused on the qualifying features of the relevant Habitats sites. This is required because this number of vehicles and HDVs represents the lowest threshold above which the traffic model can represent change in traffic conditions to a reasonable level of confidence.

4.9.14 As AADT is expected to be greater than >1000 vehicles for location A1, the traffic scoping modelling will also need to identify the traffic flow rates which will be generated from the garden community and compare this to air quality monitoring which has been carried out for this location. This will determine the likely risk of impacts being caused from the development alone and inform the need for further monitoring of this receptor as part of both the TCB Garden Community and during the lifetime of the Babergh and Mid Suffolk Joint Local Plan.

4.9.15 If a potential risk of impacts is identified at any location identified, then a mitigation strategy will need to be agreed by Colchester City Council and Tendring District Council.

Applying the Integrity Test

4.9.16 With the measures embedded as part of each phase of development, we are satisfied that the policies of the DPD Submission Version Plan reviewed at Appropriate Assessment stage will not result in any in direct Adverse Effects On site Integrity to Colne Estuary SPA and Ramsar, the Stour and Orwell Estuaries SPA and Ramsar site, the Blackwater Estuary SPA and Ramsar site and the Essex Estuaries SAC via adverse air quality.

4.10 Water Quality

Policies / Allocations and Habitats sites within Scope

4.10.1 At Screening stage, the following Habitats sites were listed as having the potential for Likely Significant Effects as a result of Water Quality issues:

- Colne Estuary SPA
- Colne Estuary Ramsar site
- Essex Estuaries SAC

4.10.2 At Screening stage, the following policies were listed as having the potential for Likely Significant Effects as a result of adverse Water Quality:

- Policy 1: Land uses and Spatial Approach
- Policy 2: Requirements for all new development
- Policy 4: Buildings, Place and Character
- Policy 5: Economic Activity and Employment
- Policy 6: Community and Social Infrastructure

4.10.3 This is because there is a direct impact pathway from the Colchester WRC (which will be the WRC that will serve the TCB Garden Community), to the above Habitats sites and the above policies include measures which will increase wastewater or surface water discharges via the WRC.

Use of Mitigation Measures

4.10.4 The Anglian Water Draft WRMP indicates that investments will be required between 2020 – 2045 to balance the supply and demand for water recycling services, which will be undertaken via the investment to increase drainage capacity through SuDS and upsizing, investigation of Combined Sewer Overflows (CSO) and providing additional WRC flow capacity. As a result, the finalised details of this infrastructure will need to be secured at application stage of the TCB Garden Community, in consultation with Anglian Water.

4.10.5 In addition, there will be a need for contingency measures to ensure that the Colchester WRC has sufficient headroom capacity to cope with approved growth across Colchester City Council and Tendring District Council and the TCB Garden Community. This would involve Anglian Water securing a discharge permit from the Environment Agency to accommodate the growth Local Plans and the TCB Garden Community past 2033. However, this is not likely to result in impacts upon the qualifying features of the Colne Estuary SPA / Ramsar site or the Essex Estuaries SAC, based on the results of the water quality assessment as part of the TCB Garden Community Integrated Water Management Strategy Phase 2 Main Report, which outlines that Water Framework Development Status of the River Colne will not deteriorate as a result of the TCB Garden Community with current conventional treatment technology, with no increases of ammonia and Biochemical Oxygen Demand (BOD).

Applying the Integrity Test

4.10.6 With appropriate infrastructure embedded as part of each phase of development, we are satisfied that the policies of the DPD Submission Version Plan reviewed at Appropriate Assessment stage will not result in any in direct Adverse Effects On site Integrity to Colne Estuary SPA and Ramsar and the Essex Estuaries SAC via adverse water quality.

4.11 Recreational disturbance

Policies/Allocations and Habitats sites within scope

4.11.1 At Screening stage, the following Habitats sites were listed as having the potential for Likely Significant Effects as a result of Functionally Linked Land issues:

- Colne Estuary SPA
- Colne Estuary Ramsar site
- Essex Estuaries SAC
- Stour and Orwell Estuaries SPA
- Stour and Orwell Estuaries Ramsar site
- Blackwater Estuary SPA
- Blackwater Estuary Ramsar site
- Dengie SPA
- Dengie Ramsar site

4.11.2 At Screening stage, the following policies were listed as having the potential for Likely Significant Effects as a result of Functionally Linked Land issues:

- Policy 1: Land uses and Spatial Approach
- Policy 2: Requirements for all new development
- Policy 4: Buildings, Place and Character

Use of Mitigation Measures

4.11.3 As per Natural England's advice letter, the DPD Submission Version Plan needs to consider the availability of on-site (*i.e.* within development boundaries) avoidance measures (such as the recommended Green Infrastructure within Annex I of Natural England's referenced strategic letter).

4.11.4 Annex I Natural England's recommendations for larger scale residential developments within the Essex Coast RAMS Zone of Influence (ZOI) states that applications for 100 units + or equivalent, as a guide, should include provision of well-designed open space/green infrastructure, proportionate to its scale. Such provisions can help minimise any predicted increase in recreational pressure to the Habitats sites by containing the majority of recreation within and around the development site boundary away from Habitats sites.

4.11.5 A network of green infrastructure within the garden community was secured by Policy SP8 of the Section 1 Local Plan including a community park facility, a new country park of a minimum of 70 hectares in size provided along the Salary Brook corridor and incorporating Churn Wood, the provision of sports areas with associated facilities and play facilities.

4.11.6 If this mitigation is secured by appropriately worded policy text *e.g*. Policy 3 Nature Part A, this can be considered as embedded or intrinsic mitigation. Such measures must be incorporated into the DPD Submission Version Plan so that these are integral parts of it and they are guaranteed to be delivered i.e. mitigation by design. Provision of sufficient SANG will need to be secured to support each and all phases of residential development.

4.11.7 The design of greenspace to provide sufficient and suitably attractive natural greenspace which will function as SANGs should include the following features to divert and deflect daily visits away from the Essex coastal Habitats sites:

- High-quality, informal, semi-natural areas
- Circular dog walking routes of 2.7 km within the site and/or with links to the surrounding public rights of way (PRoW)
- Dedicated 'dogs-off-lead' areas
- Signage/information leaflets to householders to promote these areas for recreation
- Dog waste bins
- A commitment to the long-term maintenance and management of these provisions

4.11.8 Natural England would be happy to advise developers and/or their consultants on the detail of this at the pre-application stage through their charged Discretionary Advice Service (DAS).

Applying the Integrity Test

4.11.9 With the mitigation embedded, the TCB Garden Community DPD Submission Version Plan should not result in any adverse effects on site integrity from the Plan alone.

Embedding Mitigation into the Development Plan Document

4.11.10 Need to secure access to sufficient greenspace at application stage in line with Annex I of Natural England advice referenced above by adding to supporting text & requiring project level HRA.

4.12 Assessment of Impacts in Combination with Other Plans and Projects

4.12.1 A series of individually modest impacts may, in-combination, produce a significant impact. Cumulative impacts may only occur over time, so plans or projects which are completed, approved but uncompleted, or proposed should all be considered. The assessment should not be restricted to similar types of plans and projects.

4.12.2 In the context of this AA, the relevant other plans to be considered in combination with the Colchester Tendring Borders Garden Community DPD Submission Version Plan are listed in Table 9 below.

Table 5. Other plans or projects considered for in-combination effects

Statutory Body	Title of HRA or Project	Findings of HRA or Project	Potential for in-combination effects
North Essex Authorities (Braintree District Council, Colchester City Council (formerly Colchester Borough Council) and Tendring District Council)	HRA for North Essex Authorities Shared Strategic Part 1 for Local Plans - Pre-Submission (Regulation 19) (LUC, May 2017)	Providing that key recommendations and mitigation requirements are adopted and implemented the Shared Strategic Part 1 for Local Plans will not result in adverse effects on the integrity of Habitats sites either alone or in-combination. This used the Essex Minerals LP, Essex Waste LP & Essex Local Transport Plan (and many others) in its assessment. Loss of off-site habitat: Wintering Bird surveys to ensure that parcels of land below the 1% threshold of significance; development phasing & mitigation Water Quality: Additional safeguards to water quality- by addressing water treatment capacity issues prior to specific developments.	None.
Tendring District Council	Tendring District Local Plan 2013-2033 and Beyond. Section 2 | Adopted January 2022	Providing that key recommendations and mitigation requirements are adopted and implemented the Local Plan will not result in adverse effects on the integrity of Habitats sites	None.

Statutory Body	Title of HRA or Project	Findings of HRA or Project	Potential for in-combination effects
		either alone or in-combination.	
Tendring District Council	HRA of Tendring District Local Plan Section 2: Proposed Main Modifications (LUC, June 2021)	Tendring District Draft Publication Local Plan Section 2 has been updated to include the specific policy safeguards and commitments previously recommended, and providing that the additional mitigation measures and safeguards in relation to policies SAE5 and SAE6 are adopted and successfully implemented, it can be concluded that there will be no adverse effects on European sites either alone or in combination. Water Quality: Additional safeguards to water quality- by addressing water treatment capacity issues prior to specific developments.	Recreational disturbance from residential developments within the 13km Zone of influence
Colchester City Council (formally Colchester Borough Council)	Local Plan 2017 – 2033 Section 2 | Adopted July 2022	Providing that key recommendations and mitigation requirements are adopted and implemented the Local Plan will not result in adverse effects on the integrity of Habitats sites either alone or in-combination.	None.

Statutory Body	Title of HRA or Project	Findings of HRA or Project	Potential for in-combination effects
Colchester City Council (formally Colchester Borough Council)	Habitat Regulations Assessment - Publication Draft Colchester Local Plan Section 2: Proposed Main Modifications (LUC, September 2021)	Providing that key recommendations and mitigation requirements are adopted and implemented the associated Local Plan will not result in adverse effects on the integrity of Habitats sites either alone or in-combination.	Recreational disturbance from residential developments within the 13km Zone of influence
Babergh and Mid Suffolk District Councils	Babergh and Mid Suffolk Joint Local Plan 'Part 1'	Providing that key recommendations and mitigation requirements are adopted and implemented the Local Plan will not result in adverse effects on the integrity of Habitats sites either alone or in-combination.	None.
Babergh and Mid Suffolk District Councils	Babergh and Mid Suffolk Joint Local Plan: 'Part 1' Habitats Regulations Assessment including Appropriate Assessment	Providing that key recommendations and mitigation requirements are adopted and implemented the associated Local Plan will not result in adverse effects on the integrity of Habitats sites either alone or in-combination.	None.
Neighbourhood Development Plans	Individual Plan level HRA reports	All residential development within the Zone of Influence has been or will be considered by the relevant District Council and will be mitigated through project level AAs or under the strategic Essex Coast RAMS	None as strategic mitigation for in-combination impacts from recreational disturbance will be delivered by the Essex Coast RAMS

4.12.3 There are no relevant projects to be considered in combination with the Colchester Tendring Borders Garden Community: DPD Submission Version Plan.

Recreational disturbance

4.12.4 In 2017, Natural England's West Anglia Team identified the Essex coast as a priority for strategic and proactive planning engagement and mitigation. This was due to the high numbers of dwellings that were likely to come forward for each Plan alone and also in combination within the relevant Local Plans by 2038 to meet projected housing needs, and the potential recreational impacts that these new residents could have upon the Habitats sites.

4.12.5 Natural England proposed a strategic approach to LPAs and recommended identifying the scale of the disturbance and implementing measures to mitigate impacts through the preparation of a joint Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS).

4.12.6 Based on existing evidence of visitor pressures, Natural England advised that 11 (now 12) Councils across Essex should be partners in the preparation of the strategic solution. To reflect the differing Local Plan adoption dates of these authorities, Natural England advised that a Supplementary Planning Document should be the mechanism to secure developer contributions towards the mitigation measures identified as necessary by the Strategy.

4.12.7 Natural England proposed a strategic approach to LPAs and recommended identifying the scale of the disturbance and implementing measures to mitigate impacts through the preparation of a joint Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS).

4.12.8 Based on existing evidence of visitor pressures, Natural England advised that the Councils should work together to prepare the Strategy. To reflect the differing Local Plan adoption dates of these authorities, Natural England advised that a Supplementary Planning Document should be the mechanism to secure developer contributions towards the mitigation measures identified as necessary by the Strategy.

4.12.9 Natural England’s advice was that the Local Plans must have a clear policy commitment to producing a Mitigation Strategy, with a clear timeframe for its completion. This should be by the time the Local Plan is adopted to ensure any developments coming forward as part of the plan have certainty that there are mitigation measures which can be implemented as soon as the Local Plan is live.

4.12.10 The Essex Coast RAMS partner LPAs agreed that a strategic solution to mitigate the impacts of recreational disturbance from Local Plans was a sensible approach to take the support of Natural England. As a consequence, the Essex Coast RAMS Project has prepared a strategic approach to support the Local Plans and its implementation will

deliver effective measures to avoid and mitigate for recreational disturbance from planned housing growth.

4.12.11 It is therefore considered that relevant residential development in Colchester City Council and Tendring District Council require mitigation to avoid adverse impacts on the integrity of the Habitats sites within scope through increased recreational pressure, when considered in combination with other plans and projects.

4.12.12 This includes the TCB Garden Community, as it is situated within the zone of influence (ZOI) for the Essex Coast RAMS and the development falls within the following development types:

- New dwellings of 1+ units (excludes replacement dwellings and extensions)
- Houses in Multiple Occupancy (HMOs)
- Student Accommodation
- Residential care homes and residential institutions (excludes nursing homes)
- Residential caravan sites (excludes holiday caravans and campsites)
- Gypsies, travellers and travelling show people plots

4.12.13 Colchester City Council and Tendring District Council are two of the 12 Local Planning Authorities (LPAs) which are partners who are responsible for the delivery of the Essex Coast RAMS. This has identified a detailed programme of strategic mitigation measures which are to be funded by developer contributions for residential development schemes as identified above.

4.12.14 As a result, this mitigation has been embedded into policy requirements via Policy SP 2 - Recreational disturbance Avoidance and Mitigation Strategy (RAMS) of the North Essex Authorities' Shared strategic Section 1 Plan (Adopted February 2021). Therefore, there is no further requirement to embed the strategic approach for recreational disturbance via the provision of Policy SP09 –Enhancement and Management of the Environment, which outlines that residential development will be required to make appropriate contributions through legal agreements towards management projects and/or monitoring of visitor pressure and urban effects on Habitats sites and be compliant with the Suffolk Coast RAMS. Therefore, this strategic approach addresses any in-combination impact of increased visitor pressure at the relevant costal Habitats sites.

4.13 Re-applying the integrity test

4.13.1 Colchester City Council and Tendring District Council are committed to ensuring that the Tendring Colchester Borders Garden Community and any associated recreational disturbance impacts on Habitats sites are avoided and mitigated to demonstrate compliance with the Conservation of Habitats and Species Regulations 2017 (as amended)

4.13.2 It can therefore be concluded that, the mitigation proposed, there will be no adverse effect on integrity as a result of recreational disturbance from Tendring Colchester Borders Garden Community: DPD Submission Version Plan.

5. Recommendations

5.1.1 The Habitats sites that have been considered within this HRA are:

- Abberton Reservoir SPA
- Abberton Reservoir Ramsar site.
- Colne Estuary SPA
- Colne Estuary Ramsar site
- Essex Estuaries SAC
- Stour and Orwell Estuaries SPA
- Stour and Orwell Estuaries Ramsar site
- Blackwater Estuary SPA
- Blackwater Estuary Ramsar site
- Dengie SPA
- Dengie Ramsar site

5.1.2 Potential impact pathways are present to the above Habitats sites and the Development Plan have been identified, considered and assessed, *i.e.* loss of functionally linked land (land outside an SPA and/ or Ramsar site), air quality, water quality and recreational disturbance.

5.1.3 Mitigation secured as part of the Appropriate Assessment for loss of functionally linked land will include embedding wintering bird surveys into each relevant phase of development, to determine whether significant populations of waterbirds or the waterbird assemblage is present within the Garden Community site. However, based on the results of the Wintering Bird Surveys carried out in 2021 – 2022 and that the habitats present are common and widespread, no impacts are predicted on the waterbirds or the waterbird assemblage from the proposals.

5.1.4 Mitigation secured as part of the Appropriate Assessment for air quality requires traffic scoping modelling to be completed as part of the application stage for the locations outlined in Appendix 5, which are located within 200 metres of coastal Habitats sites. This is necessary to determine impacts beyond reasonable scientific doubt, even though an extremely low risk of impacts from adverse air quality has been identified.

5.1.5 Mitigation secured as part of the Appropriate Assessment for water quality requires the finalised details of any further surface water and wastewater infrastructure to be secured at application stage of the TCB Garden Community, in consultation with Anglian Water.

5.1.6 Mitigation secured as part of the Appropriate Assessment for Recreational disturbance requires the delivery of on-site (including demonstrating sufficient SANGs) and off-site measures in line with the Essex Coast Recreational disturbance Avoidance and Mitigation Strategy (RAMS) to be fully embedded into the DPD to avoid adverse impacts to site integrity from the development alone and in combination with other plans and projects.

6. Conclusion

6.1.1 This Habitats Regulation Assessment, including Appropriate Assessment, considers the impacts arising from the Tendring Colchester Borders Garden Community: Development Plan Document (DPD) Submission Version Plan.

6.1.2 In applying the HRA Test 2 –the integrity test at AA stage - based on the development type and proximity to Habitats (European) sites, the potential for in-combination effects resulting from other plans or projects has also been assessed and avoidance and/or mitigation measures have been considered. Embedded mitigation measures for projects will need to be considered in project level HRA/AA reports and secured by way of any planning consent. Therefore, there will be no need for further assessment for this Local Plan.

6.1.3 Consequently, this HRA report including Appropriate Assessment indicates that the Tendring Colchester Borders Garden Community: Development Plan Document (DPD) Submission Version Plan is not predicted to have any adverse effect on integrity (AEOI) on any Habitats sites, either alone or in combination with other plans and projects. A summary of policies after mitigation has been included is in Appendix 3.

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8. Appendix

Appendix 1. HRA Screening of Individual Policies

Where mitigation is necessary to avoid Likely Significant Effects (LSE), then in line with CJEU *People over Wind* court ruling, this cannot be taken into consideration at HRA Screening Stage 1. Any policies providing mitigation are therefore also carried forward to Stage 2 Appropriate Assessment.

Policy/Option	Stour and Orwell SPA & Ramsar	Colne Estuary SPA & Ramsar	Blackwater Estuary SPA & Ramsar Site	Dengie SPA & Ramsar Site	Hamford Water SPA & Ramsar site	Abberton Reservoir SPA & Ramsar Site	Essex Estaurties SAC	Will Policy have Likely Significant Effect (LSE) on Habitats Sites?
Policy 1: Land uses and Spatial Approach	✓	✓	✓	✓	✓	✓	✓	Yes. Screen in. The HRA for the Section 1 Plan predicts impacts on changes in water quality and recreational disturbance and potentially also on protected species outside designated sites. Mitigation is necessary and must be considered at Stage 2 Appropriate Assessment.
Policy 2: Requirements for all new development	✓	✓	✓	✓	✓	✓	✓	Yes. Screen in. The HRA for the Section 1 Plan predicts impacts on changes in water quality and potentially also on protected species outside designated sites. Mitigation is necessary and must

Policy/Option	Stour and Orwell SPA & Ramsar	Colne Estuary SPA & Ramsar	Blackwater Estuary SPA & Ramsar Site	Dengie SPA & Ramsar Site	Hamford Water SPA & Ramsar site	Abberton Reservoir SPA & Ramsar Site	Essex Estaurties SAC	Will Policy have Likely Significant Effect (LSE) on Habitats Sites?
								be considered at Stage 2 Appropriate Assessment. Embedded mitigation of SANG provision needs to be guaranteed to avoid LSE from recreational disturbance from the DPD alone
Policy 3: Nature	x	x	x	x	x	x	x	No. Screen out. This policy outlines measures to protected and enhance biodiversity, geology, heritage assets, archaeology and landscape character. Measures are included to ensure green infrastructure network will provide Suitable Accessible Natural Greenspace (SANG) to reduce recreational impacts upon coastal Habitats sites, in line with the Essex RAMS.
Policy 4: Buildings, Place and Character	✓	✓	✓	✓	x	x	✓	Yes. Screen in. Triggers in-combination impacts from all residential development including student accommodation and gypsy and travellers' pitches.
Policy 5:	✓	✓	✓	x	x	x	✓	Yes. Screen in. The HRA for the Section 1 Plan predicts impacts on changes in water quality and air quality and potentially also on protected species outside designated sites. Mitigation is

Policy/Option	Stour and Orwell SPA & Ramsar	Colne Estuary SPA & Ramsar	Blackwater Estuary SPA & Ramsar Site	Dengie SPA & Ramsar Site	Hamford Water SPA & Ramsar site	Abberton Reservoir SPA & Ramsar Site	Essex Estaurties SAC	Will Policy have Likely Significant Effect (LSE) on Habitats Sites?
Economic Activity and Employment								necessary and must be considered at Stage 2 Appropriate Assessment.
Policy 6: Community and Social Infrastructure	✓	✓	✓	x	x	x	✓	Yes. Screen in. The HRA for the Section 1 Plan predicts impacts on changes in water quality and air quality and potentially also on protected species outside designated sites. Mitigation is necessary and must be considered at Stage 2 Appropriate Assessment.
Policy 7: Movement and Connections	✓	✓	✓	x	x	x	✓	Yes. Screen in. The HRA for the Section 1 Plan predicts impacts on changes in water quality and air quality and potentially also on protected species outside designated sites. Mitigation is necessary and must be considered at Stage 2 Appropriate Assessment.
Policy 8: Sustainable infrastructure	x	x	x	x	x	x	x	No. Screen out. This policy outlines measures to ensure that the development demonstrates the very highest standards of energy efficiency, water efficiency and renewable energy generation to set the design quality, transition to a low carbon future

Policy/Option	Stour and Orwell SPA & Ramsar	Colne Estuary SPA & Ramsar	Blackwater Estuary SPA & Ramsar Site	Dengie SPA & Ramsar Site	Hamford Water SPA & Ramsar site	Abberton Reservoir SPA & Ramsar Site	Essex Estaurties SAC	Will Policy have Likely Significant Effect (LSE) on Habitats Sites?
								and ensure that buildings are future-proofed and will not require retrofitting in the future.
Policy 9: Infrastructure delivery and impact mitigation	x	x	x	x	x	x	x	No. Screen out. The policy relates to relevant mechanisms on how direct provision or contribute towards the delivery of relevant infrastructure will be secured by developers. As a result, no impacts are predicted.

Appendix 2. Results of embedding mitigation within the Appropriate Assessment

Policy	Loss of Functionally Linked Land	Disturbance	Water Quality	Water Quantity	Air Pollution	Potential for In-combination Effects	With proposed mitigation embedded, can adverse impacts on site integrity of the identified Habitats sites be avoided?
Policy 1: Land uses and Spatial Approach	✓		✓			✓	No Adverse Effects On site Integrity to identified Habitats sites with mitigation secured at application stage.
Policy 2: Requirements for all new development	✓		✓			✓	No Adverse Effects On site Integrity to identified Habitats sites with mitigation secured at application stage.
Policy 4: Buildings, Place and Character						✓	No Adverse Effects On site Integrity to identified Habitats sites with mitigation secured at application stage.
Policy 5:	✓		✓				No Adverse Effects On site Integrity to identified

Policy	Loss of Functionally Linked Land	Disturbance	Water Quality	Water Quantity	Air Pollution	Potential for In-combination Effects	With proposed mitigation embedded, can adverse impacts on site integrity of the identified Habitats sites be avoided?
Economic Activity and Employment							Habitats sites with mitigation secured at application stage.
Policy 6: Community and Social Infrastructure	✓		✓				No Adverse Effects On site Integrity to identified Habitats sites with mitigation secured at application stage.
Policy 7: Movement and Connections	✓		✓				No Adverse Effects On site Integrity to identified Habitats sites with mitigation secured at application stage.

Appendix 3. Characteristics of Habitats sites

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
The Stour and Orwell estuaries These estuaries straddle the eastern part of the Essex/Suffolk border in eastern England. The estuaries include extensive mud-lats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The mud-lats 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 water birds, 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.				
Stour and Orwell Estuaries SPA EU Code: UK9009121	3676.92	Qualifying Features potentially affected: Annex I species: Over winter: Hen Harrier *Circus cyaneus* This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following	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.	**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;

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		migratory species: Over winter: • Black-tailed Godwit *Limosa limosa islandica* • Dunlin *Calidris alpina alpina* • Grey Plover *Pluvialis squatarola* • Pintail *Anas acuta* • Redshank *Tringa totanus* • Ringed Plover *Charadrius hiaticula* • Shelduck *Tadorna tadorna* • Turnstone *Arenaria interpres* The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl including:	Subject to natural change, to maintain or restore: The extent and distribution of the habitats of the qualifying features; The structure and function of the habitats of the qualifying features; The supporting processes on which the habitats of the qualifying features rely; The populations of the qualifying features; The distribution of the qualifying features within the site.	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 maritima, 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

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		• 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 totanus* • Shelduck *Tadorna tadorna* • Great Crested Grebe *Podiceps cristatus* • Curlew *Numenius arquata* • Dark-bellied Brent Goose *Branta bernicla bernicla* • Wigeon *Mareca penelope* • Goldeneye *Bucephala clangula*		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

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		• Oystercatcher *Haematopus ostralegus* • Lapwing *Vanellus vanellus* • Knot *Calidris canutus* • Turnstone *Arenaria interpres*		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 marine Habitats 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.
Stour and Orwell Estuaries Ramsar site	3676.92	Ramsar criterion 2 Contains seven nationally scarce plants:	There are no Conservation Objectives set for Ramsar sites.	Similar to Stour and Orwell Estuaries SPA (See above). A key threat identified by RIS was erosion.

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
EU Code: UK11067		• 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:		**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. The notes in the RIS for Ramsar sites of factors affecting site's ecological character are not considered as necessary for HRA screening purposes. The assessment under the provisions of the Habitats Regulations is strictly limited to the qualifying features which meet the Ramsar criteria. Where the qualifying features of a Ramsar site would or could be adversely affected by a plan or project, the tests at Appropriate Assessment would need to be based on Article 4 of the

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Species with peak counts in spring/autumn: • Redshank, *Tringa totanus totanus* • 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* • Redshank , *Tringa totanus totanus*		Ramsar Convention, which allows a Contracting Party (in this case the UK government) to delete or restrict the boundaries of sites only " in its urgent national interest".

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Colne Estuary Colne Estuary is a comparatively short and branching estuary, with five tidal arms which flow into the main river channel. The estuary has a narrow intertidal zone predominantly composed of flats of fine silt with mudflat communities typical of south-eastern estuaries. The estuary is of European / international importance for wintering Brent Geese and Black-tailed Godwit and of national importance for breeding Little Terns and five other species of wintering waders and wildfowl. The variety of habitats which include mudflat, saltmarsh, grazing marsh, sand and shingle spits, disused gravel pits and reedbeds, support outstanding assemblages of invertebrates and plants				
Colne Estuary (Mid-Essex Coast Phase 2) SPA UK9009243	2,719.93	• Dark-bellied brent goose (Branta bernicla bernicla), Non-breeding • Hen harrier (Circus cyaneus), Non-breeding • Little tern (Sternula albifrons), Breeding • Pochard (Aythya ferina), Breeding • Redshank (Tringa totanus), Non-breeding	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely	Same as Essex Estuaries SAC

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		• Ringed plover (Charadrius hiaticula), Breeding • Waterbird assemblage, Non-breeding	• The population of each of the qualifying features, and The distribution of the qualifying features within the site	
Colne Estuary Ramsar UK11015	2,719.93	**Ramsar criterion 1** The site is important due to the extent and diversity of saltmarsh present. This site, and the four other sites in the Mid-Essex Coast complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total saltmarsh in Britain **Ramsar criterion 2**	None available.	

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		The site supports 12 species of nationally scarce plants and at least 38 British Red Data Book invertebrate species. **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: Species with peak counts in winter: • *Branta bernicla bernicla*; Dark-bellied Brent Goose - 3165 individuals, representing an average of 1.4% of the population (5 year		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		peak mean 1998/9-2002/3) • *Tringa totanus tetanus*; Common redshank - 1624 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3) Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in winter: *Limosa limosa islandica*; Black-tailed godwit - 402 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9- 2002/3)		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Blackwater Estuary (Mid-Essex Coast Phase 4) The Blackwater Estuary is the largest estuary in Essex north of the Thames and, is one of the largest estuarine complexes in East Anglia. Its mudflats, fringed by saltmarsh on the upper shores, support internationally and nationally important numbers of overwintering waterfowl. Shingle and shell banks and offshore islands are also a feature of the tidal flats. The surrounding terrestrial habitats; the sea wall, ancient grazing marsh and its associated fleet and ditch systems, plus semi-improved grassland are also of high conservation interest. This rich mosaic of habitats supports an outstanding assemblage of nationally scarce plants and a nationally important assemblage of rare invertebrates. There are 16 British Red Data Book species and 94 notable and local species.				
Blackwater Estuary SPA (Mid-Essex Coast Phase 4) UK9009245	4395.15	• A046a Branta bernicla bernicla; Dark-bellied brent goose (Non-breeding) • A059 Aythya ferina; Common pochard (Breeding) • A082 Circus cyaneus; Hen harrier (Non-breeding) • A137 Charadrius hiaticula; Ringed plover (Breeding)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely	Same as Essex Estuaries SAC

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		• A141 Pluvialis squatarola; Grey plover (Non-breeding) • A149 Calidris alpina alpina; Dunlin (Non-breeding) • A156 Limosa limosa islandica; Black-tailed godwit (Non-breeding) • A195 Sterna albifrons; Little tern (Breeding) • Waterbird assemblage Further information can be found via Natural England's Supplementary Advice.	• The population of each of the qualifying features, and, The distribution of the qualifying features within the site.	
Blackwater Estuary Ramsar site (Mid-Essex Coast Phase 4)	4395.15	Ramsar criterion 1 Qualifies by virtue of the extent and diversity of saltmarsh habitat present. This site, and the four others in the Mid-Essex Coast complex,	None available.	None available.

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
UK11007		includes a total of 3,237 ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. <u>Ramsar criterion 2</u> The invertebrate fauna is well represented and includes at least 16 British Red Data Book species. In descending order of rarity these are: Endangered: a water beetle *Paracymus aeneus*; Vulnerable: a damselfly *Lestes dryas*, the flies *Aedes flavescens*, *Erioptera bivittata*, *Hybomitra expollicata* and the spiders *Heliophanus auratus* and *Trichopterna cito*; Rare: the beetles *Baris scolopacea*, *Philonthus punctus*, *Graptodytes bilineatus* and *Malachius vulneratus*, the flies *Campsicemus magius* and *Myopites eximia*, the moths		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Idaea ochrata and *Malacosoma castrensis* and the spider *Euophrys*. Ramsar criterion 3 This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. Ramsar criterion 5 Assemblages of international importance; species with peak counts in winter; 105061 waterfowl (5 year peak mean 1998/99-2002/2003) Ramsar criterion 6 Species/populations occurring at levels of international importance: Species with peak counts in winter:		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		• *Pluvialis squatarola*; Grey plover • *Calidris alpina alpina*; Dunlin • *Limosa limosa islandica;* Black-tailed godwit Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in winter: • *Tadorna tadorna*; Common shelduck • *Pluvialis apricaria apricaria; European golden plover* • *Tringa totanus tetanus; Common redshank*		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Dengie Dengie is a large and remote area of tidal mudflat and saltmarsh at the eastern end of the Dengie peninsula, between the Blackwater and Crouch Estuaries. The saltmarsh is the largest continuous example of its type in Essex. Foreshore, saltmarsh and beaches support an outstanding assemblage of rare coastal flora. It hosts internationally and nationally important wintering populations of wildfowl and waders, and in summer supports a range of breeding coastal birds including rarities. The formation of cockleshell spits and beaches is of geomorphological interest				
Dengie SPA (Mid-Essex Coast Phase 1) UK9009242	3127.23	• *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding) • *Pluvialis squatarola;* Grey plover (Non-breeding) • *Circus cyaneus* Hen harrier (Non-breeding) • *Calidris canutus;* Knot (Non-breeding) • Waterbird assemblage (Non-breeding)	The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • 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 qualifying features	Same as Essex Estuaries SAC

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Further information can be found via Natural England's Supplementary Advice.	the distribution of qualifying features within the site	
Dengie Ramsar Site (Mid-Essex Coast Phase 1) UK9009242	3127.23	Ramsar criterion 1 Qualifies by virtue of the extent and diversity of saltmarsh habitat present. Dengie, and the four other sites in the Mid-Essex Coast Ramsar site complex, includes a total of 3,237 ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain. Ramsar criterion 2 Dengie supports a number of rare plant and animal species. The Dengie has 11 species of nationally scarce plants: sea kale *Crambe maritima*, sea barley *Hordeum marinum*, golden samphire *Inula*	None available.	None available.

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		crithmoides, lax flowered sea lavender *Limonium humile*, the glassworts *Sarcocornia perennis* and *Salicornia pusilla*, small cord-grass *Spartina maritima*, shrubby sea-blite *Suaeda vera*, and the eelgrasses *Zostera angustifolia*, *Z. marina* and *Z. noltei*. The invertebrate fauna includes the following Red Data Book species: a weevil *Baris scolopacea*, a horsefly *Atylotus latistriatus* and a jumping spider *Euophrys browningi*. Ramsar criterion 3 This site supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain. Ramsar criterion 5		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Assemblages of international importance; species with peak counts in winter; 43828 waterfowl (5 year peak mean 1998/99-2002/2003) <u>Ramsar criterion 6</u> Species/populations occurring at levels of international importance: Species with peak counts in winter: • *Tringa totanus tetanus; Common redshank* Species/populations identified subsequent to designation for possible future consideration under criterion 6. Species with peak counts in winter:		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		• *Branta bernicla bernicla*; Dark-bellied brent goose • *Haematopus ostralegus ostralegus*; Eurasian oystercatcher • *Pluvialis squatarola;* Grey plover • *Limosa lapponica lapponica*; Bar-tailed godwit • *Calidris canutus*; Red knot		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Essex Estuaries The Mid-Essex Coast comprises an extensive complex of estuaries and intertidal sand and silt flats, including several islands, shingle and shell beaches and extensive areas of saltmarsh. The proposed SPA follows the boundaries of five SSSIs: the Colne Estuary, the Blackwater Estuary, Dengie, the River Crouch Marshes and Foulness.				
Essex Estuaries SAC UK0013690	46109.95	• H1110 Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks • H1130 Estuaries • H1140 Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats. • H1310 Salicornia and other annuals colonizing mud and sand; Glasswort and other annuals	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	**1. 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 SIP area are important for waterbirds and are also threatened by sea level rise because most are near or below mean

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		colonising mud and sand • H1320 Spartina swards (*Spartinion maritimae*); Cord-grass swards • H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) • H1420 Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)		high tide level, currently protected behind seawalls. **2. 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. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				locations and times of year are most sensitive. **3. Fisheries: Commercial marine and estuarine** Commercial fishing activities categorised as Amber or Green under Defra's revised approach to commercial fisheries in EMSs are being assessed by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA) to determine whether management is required. For activities categorised as Amber and Green these assessments should take account of any relevant in-combination effects with other fishing activities. 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. **4. Planning Permission: general** Several of the issues affecting the Essex Estuaries and the management of

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				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 (perhaps summarised as sensitivity maps and matrices for the SIP area). Difficult issues include: (a) Assessing the cumulative effects of numerous, small and often 'non-standard' developments (b) Development outside the SPA/SAC boundaries 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. **5. Changes in species distributions** Declines in the numbers of some of the waterbird species using the Essex Estuaries SIP area may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change. For

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				example, milder winters may be allowing birds to overwinter closer to their northern breeding grounds, or changes on the breeding grounds may be reducing breeding success. When assessing SPA condition, distinguishing these types of large-scale effect from effects produced by changes within the site itself is important. **6. Invasive Species**: An increase in Pacific oyster Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. The importance of Pacific oysters for the local shellfish industry is recognised, however Natural England would not like to see an overall increase in the extent of foreshore across the EMS populated by Pacific oysters. Other non-native invasive species such as the American whelk tingle Urosalpinx

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				cinerea and Slipper limpet Crepidula fornicata are known to occupy subtidal muddy habitats, potentially impacting native communities through competition for resources and predation. **7. Fisheries: Recreational marine and estuarine** Recreational bait digging may impact waterbirds by reducing prey availability and creating disturbance in intertidal feeding areas. It could also 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. **8. Fisheries: Recreational marine and estuarine** Bottom towed fishing gear (i.e. any fishing instrument designed to take sea fisheries resources from the seabed) has been

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				categorised as a 'Red' for the interest features listed, specifically the seagrass beds Zostera spp, a sub-feature of the SAC, as part of Defra's revised approach to commercial fisheries management in European Marine Sites (EMS). Appropriate management measures will be implemented and enforced by Kent and Essex Inshore Fisheries and Conservation Authority (IFCA) who have put in place the 'Bottom Towed Fishing Gear Byelaw' within the SAC to prohibit the above fishing gear being used over the majority of known seagrass beds.

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Outer Thames Estuary The Outer Thames Estuary SPA is located on the east coast of England between the counties of Norfolk (on the north side) and Kent (on the south side) and extends into the North Sea. The site comprises areas of shallow and deeper water, high tidal current streams and a range of mobile mud, sand, silt and gravely sediments extending into the marine environment, incorporating areas of sand banks often exposed at low tide. Intertidal mud and sand flats are found further towards the coast and within creeks and inlets inland down the Blyth estuary and the Crouch and Roach estuaries. The diversity of marine habitats and associated species is reflected in existing statutory protected area designations, some of which overlap or about the SPA.				
Outer Thames Estuary SPA UK9020309	392451.66	• A001 *Gavia stellata*; Red-throated diver (Non-breeding) • A193 *Sterna hirundo*; Common tern (Breeding) • A195 *Sternula albifrons*; Little tern (Breeding)	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: • The extent and distribution of the habitats of the qualifying features • The structure and function of the habitats of the qualifying features • The supporting processes on which the habitats of the qualifying features rely	Fisheries: Commercial marine and estuarine: Commercial fishing activities categorised as 'amber or green' under Defra's revised approach to commercial fisheries in European Marine Sites (EMS) require assessment and (where appropriate) management. This assessment will be undertaken by the Eastern IFCA and the Kent & Essex IFCA, and the Marine Management Organisation. For activities categorised as 'green', these assessments should take account of any in-combination effects of amber activities,

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			• The population of each of the qualifying features, and, The distribution of the qualifying features within the site	and/or appropriate plans or projects, in the site. The gear types being assessed are towed demersal gear and dredges, and suction dredges for cockles as well as static/passive fishing gear methods such as set gillnets and drift netting represent potentially the most serious direct risk from fishing activity to the birds themselves. Disturbance and displacement effects may arise from boat movements associated with fishing activities. Removal of fish and larger molluscs can have a significant impact on the structure and functioning of benthic communities. Entanglement in static fishing nets is an important cause of death for red-throated divers in the UK waters. Netting is widespread across the sandbanks but is seasonal and occurs primarily when the Red-throated diver population is not at its peak. The scale of by-catch within the site has been assessed by the Kent & Essex IFCA and

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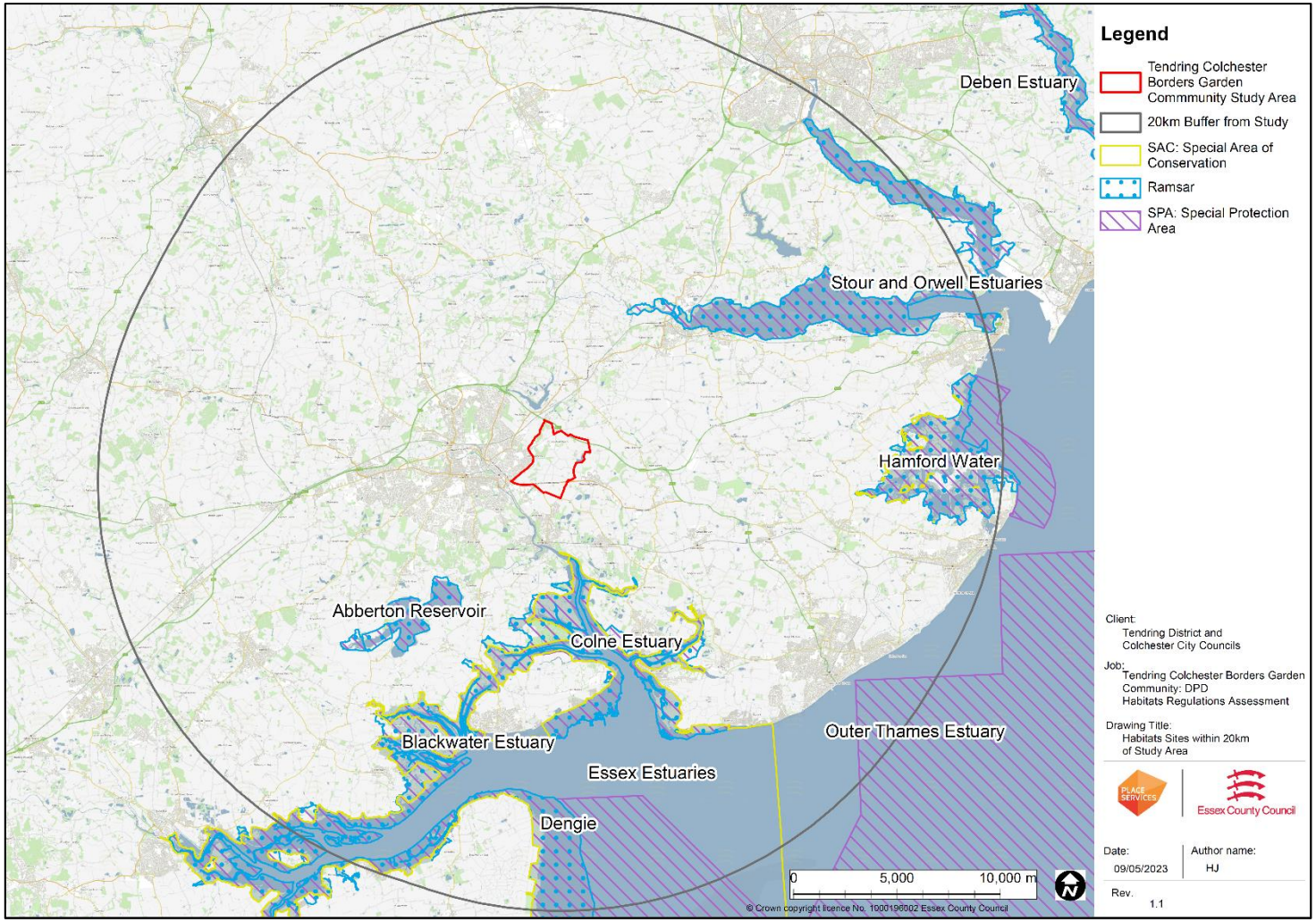
				was not found to be problematic and so can be deemed to be low-risk.

Appendix 4. Habitats sites within 20km of the Tendring Colchester Borders Garden Community



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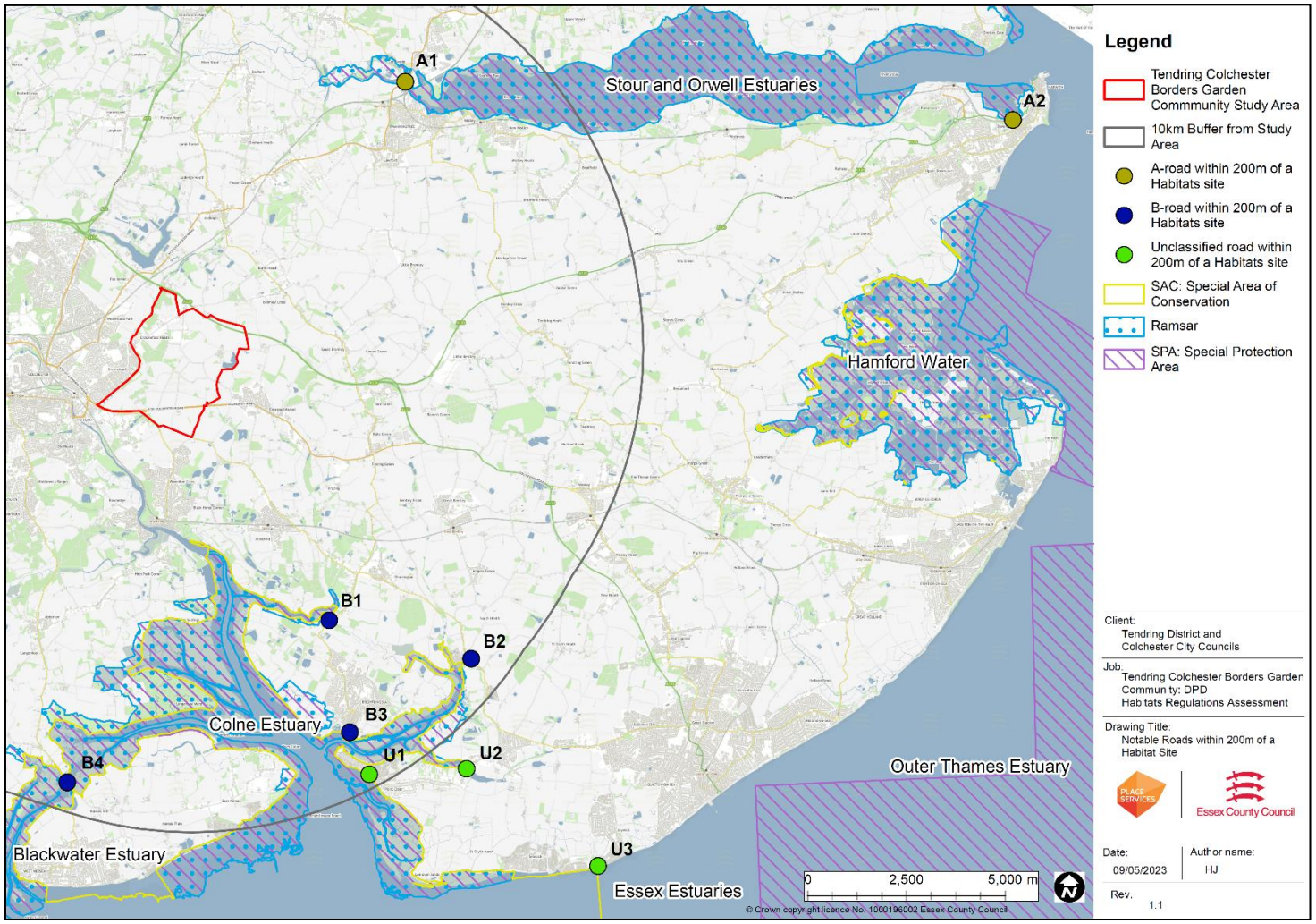
Appendix 5. Roads within 200m of Habitats sites



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