A Better Connected Essex:
Local Transport Plan 4
Habitats Regulations Assessment
Screening Report

July 2025

Essex County Council

About Place Services

Place Services is a leading public sector provider of integrated environmental assessment, planning, design and management services. Our combination of specialist skills and experience means that we are uniquely qualified to help public organisations meet the requirements of the planning process, create practical design solutions and deliver environmental stewardship.

Our Natural Environment Team has expertise of arboriculture, biodiversity, countryside management and ecology. This multidisciplinary approach brings together a wide range of experience, whether it is for large complex briefs or small discrete projects. We aim to help our clients protect and improve the natural environment through their planning, regulatory or land management activities. This approach ensures that not only that our clients will fulfil their legal duties towards the natural environment, but they do so in a way that brings positive benefits to wildlife and people.

Address: County Hall**,** Market Road**,** Chelmsford**,** Essex, CM1 1QH

Contact no: 0333 013 6840

Email: placeservicesecology@essex.gov.uk

Website: www.placeservices.gov.uk

VAT number: GB 104 2528 13

Report Checking and Version Control

Prepared by:

Sue Hooton | Principal Ecological Consultant | sue.hooton@essex.gov.uk
Hamish Jackson | Senior Ecological Consultant | hamish.jackson@essex.gov.uk

Report version control:

Version	Date	Author	Description of changes
1.1	24.03.25	Sue Hooton & Gen Broad	Drafted
1.2	28.03.25	Hamish Jackson	Reviewed internally
1.3	08.07.25	Sue Hooton	Drafted
1.4	09.07.25	Hamish Jackson	Reviewed internally

Contents

List of Tables

List of Figures

List of Appendices

Glossary of Acronyms

AA	Appropriate Assessment
AEOI	Adverse Effect On site Integrity
AMR	Annual Monitoring Report
CEMP	Construction Environmental Management Plan
EA	Environment Agency
EMS	European Marine Site
Ha	Hectare
HRA	Habitats Regulations Assessment
IRZ	Impact Risk Zone
Km	Kilometre
LPA	Local Planning Authority
LTP	Local Transport Plan
LSE	Likely Significant Effect
NE	Natural England
NPPF	National Planning Policy Framework
NSIP	National Strategic Infrastructure Project
PRoW	Public Right of Way
RIS	Ramsar Information Sheet
SAC	Special Area of Conservation
SACO	Supplementary Advice on Conservation Objectives
SIP	Site Improvement Plan
SPA	Special Protection Area
SSSI	Site of Specific Scientific Interest
ZoI	Zone of Influence

Summary

A Habitats Regulations Assessment (HRA) has been prepared by Place Services for the Essex Local Transport Plan 4 to enable Essex County Council to comply with Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

This report includes the first stage of the HRA process: it aims to consider the elements of the Essex Local Transport Plan 4 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 at applicant stage.

There are a wide range of potential impacts upon Habitats sites which could arise as a result of components of the Local Transport Plan 4. A few potential schemes in Implementation Plans are considered to have potential to result in Likely Significant Effect, without mitigation for impacts on functionally linked land, water quality, air quality and disturbance.

Although the policies in the Local Transport Plan 4 can be screened out, it is not possible to rule out Likely Significant Effects on Habitats (European) sites for all of the schemes at Stage 1 HRA Screening. There is therefore a need for further assessment of impacts and Stage 2 Appropriate Assessment will be necessary when sufficient design details on schemes are available to prepare a project level HRA.

Subject to Natural England's review, this HRA Screening Report, concludes that, without mitigation embedded, the Essex Local Transport Plan 4 is not of itself predicted to have Likely Significant Effect on the designated features of any Habitats site, either alone or in combination with other plans and projects. The requirement for the Plan to undertake further assessment of the LTP4 under the Conservation of Habitats and Species Regulations 2017 (as amended) is therefore screened out.

1. Introduction

1.1 The Purpose of This Report

1.1.1 This report is to provide a Habitats Regulations Assessment (HRA) for the Essex Local Transport 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 Authority (in this instance Essex County 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 Habitats site[1] as defined in the National Planning Policy Framework (NPPF, 2024).

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 policies relate to land within the Zone of Influence (ZOI) for a number of Habitats sites, it is not possible to rule out any Likely Significant Effect, without mitigation in place.

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

2. […] 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.

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

[1] 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 the NPPF (December 2024). 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.

4. […] 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 as required by Regulation 63 of The Conservation of Habitats and Species Regulations 2017 (as amended).

1.1.6 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].

1.1.7 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).

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

1.1.9 This HRA report aims to:

- Identify the Habitats sites within 20km of any proposed schemes within the Essex Local Transport Plan 4.
- Summarise the reasons for designation and Conservation Objectives for each site to be considered in this assessment.
- Screen the Essex Local Transport Plan 4 for its potential to impact upon any Habitats sites.
- 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.

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

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

1.2 Overview of the Essex Transport Strategy (Local Transport Plan) 4

1.2.1 Since LTP (2011), the short-term programme of County Council investment has been updated and A Better Connected Essex Local Transport Plan has been prepared to reflect this (henceforth called the LTP 4). This LTP sets out the vision for transport in Essex. Every local transport authority must produce and adopt an LTP. This is the fourth plan for Essex and contains a vision for the next 25 years to 2050 and how the County Council will deliver on these objectives.

1.2.2 It will provide both a long-term Plan for transport in Essex and make recommendations for short-, medium- and long-term transport improvements. This Plan will set out how it proposes to connect our communities to enable residents to travel to where they want to go and allow local businesses to trade effectively with their customers and suppliers. This plan also sets out how the County Council proposes to create more sustainable places and communities providing essential policy direction to inform the local planning authorities' Local Plans for growth and development.

1.2.3 The Local Transport Plan is led by both the Council's vision for transport in Essex and what evidence (see Chapters 4-6) tells it what is needed and where. The transport vision is: **"To understand the travel needs of people in Essex, to raise awareness of the travel options people have, and to enable more sustainable choices and journeys to be made".**

1.2.4 This, the fourth transport strategy for Essex, focuses on real outcomes for its residents. It will provide both a long-term plan for transport but will also tackle short- and medium-term challenges. Transport is often considered in isolation, but it is an enabler, underpinning everything we do, helping to deliver economic growth, productivity and prosperity, providing access to our homes, services, education, work and leisure.

1.2.5 Further details can be found at: Essex Transport Strategy - Essex County Council - Citizen Space.

1.2.6 The LTP4 is in two parts: the first sets out Essex County Council's long-term transport strategy to 2031 and the second part includes Implementation Plans in its Focus Areas (shown in Figure 2), setting out how the strategy could be delivered over the short, medium and long term, using a variety of funding and delivery mechanisms. To focus on the changes necessary to deliver a wider ambition for Essex, the LTP strategy has three broad themes:

- Supporting people: health, wellbeing and independence

- Creating sustainable places and communities
- Connecting people, places and businesses

1.2.7 Beneath these three themes are nine outcomes, with activities identified, which are at the heart of the LTP4, and the County Council will monitor them to demonstrate how the strategy is having a positive impact on people's lives. Table 5.4 of the LTP4 strategy lists the planned activities to reduce transport's impact on the environment.

1.2.8 The policies are listed in Table 1 below with full supporting text included in Appendix 7:

Table 1. Proposed strategic transport policies within the LTP4 2025

Policy 1. Understanding the travel needs of people and businesses of Essex.
We will work with partners to ensure that the travel needs of people and businesses in Essex is clearly understood in how transport services are planned and delivered, including making effective use of the latest digital technology.
Policy 2. Access to Key Services.
We will work with partners and service providers to ensure that everyone living, working and investing in Essex can access key services with a particular focus on resolving inequalities in access to the transport network.
Policy 3. Sustainable and Active Travel Choices.
We will encourage existing communities and require new developments to maximise the use of sustainable forms of travel for a healthier, safer, and more resilient Essex, with better access to a wider range of opportunities.
Policy 4. Being Safe and Feeling Safe.
We will ensure that travel in Essex is safe and feels safe for all users of the transport network.
Policy 5. Our Built Environment.
We will aim to project the historic and built environment from the harmful effects of transport and strive to make places more people focussed with an emphasis on placemaking to make spaces safe and accessible for all.
Policy 6. Integrating Planning and Transport.
We will work with partners to put people and places at the heart of our decisions to secure new development at the most appropriate and sustainable locations. We will consider land use planning and travel planning together, to help reduce the number and length of journeys that people need to make.
Policy 7. Carbon Reduction.
We are committed to the decarbonisation of transport within Essex by 2050; and to implement measures to ensure our transport system is resilient to the impacts of climate change.

Policy 8. Our Natural Environment.
We will aim to reduce the impact of transport on the natural environment to minimise pollution and contribute to biodiversity net gain.
Policy 9. Maintenance and Asset Management.
We will work with Partners to ensure that the transport network is safe to use, resilient to the impacts of climate change, and fit for purpose, especially during periods of adverse weather.
Policy 10. Connectivity and Journey Reliability for All Modes of Transport.
We will work with Partners to ensure that our transport networks support sustainable and high quality places which promote connectivity and reliable journeys for all.
Policy 11. Freight Movement.
We will work with Partners to support the efficient and sustainable movement of freight
Policy 12. Sustainable Transport.
We will support a sustainable transport network that assists inclusive economic growth and connectivity and enables access to key services.

1.2.9 The Implementation Plans for each of the Focus Areas set out the 2025 list of transport schemes, which require HRA screening. The Implementation Plans for the LTP 4 will be reviewed over time to take account of any changes in priorities and funding levels.

1.2.10 The LTP 4 aims to provide more effective use of Essex's transport network and reduce the level of demand for car travel. The LTP is led by the vision for a Better Connected Essex and what the evidence tells the County Council to, specifically:

- Improve how the transport network works and is maintained for the long-term.
- Make the most effective improvements where these are necessary.
- Consider longer term changes affecting Essex and how and when people travel.

1.2.11 This approach has shaped a series of Implementation Plans for different geographies, detailing how we will work with other organisations and the community to deliver the most effective projects.

1.2.12 In the County's larger towns. this will see the development of facilities to make walking, cycling and public transport a viable alternative to personal transport. In order to meet these local transport aims, 35 Strategic Transport schemes (listed in Tables 11 and 14) and 34 Countywide transport schemes (listed in Tables 12 and 15) are proposed. The Implementation Plans hope to see the commencement and completion of projects that support economic growth, invest in maintaining and improving transport and increase the rate of decarbonisation.

1.2.13 Each Implementation Plan Focus Area also has proposed schemes which need to be screened for Likely Significant Effects on Habitats sites to inform the process of identifying

which transport schemes to take forward to design stage. These are listed in each of the Implementation Plans and listed in Table 16 and 17).

1.3 Habitats (European) sites

1.3.1 Habitats sites is the term used in the NPPF (December 2024) to describe any sites 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. These now form part of the UK national network of sites for nature protection. The aim of the network is the long-term survival of UK's most valuable and threatened species and habitats.

1.3.2 All Special Protection Areas (SPAs) are designated for birds and Special Areas of Conservation (SACs) are designated for other species, and for habitats. Wetlands of International Importance (Ramsar sites) are also part of the National Network of sites. This is because all SPAs and SACs are comprised of Sites of Special Scientific Interest (SSSIs) and all Ramsar sites in England are SSSIs. Together, SPAs, SACs and Ramsar sites make up the Habitats sites in England. The following table (Table 3) offers a description and explanation of SPAs, SACs and Ramsar sites.

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

Table 2. 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: The Blackwater Estuary is internationally important for wintering and breeding waterfowl. *Legislation: Conservation of Habitats and Species Regulations 2017 (as amended).*
Special Areas of Conservation (SACs)
SACs are areas designated to protect habitat types that are in danger of disappearance, have a small natural range, or are highly characteristic of the region; and to protect species that are endangered, vulnerable, rare, or endemic. Example: Essex Estuaries SAC has Atlantic salt meadows, mudflats and sandflats *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. Example: Benfleet and Southend Marshes Ramsar site is important due to bird assemblages of international importance in winter and spring. 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 Four Stage Approach

2.1.1 The legislation does not require a fixed method for preparing a HRA report, 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 Figure 1 taken in the DTA Publications Handbook[3]. Each of the stages contains a number of sequential steps, comprising the tests or procedures required by the Conservation of Habitats and Species Regulations 2017 (as amended).

2.1.2 This HRA includes the first sequential stage, i.e., screening. The four stages are outlined and Stage 1 is explored in further detail below.

Stage 1 - Screening

2.1.3 The process identifies whether a Plan, either alone or in combination with other plans or projects, is likely to have a significant effect on a Habitats site. Current guidance on HRA recommends that the screening stage should comprise the following elements:

- Determining whether the Plan is directly connected with or necessary to the management of the site – if it is then no further assessment is necessary,
- Identify Habitats (European) sites in and around the Plan area,
- Review the policies and proposals in the Plan and consider the potential effects on Habitats (European) sites (magnitude, duration, location, extent),
- Examine other plans and projects that could, 'in combination', have the potential to have significant effects on a Habitats (European) site,
- Produce screening assessment – record of screening analysis.

2.1.4 The screening exercise should be approached on a precautionary basis. If the screening stage concludes that there are likely to be no significant impacts on Habitats (European) sites, then there will be no need to progress to Stage 2. If effects are judged likely or uncertain, the precautionary principle is applied, and the Plan is then considered under Stage 2.

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

Stage 2 - Appropriate Assessment (AA)

2.1.5 Where a plan 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.

2.1.6 An AA assesses the impacts of the proposed plan against the conservation objectives of the qualifying features of the relevant Habitats sites. Should the AA identify adverse effects, then alternatives, such as changes to the Plan, should be examined to avoid any potential damaging effects. If no alternative exists, mitigation measures are identified and evaluated.

2.1.7 Some policies of a plan can be used to mitigate some of the potential Likely Significant Effects 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.

2.1.8 Appropriate Assessment should be undertaken by the competent authority and should assess every aspect of the Minerals and Waste Local Plan which can by itself, or in combination with other plans and projects, affect the Habitats sites' Conservation Objectives. The assessment must consider the implications for each qualifying feature of each potentially affected Habitats site.

2.1.9 If effects remain after all alternatives and mitigation measures have been considered, the HRA proceeds to Stage 3.

Stage 3 - Assessment of Alternative Solutions

2.1.10 A HRA only moves to Stage 3 when significant effects on the integrity of Habitats sites remain, following the consideration of alternatives and development of mitigation measures in Stage 2.

Stage 4 - Imperative Reasons of Overriding Public Interest and Compensatory Measures

2.1.11 Stage 4 involves the process of identifying 'imperative reasons of overriding public interest' ('IROPI'). It must demonstrate that no alternatives exist and identify potential compensatory measures. This stage is a last resort and should be avoided if at all possible. If significant negative effects remain, a Plan may only be adopted under such circumstances if there are imperative reasons of overriding public interest, where it is deemed that the Plan should proceed.

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

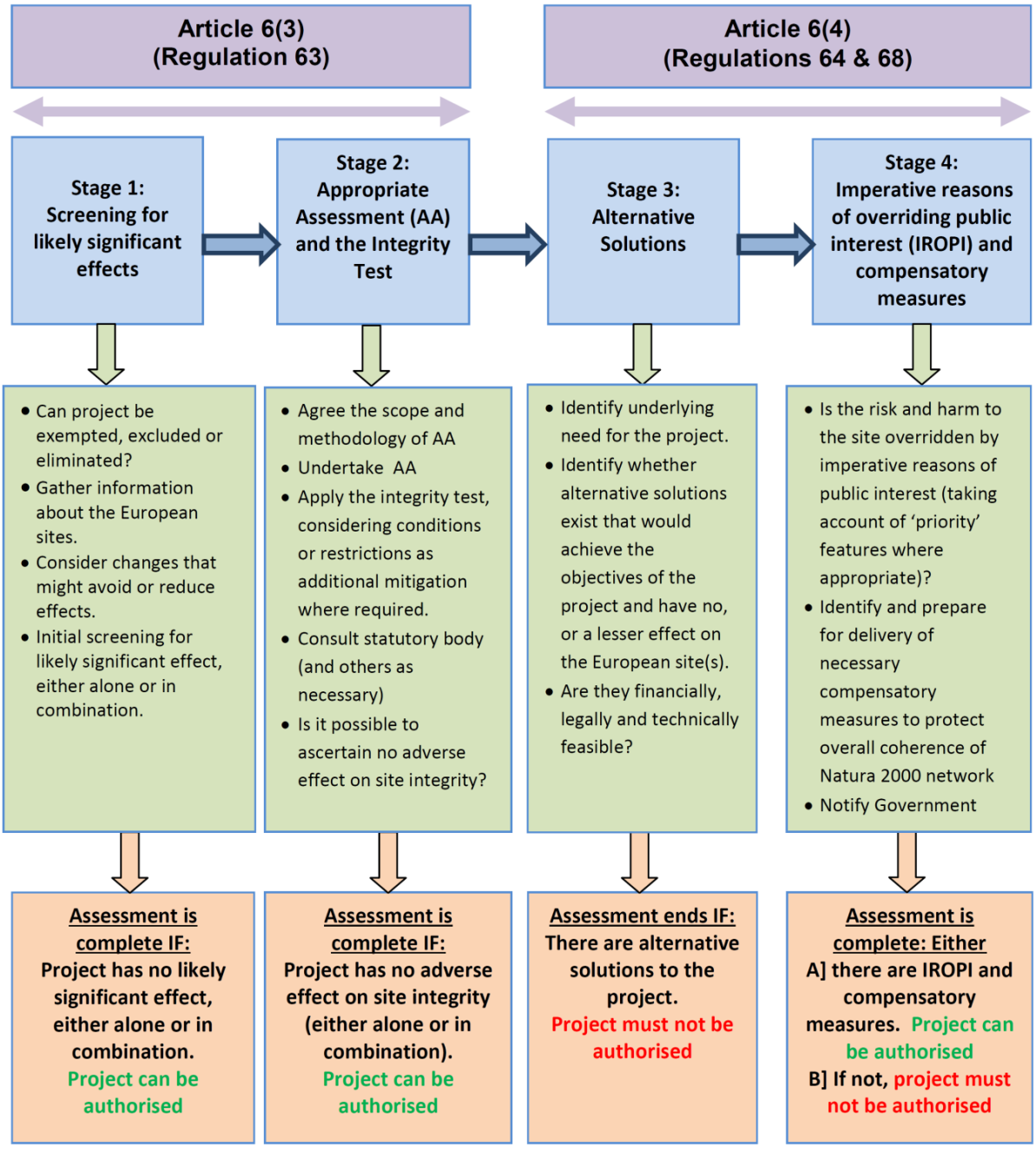


Table 3. Stages of the Habitats Regulations Assessment Process

Stage	Tasks	Outcome
Stage 1 HRA Screening (Regulation 63)	- List the policies and nominated sites . - Identify potential effects to a Habitats site from the Plan. - Assess if any significant effects on a Habitats site from the Plan, either alone or in combination, with other plans or projects.	Where significant effects are unlikely, prepare a 'finding of no significant effect' report and the Plan can be adopted. Where significant effects are judged likely, either alone or in combination or there is a lack of information to prove otherwise, go to Stage 2. *People over Wind CJEU ruling (April 2018) means that it is not possible to consider mitigation measures when screening for impacts.*
Stage 2 Appropriate Assessment (Regulation 63)	- List policies and allocations within scope. - List Habitats sites within scope. - Set out methodology of the AA and agree with Natural England. - Assess the implication of the policies and allocations against the designated features and species not listed but which could be using the habitat features. - Apply the integrity test. - Where there may be adverse effects on the ecological integrity of Habitats sites, in view of the site's conservation objectives, consider mitigation measures.	If no adverse effect on site integrity either alone or in combination, the Plan can be adopted. If it is not possible to ascertain no adverse effect on site integrity, go to Stage 3. Holohan CJEU ruling (November 2018) now imposes more detailed requirements on the competent authority at Appropriate Assessment stage.

Stage	Tasks	Outcome
	- Ensure mitigation is embedded into the Local Plan. - Assess in combination effects with other plans and projects. - Reapply the integrity test. Where there may be adverse effects on the ecological integrity of Habitats sites, in view of the Site's conservation objectives, consider mitigation measures. - Formally Consult Natural England.	
Stage 3 Assessment of alternative solutions (Regulation 64)	- Identify whether alternative solutions exist that would achieve the objectives of the Plan and have no or a lesser effect on the integrity of a Habitats site(s). - If effects remain after alternative solutions have been considered, consider whether the policies and/or projects should proceed with modification or the policies (and projects) be removed from the Plan.	If there are alternative solutions to the Plan, it cannot be adopted without modification. If not financially, legally, or technically viable alternatives exist, go to Stage 4.
Stage 4 IROPI (Regulation 64)	- Consider if the risk and harm to the Habitats site is over-ridden by Imperative Reasons of Over-riding Public Interest. - Identify and prepare delivery of compensatory measures	If there are IROPI and compensatory measures, the Plan can be adopted If there are no IROPI the Plan cannot be adopted.

Stage	Tasks	Outcome
	to protect the overall coherence of the UK national network and notify Government.	

2.2 Screening Methodology - Assessment of Likely Significant Effects

2.2.1 The screening stage identifies whether the Essex Local Transport Plan 4 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 Essex Local Transport Plan 4 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.

2.2.2 In line with the 2018 Court judgment (CJEU People Over Wind v Coillte Teoranta C-323/17) mitigation measures designed by the Plan to avoid or reduce harmful effects upon a Habitats site cannot be taken into account when carrying out a screening assessment.

2.2.3 Mitigation measures may be those which avoid, cancel or reduce effects. They may be embedded into the Plan, and can also be called embedded measures.

2.2.4 Consequently, any aspect of the Plan which cannot be ruled out as having Likely Significant Effects should continue to Stage 2 Appropriate Assessment.

2.2.5 It has been established that this Plan requires an HRA for the following reasons, outlined in Table 4 below:

Table 4. Can the plan be exempt, excluded or eliminated from requiring a HRA?

Stage	Outcome
Can the plan be exempt?	No, the LTP4 is not directly connected with or necessary to management of any Habitats sites.

Stage	Outcome
Can the plan be excluded?	No, the LTP4 cannot be excluded as it falls within the definition of being a plan within the Habitats Regulations.
Can the plan be eliminated?	No, the LTP4 as a whole cannot be eliminated as it proposes a number of schemes which may have a Likely Significant Effect on one or more Habitats site. However, many individual schemes can be eliminated.

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

2.2.7 'Likely' and 'Significant effects' have been defined through case law. 'Likely' means the risk or possibility of significant effects occurring. An effect is 'likely' if it cannot be excluded on the basis of objective information.

2.2.8 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 Essex LTP4 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.

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

2.2.10 A risk-based approach involving the application of the precautionary principle has been used in the assessment. A conclusion of 'no significant effect' is only reached where it is considered very unlikely, based on current knowledge and the information available, that a proposal in the Essex Local Transport Plan 4 would have a significant effect on the integrity of a Habitats site.

2.2.11 Transport policies, schemes and Implementation plans are screened out where they would not result in development because they either set out criteria relating to development proposed under other policies, or are very general in nature, or they seek to protect the natural environment.

2.2.12 However, some transport policies may have a significant positive effect by requiring mitigation measures which are designed to avoid, eliminate, cancel or reduce the effects upon Habitats sites. As these and transport schemes to be delivered will not undermine the conservation objectives of the Habitats sites, they therefore do not need to be taken forward for further consideration in the Appropriate Assessment**.**

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

- DTA Publications Handbook: https://www.dtapublications.co.uk/
- 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

2.3 Identifying Habitats sites, their Conservation Objectives and Qualifying Features

2.3.1 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 Essex Local Transport Plan 4.

2.3.2 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

2.3.3 The Local Transport Plan has the potential to impact areas that are beyond the Plan's area boundary. As a starting point, a distance of 20km from the county boundary was used to identify Habitats sites which could be affected by impacts relating to the Local Transport Plan; these are listed below. They include all Habitats sites within Essex and

those within 20km of Essex, to take into account any windfall sites that may arise. These are listed in Table 5 below.

Table 5. Habitats sites within 20 km of Essex County Boundary

Site	Location
Abberton Reservoir SPA and Ramsar site	Abberton Reservoir
Alde-Ore Estuary SPA	Suffolk coast
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site	Estuary from Maldon to Mersea Island
Benfleet and Southend Marshes SPA and Ramsar site	South Essex on the Thames coastline coast, including Hadleigh Ray between the north east coastline of Canvey Island and southern edge of Hadleigh Castle County Park.
Chippenham Fen Ramsar site	Cambridgeshire
Colne Estuary (Mid-Essex Coast Phase 2) SPA	Estuary between Tendring District and Colchester City
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site	Estuaries from South Woodham Ferrers, between Dengie peninsula and Foulness
Deben Estuary Ramsar site	Suffolk coast
Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar site	Dengie peninsula, east of Maldon and Burnham-on-Crouch
Devils Dyke SAC	Newmarket, Suffolk
Epping Forest SAC	South West Essex
Essex Estuaries SAC	Estuaries from Clacton on Sea to Southend

Site	Location
Eversden and Wimpole Woods SAC	South Cambridgeshire
Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar	Covers southeast corner of Essex, near Southend
Hamford Water SAC, SPA and Ramsar site	Essex coast between Harwich and Clacton
Lee Valley SPA and Ramsar site	Hertforsdshire/Essex boundary
North Downlands SAC	Kent
Medway Estuary and Marshes SPA and Ramsar site	Estuary near Sheerness (Kent)
Sandlings SPA	Suffolk coast
Staverton Park & The Thicks Wantisden SAC	Suffolk
Stour and Orwell Estuaries SPA and Ramsar site	Suffolk/Essex boundary
Thames Estuary & Marshes SPA and Ramsar site	South Essex
The Swale SPA	Kent
Wicken Fen Ramsar site	Cambridgeshire
Wormley-Hoddensdonpark Woods SAC	Hertfordshire
Orfordness-Shingle Street SAC	Suffolk coast

2.3.4 A map of all above Habitats sites with the 20 km radius of the Essex County boundary can be found in Appendix 2.

2.4 Identifying potential effects to a Habitats site from the Local Transport Plan 4 and Use of Impact Pathways

2.4.1 There are a wide range of potential impacts upon Habitats sites. These may create direct or indirect effects, be short, medium or long term, temporary or permanent, continuous or intermittent, reversible or irreversible, and they could be positive, negative or neutral.

2.4.2 The following potential pathways for unmitigated effects arising from the Essex Local Transport Plan 4 are grouped into categories, and these are summarised below:

- **Land take** - Direct or indirect impacts to a Habitats site causing habitat loss, degradation or fragmentation.
- **Impacts on protected species outside the designated site** - e.g. loss of functionally linked land (outside Habitats sites). The impact on site features (species) which travel outside the protected sites may be relevant where a development could result in effects on qualifying interest species within the Habitats sites, for example through the loss of feeding grounds for an identified species.
- **Disturbance** - Increase of any type of disturbance from construction and operation phases, such as those arising from dust, noise and lights, as well as from increased recreational disturbance from improved access due to transport infrastructure schemes.
- **Water quality** - Changes in water quality to water-dependent Habitats sites e.g. as a result of transport infrastructure projects and changes in groundwater regimes due to increased impermeable areas;
- **Water quantity** - Changes in surface or ground water availability from increased surface runoff or increased groundwater extraction.
- **Air quality** - Changes in localised atmospheric pollution levels from vehicle emissions. e.g. due to increased traffic or pollution discharges from transport infrastructure schemes.

2.4.3 Where a potential impact pathway on a Habitats site is identified, through which the Local Transport Plan 4 could create a Likely Significant Effect, this is considered at screening stage. Potential impact pathways between the LTP4 and Habitats sites can be ruled out due to distance (>20km), lack of hydrological connectivity or where the issues and key vulnerabilities are unrelated to potential impacts from the Local Transport Plan.

2.4.4 During the HRA Screening stage, each implementation plan and transport scheme is screened for Likely Significant Effects, based upon the above categories. Where it is not possible to rule out Likely Significant Effects without mitigation, it is necessary to progress to Appropriate Assessment stage.

2.4.5 There are many uncertainties associated with using trigger distances as there are very few standards available as a guide to how far impacts will travel. When considering the

potential for effects on Habitats sites, distance itself is not a definitive guide to the likelihood or severity of an impact. There are other factors that will influence the relative distance at which an impact can occur, such as the prevailing wind or river flow direction. This means that development proposed in a plan that is some distance away from a Habitats site could potentially affect the site, and therefore should be considered as part of HRA screening.

2.4.6 Rather than rely on distance alone, best practice is to use a 'source-pathway-receptor' model which focuses on whether there is a potential link or causal connection (pathway) from the source (the direct or indirect change occurring as a result of development) by which impacts from a plan can affect the vulnerabilities/sensitivities of a Habitats site's features to the predicted changes. The pathway is the route or mechanism by which any Likely Significant Effect would be manifest in the environment and would reach the receptor (i.e. the Habitats site). Therefore, during the screening stage a number of assumptions based on professional judgement have been applied in relation to assessing the Likely Significant Effects on Habitats sites that may result from the Local Transport Plan, as described below.

2.4.7 The risks of effects to occur are predicted in light of assumptions, limitations and confidence in predictions. Then, taking no account of the mitigation measures incorporated into the Local Transport Plan, the potential effects on qualifying features are determined and assessed on whether they are likely to be 'significant'.

2.4.8 The Impact Risk Zones (IRZ) 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.

2.4.9 Each potential impact pathway is considered in more detail below.

Land Take

2.4.10 Direct or indirect impacts to a Habitats site could cause habitat loss, degradation or fragmentation.

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

2.4.12 Any scheme which may directly affect any Habitats site would automatically be screened in for further assessment.

2.4.13 Any direct land take, habitat loss and fragmentation are therefore within scope of this HRA screening report. Any scheme which may directly affect any Habitats site has automatically been screened in for further assessment.

Impacts on protected species outside the designated site

2.4.14 Functionally Linked Land is land situated outside the Habitats site which supports designated features of Habitats sites. 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, for example through the loss of feeding grounds for an identified species.

2.4.15 Mobile interest features listed in the relevant Habitats sites- i.e. the birds- may use off-site habitat (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, for example, Hen Harrier, Brent Geese, Lapwing and Golden Plover. Natural England has previously advised that their recognised foraging distance threshold for the majority of wetland bird (excluding Lapwing and Golden Plover) species is 2km from a designated site. Lapwing and Golden Plover can be found considerably further from the coastal sites.

2.4.16 Impacts on protected species outside the designated site (Functionally Linked Land) is therefore within scope of the HRA screening.

Disturbance

2.4.17 Disturbance concerns species, rather than habitats e.g. wetland birds and it may be limited in time (noise, source of light etc.). The intensity, duration and frequency of repetition of disturbance are therefore important parameters. The following factors can be regarded as significant disturbance. 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.

2.4.18 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."*

2.4.19 Increase of any type of disturbance from construction, such as those arising from noise, light and vibration and visual disturbance are capable of causing significant disturbances for species, e.g. wintering waterfowl populations.

2.4.20 A precautionary distance of 2km from a Habitats site has been used for the purpose of this screening assessment for non-recreational related disturbance.

2.4.21 Disturbance is therefore within scope of the HRA screening.

Water Quality

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

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

2.4.24 Diffuse pollution, including that from highways run-off, is considered to be a major factor in the unfavourable condition of some Habitats sites. Due to the very nature of watercourses, hydrological connectivity can continue for considerable distances. Sites are screened in where there is a potential impact pathway connecting a Habitats site with water quality 'sensitivities' and a project location. For project level HRAs, Natural England has advised that it requires professional judgement when looking at hydrological impacts and greater than 20km is considered over precautionary.

2.4.25 The Habitats sites scoped in support features which are dependent on water quantity and quality. Any changes in water quantity and quality therefore have the potential to significantly impact them. Consequently, impacts could be caused if developments create increased demands for water treatment or changes to groundwater regimes because of increased impermeable areas. An assessment of the key vulnerabilities contained within the Site Improvement Plans for the Habitats sites within the scope of the HRA (Appendix 6) identified that water quality and quantity was not a factor affecting site integrity.

2.4.26 This HRA screening has assumed that the potential for Likely Significant Effects due to reduced water quality, either alone or in-combination, only exists for Habitats sites which are within 20 km of the Essex county boundary (as identified earlier in this chapter) or are hydrologically connected to it and have been scoped in, as shown in **Error! Reference s ource not found.**5 above. Any water pollution from more distant development was assumed to be sufficiently diluted and dispersed as to cause a negligible impact.

2.4.27 Any potential impacts to water quality are therefore within scope for the HRA screening.

2.4.28 A map showing the proximity of main rivers to Habitats sites and the LTP4 schemes can be found in Appendix 2.

Water Quantity

2.4.29 Due to the very nature of watercourses, hydrological connectivity can continue for considerable distances. Natural England have advised on project level HRAs that it requires professional judgement when looking at hydrological impacts. Schemes are screened in where there is a potential risk of significant increase or reduction of water resources affecting a Habitats site from the LTP4.

2.4.30 The Habitats sites scoped in support features which are dependent on water quantity. Any changes in water quantity therefore have the potential to significantly impact them. Consequently, impacts could be caused if developments create increased demands for water treatment or changes to groundwater regimes because of increased impermeable areas.

2.4.31 Any potential impacts to water quantity are therefore within scope for the HRA screening.

Air Quality

2.4.32 There are number of atmospheric pollutants which can result in direct or indirect impacts to Habitats sites. These impacts are usually caused when the qualifying features are plants, soils and wetland habitats. However, some species may also be indirectly impacted from air pollution causing changes in habitat composition. Potential impacts from pollutants and their sources have been highlighted within Table 6.

Table 6. 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	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
	action at international level to reduce 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.

2.4.33 Nitrogen deposition (*i.e*. primarily NO_x and NH_3 emissions) has been included as a key vulnerability/ factor affecting site integrity as part of the Site Improvement Plans for the following Habitats sites:

- Greater Thames Complex SIP – this covers the following Natura 2000 sites:
  - UK9009171 Benfleet and Southend Marshes SPA
  - UK9012031 Medway Estuary & Marshes SPA
  - UK9012021 Thames Estuary & Marshes SPA
  - UK9012011 The Swale SPA
- Essex Estuaries SIP - this covers the following Natura 2000 sites:
  - UK9009245 Blackwater Estuary (Mid-Essex Coast Phase 4) SPA
  - UK9009243 Colne Estuary (Mid-Essex Coast Phase 2) SPA
  - UK9009244 Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA
  - UK9009242 Dengie (Mid-Essex Coast Phase 1) SPA
  - UK0013690 Essex Estuaries SAC**

2.4.34 This is 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"* [4].

2.4.35 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[5].

2.4.36 The leading cause of increased nitrogen deposition at Habitats sites are typically 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 supporting species / qualifying features which rely on these specific habitats.

2.4.37 In addition, a key contributor to atmospheric pollution is transport related activities, which will be the main cause in Essex. Increases of traffic on roads, may result in increases in air pollution (ammonia NH3, nitrogen oxides NO_x and sulphur dioxide SO_2) from traffic emissions upon Habitats sites.

2.4.38 Any potential impacts upon specific Habitats sites identified will need to consider habitat / pollution impacts information from the Air Pollution Information System (APIS).

2.4.39 With respect to nitrogen deposition on coastal and marine habitats, APIS advises that "littoral ecosystems, such as salt marshes or estuarine habitats may be under the dual threat of nutrient inputs from river inputs and atmospheric deposition"[6].

2.4.40 Paragraph 5.2.8 of the Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites[7] states that: "Road transport emissions near to designated sites are often the result of many projects and plans located some distance from the site. It is normal in an air quality assessment to include traffic growth estimates using the Department of Transport's TEMPRO35 growth factors or from a strategic transport model that explicitly includes traffic from other projects and/or plans."

2.4.41 "The Design Manual for Roads and Bridges (DMRB)-LA 105 -Air quality (vertical barriers)[8] describes the approach for the assessment of the impact of emissions from schemes on the strategic road network. A quantitative air quality assessment is required if Habitats

[4] 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 2023].
[5] IAQM (June 2019). Available from https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2019.pdf [Accessed April 2024].
[6] https://www.apis.ac.uk/overview/ecosystems/overview_coastal.htm
[7] ISAQM version 1.0 (June 2019). This can be viewed at: air-quality-impacts-on-nature-sites-2019.pdf
[8] Highways Agency National Highways' Design Manual for Roads and Bridges (DMRB) -LA 105 -Air quality (vertical barriers) (formerly HA 207/07, IAN 170/12, IAN 174/13, IAN 175/13, part of IAN 185/15), Version 0.1.0, can be viewed at: HTML Document View

sites are within 200m of affected roads. Within this context, the distance of the affected road from the designated site is an important consideration. Air pollution levels fall sharply within the first few tens of metres from a road before reducing more slowly with distance. The air quality impact of a given change in traffic on a designated site where the relevant habitat/ species is 100 m from a road will be very different to one that abuts the road."

2.4.42 Therefore, atmospheric pollution, primarily nitrogen deposition, should be considered and Air Quality has been scoped in for the HRA screening.

2.5 Screening categorisation

2.5.1 The screening stage identifies if alternatives are needed because any schemes will have an impact on a Habitats site, amendments need to be made in the LTP4. Table 7 identifies the different categories assigned to each transport scheme included in the plan: Category A identifies those projects that may not result in a Likely Significant Effect and are considered to have No Negative Effect. Category B identifies those projects that will have No Likely Significant Effect. Category C identifies those projects that might have Likely Significant Effect upon a Habitats site, either alone or in combination with other plans or projects. Section 4 considers each transport scheme (strategic and countywide) and the results of the screening exercise recorded.

Table 7. 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 any Habitats 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 Habitats site, alone, that is the effect could undermine the conservation objectives. In this case an Appropriate Assessment would be triggered without needing to consider in-combination effects at HRA screening stage, although they will need to be considered at Appropriate Assessment stage.

2.6 Scoping the HRA Process

2.6.1 To demonstrate sequential progress through the HRA process, this HRA has followed the flowchart in Natural England's document HRA of Local Development Documents. As the LTP4 is not directly connected with or necessary to the nature conservation management of a Habitats site, it is necessary to follow the HRA process as set out below:

a) Identification of all Habitats sites that could sustain significant effects from the Plan:
This information is available to Essex County Council from records available on www.magic.gov.uk and Designated Sites website. This produces accurate information on each Habitats site including the name, Joint Nature Conservation Committee (JNCC) code, location and area. We also hold paper records of each designated site and are able to use the publicly accessible parts of the JNCC website to confirm information.

As part of the Habitats Regulations Assessment, it is necessary to perform a site screening exercise to consider which sites may or may not be affected by the LTP4. This exercise is carried out to ensure that all sites and all site interest features that are likely to be significantly affected by the LTP4 have suitable avoidance measures applied.

b) Acquisition, examination and understanding of the Conservation Objectives for each Habitats site that could potentially be affected.
The relevant information on the Conservation Objectives for the interest for each relevant SSSI compartment within the SPA, SAC or Ramsar site, likely to be affected has been obtained from Natural England. The complete list of Conservation Objectives is shown in Appendix 6. This information has been considered in detail by Place Services Principal Ecological Consultant.

c) Consideration of the effects of the Plan and the likely impact that it might have on any Habitats sites.
Overall the proposed LTP4 will have strong beneficial impacts on health, social, community and accessibility for residents and the economy of Essex. The most significant effects of the LTP 4 will be on reducing carbon emissions, reducing road accidents and encouraging indigenous and inward investment. The matters of concern for each of the Habitats site are listed in Appendix 6.

d) Assessment of Implications and Consultation pursuant to the Conservation of Habitats and Species Regulations 2017 (as amended):

The potential implications for the relevant SPA, SAC & Ramsar sites include factors such as the direct effect of road improvements e.g. land take, disturbance, pollution and the indirect effect of disturbance to Annex I birds.

e) Dealing with negative and potentially negative impacts on the designated features of interest.

Natural England will be consulted on the draft LTP4 document and their responses used to inform the inclusion of any transport scheme likely to result in adverse impacts on the integrity of any of the Habitats sites.

f) In combination effects:

If any of the LTP 4 schemes listed in Table 1 and Table 2 or those in the Implementation Plans are screened in for likely significant effects, there will be a need for a Stage 2 Appropriate Assessment and an in- combination assessment at project level when sufficient detail is available. If not, then other plans and projects will then be considered in combination with the LTP 4 and screened again.

g) Mitigation

In line with the Court judgment (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 development is likely to result in significant effects on a Habitats site. During the consultation process, Natural England may raise concerns about particular transport schemes and recommend mitigation identified by the Sustainability Appraisal.

If it cannot be ascertained that there would be no adverse effects on site integrity, any project will have to be refused or pass the tests of Regulation 63, in which case any necessary compensatory measures will need to be secured in accordance with Regulation 66.

3. Screening of Likely Significant Effects

3.1 Scope of screening for Likely Significant Effect

3.1.1. The Habitats sites scoped in or out are set out in Table 8 below. Within 20km of Essex there are 41 Habitats sites; 8 Special Areas for Conservation (SACs), 16 Special Protection Areas (SPAs) and 16 Ramsar sites including some marine sites. Many of these Habitats sites within a 20km buffer are out of county and have been screened out of the process as they are too distant from transport schemes to potentially sustain a significant effect.

3.1.2. The key Habitats sites information (i.e. the qualifying features and conservation objectives of the Habitats sites) together with current pressures and potential threats have been referenced. Impact Risk Zones (IRZ) have been interrogated on MAGIC and these help to show which elements may have an effect.

3.1.3. The list of Habitats sites, their qualifying features and conservation objectives can be found in Appendix 6 including web links to further information.

3.1.4. The list of key vulnerabilities / factors affecting site integrity can also be found in Appendix 6.

Table 8. Lists of Habitats sites within the scope of the screening assessment

Site	Scoping assessment	Included within screening assessment?
Abberton Reservoir SPA and Ramsar	Abberton Reservoir	Yes
Alde-Ore Estuary SPA	Suffolk coast	No
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site	Estuary from Maldon to Mersea Island	Yes

Site	Scoping assessment	Included within screening assessment?
Benfleet and Southend Marshes SPA and Ramsar site	South Essex on the Thames coastline coast, including Hadleigh Ray between the north east coastline of Canvey Island and southern edge of Hadleigh Castle County Park.	Yes
Chippenham Fen Ramsar	Cambridgeshire	No
Colne Estuary (Mid-Essex Coast Phase 2) SPA	Estuary between Tendring District and Colchester City	Yes
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site	Estuaries from South Woodham Ferrers, between Dengie peninsula and Foulness	Yes
Deben Estuary Ramsar	Suffolk coast	No
Dengie (Mid-Essex Coast Phase 1) SPA and Ramsar site	Dengie Peninsula, east of Maldon and Burnham-on-Crouch	Yes
Devils Dyke SAC	Newmarket, Suffolk	No
Epping Forest SAC	South west Essex	Yes
Essex Estuaries SAC	Essex Coast (overlaps with SPA and Ramsar sites)	Yes
Eversden and Wimpole Woods SAC	South Cambridgeshire	No

Site	Scoping assessment	Included within screening assessment?
Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar	Covers southeast corner of Essex, near Southend	Yes
Hamford Water SAC, SPA and Ramsar	Tendring coast	Yes
Lee Valley SPA and Ramsar	Hertfordshire/Essex boundary	Yes
North Downlands SAC	Kent	No
Medway Estuary and Marshes SPA and Ramsar site	Estuary near Sheerness (Kent)	No
Sandlings SPA	Suffolk coast	No
Staverton Park & The Thicks Wantisden SAC	Suffolk	No
Stour and Orwell Estuaries SPA and Ramsar	Suffolk/Essex coastal boundary	Yes
Thames Estuary & Marshes SPA and Ramsar	South Essex	Yes
The Swale SPA	Kent	No
Wicken Fen Ramsar	Cambridgeshire	No

Site	Scoping assessment	Included within screening assessment?
Wormley-Hoddensdonpark Woods SAC	Hertforshire	No
Orfordness-Shingle Street SAC	Suffolk coast	No

3.2 Habitats sites within scope of the screening report

3.2.1. There are 25 Habitats sites which may be affected by the Essex LTP 4 policies and schemes as listed in Table 9 below.

Table 9. Habitats sites to be considered within scope of HRA screening of LTP 4

SPA	SAC	Ramsar site
Abberton Reservoir SPA	Epping Forest SAC	Abberton Reservoir Ramsar site
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA	Essex Estuaries SAC	Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site
Benfleet and Southend Marshes SPA	Hamford Water SAC	Benfleet and Southend Marshes Ramsar site
Colne Estuary (Mid-Essex Coast Phase 2) SPA		Colne Estuary (Mid-Essex Coast Phase 2) Ramsar site
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA		Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site
Dengie (Mid-Essex Coast Phase 1) SPA		Dengie (Mid-Essex Coast Phase 1) Ramsar site

SPA	SAC	Ramsar site
Foulness (Mid-Essex Coast Phase 5) SPA		Foulness (Mid-Essex Coast Phase 5) Ramsar site
Hamford Water SPA		Hamford Water Ramsar site
Lee Valley SPA		Lee Valley Ramsar site
Stour and Orwell Estuaries SPA		Stour and Orwell Estuaries Ramsar site
Thames Estuary & Marshes SPA		Thames Estuary & Marshes Ramsar site

4. Assessing the Likely Significant Effects of the LTP 4

4.1 Screening process introduction

4.1.1. The European Court of Justice has held that any effect likely to undermine the conservation objectives of a Natura 2000 site should be regarded as a likely significant effect in this context. All of the stages of the HRA process outlined in section 2 above have been consolidated into Table 4 above. Guidance has been taken from all of the sources described in 2.6.1(b) and the range of impacts described in 2.6.1(c) applied to the Conservation Objectives listed in Appendix 6.

4.1.2. This has enabled the HRA screening categorisation of likely impacts as either “Significant Effects unlikely”, “Significant Effects uncertain” or “Likely Significant Effects”. These conclusions have been arrived at by using professional judgement based on the available evidence (referred to above) and our knowledge of the sites (often personal) and the types of habitats and species found there.

4.1.3. Regulation 63 considers likelihood of significant effects “either alone or in combination with other plans or projects”. The in- combination assessment is intended to protect sites from the cumulative effects of more than one project when the effects of projects acting on the site alone would not likely to be significant i.e. residual effects. In undertaking this assessment, the idea is to seek focus on plans or projects that would increase the likelihood or significant of the effects identified.

4.1.4. There are therefore two steps in the HRA screening process:

1. Assemble basic information to consider residual effects which are not significant alone, considering each qualifying feature of Habitats sites;
2. Consider whether any effects in combination with other plans and projects or cumulative effects can be eliminated. Possible effects are taken into account and eliminated on the basis of lack of credibility.

4.2 LTP4 Policies

4.2.1 The LTP4 policies 1-12 as listed in Table 1 are not considered to result in a Likely Significant Effect and do not need any mitigation embedded or additional supporting text to avoid adverse effects on integrity of the Habitats sites within scope of this HRA screening.

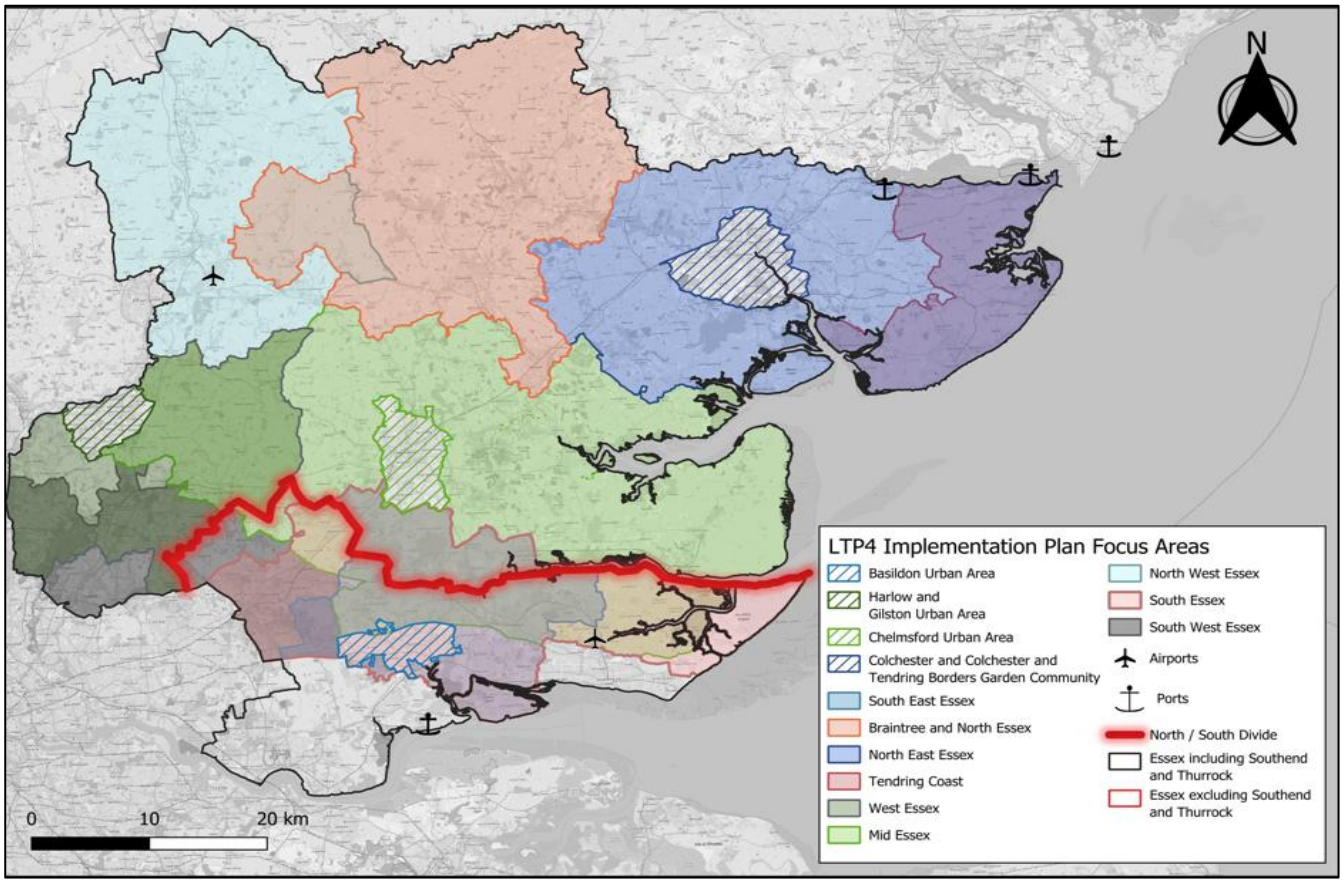
Policy 8. Our Natural Environment.
We will aim to reduce the impact of transport on the natural environment <u>to avoid adverse effect on the integrity of Habitats sites,</u> minimise pollution and contribute to biodiversity net gain.

4.3 LTP4 schemes that may lead to a significant effect on Habitats sites

4.3.1 Appendix 1 shows the location of Essex LTP4 Strategic road schemes with Appendix 2 providing these mapped with Habitats sites and main rivers. Appendix 3 shows the location of Strategic rail transport schemes and Appendix 4 shows these mapped with main rivers and Habitats sites.

4.3.2 The below Figure (Figure 2) shows the Essex LTP4 Implementation Plan Focus Areas which each have identified transport schemes in addition to strategic and countywide schemes.

Figure 2. LTP4 Implementation Plan Focus Areas



4.3.3 All of the known LTP 4 schemes have been assessed for likely effects based on the Impact Risk Zones as shown on MAGIC website www.magic.gov.uk, with the key for this assessment provided in Table 10. The schemes screened out from further assessment are listed in Tables 11, 12 and 13. Those identified as having potential to lead to a significant effect on a Habitats site are listed in Table 14, 15 and 16. Where there is insufficient certainty on location, due to potentially a large number of sites across the county each having difference significance as and when they are identified at that level.

Table 10. Colour coding of effect significance on Habitats sites

0	**Category A Negligible or no effect**
-	**Category B Likely negative effect**
--	**Category C Likely significant negative effect**

Table 11. LTP 4 Strategic transport schemes which will have negligible or no effect on Habitats sites

Proposed Strategic Transport Scheme	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect significance
M25 junction 28 improvements	Considered under DCO for this NSIP	0
A12 Widening M25 to Chelmsford	No	0
A120 Braintree to A12	No	0
Widespread roll-out of EV charging infrastructure	Potential but de minimis effect	0
Great Eastern Main Line Rail Link to London Gateway	Uncertain but outside of Essex	0
Great Eastern Main Line strategic package	Uncertain but outside of Essex	0
Liverpool St station	No	0
Stratford Station	No	0
West Anglia Main Line medium term package	No	0
Ely Junction Improvements (including Haughley Junction)	Uncertain but outside of Essex	0
East-West Rail	No	0
Stansted Airport Sustainable Access Package	No	0

Proposed Strategic Transport Scheme	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect significance
Harlow and Gilston Sustainable Transport Corridors	No	0
North Essex Rapid Transit – phase 2	No	0
M11 J8 Long Term Scheme	No	0
M11 J7 long term enhancement	No	0
Rapid Transit - Cambridge to Uttlesford CAM	No	0
South Essex bus metro - rapid transit	No	0
Southend Airport Access Package	No	0

Table 12. LTP4 countywide schemes which will have negligible or no effect on Habitats sites

Proposed Countywide Transport Scheme	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect significance
Promotion of Synthetic Fuels	Potential but de minimis effect	0
Roll out of EV infrastructure	Potential but de minimis effect	0
Use of autonomous self-driving (without passenger) vehicles to support elderly communities	Potential but de minimis effect	0

Proposed Countywide Transport Scheme	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect significance
Business and School Travel Planning	Potential but de minimis effect	0
Residential Travel Planning	Potential but de minimis effect	0
Smart junctions	Potential but de minimis effect	0
Behavioural change programme	Potential but de minimis effect	0
Bus stop improvements	Potential but de minimis effect	0
Expansion of plus bus schemes and new ones cross county	Potential but de minimis effect	0
Implementation of rural LCWIPs	Potential but de minimis effect	0
Better access to rail stations	Potential but de minimis effect	0
Countywide LCWIP Delivery	Potential but de minimis effect	0
NCN Package - Urban	Potential but de minimis effect	0
Roll out of shared mobility initiatives	Potential but de minimis effect	0
ATF major package	Potential but de minimis effect	0
Healthy School streets	Potential but de minimis effect	0

Proposed Countywide Transport Scheme	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect significance
Car sharing lanes in Major towns/Cities	Potential but de minimis effect	0
A12 - Technology package	Potential but de minimis effect	0
Rail Freight capacity enhancements on Barking, Gospel Oak and North London lines to provide access from Thames ports.	Potential but de minimis effect	0
Active Intelligent Traffic Management Systems	Potential but de minimis effect	0
You Smart Travel Planning Tool	Potential but de minimis effect	0
Use of mobile apps and web information (supporting traditional information way finding) to encourage use of public transport	Potential but de minimis effect	0
Cycle Hire	Potential but de minimis effect	0
Cycle Quietways in Residential Areas	Potential but de minimis effect	0
Provision of Cycling equipment in new development	Potential but de minimis effect	0
Cycle training and bike maintenance workshops	Potential but de minimis effect	0
Home Run Travel Planning App for schools	Potential but de minimis effect	0

Proposed Countywide Transport Scheme	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect significance
Promotion of the Smarter Travel Network to Essex Businesses	Potential but de minimis effect	0
Integrated Ticketing across modes	Potential but de minimis effect	0
Cycle parking package	Potential but de minimis effect	0
Countywide programme of barrier removal on cycle paths	Potential but de minimis effect	0

Table 13. LTP 4 Implementation Plan Focus Area schemes likely to have a negligible or no effect on Habitats sites

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Tendring Coast:		
North Tendring Access Package	Potential but de minimis effect	**0**
Investigate Opportunities for Sustainable Transport in Tendring	Potential but de minimis effect	**0**
Clacton Station Improvements	Potential but de minimis effect	**0**
More affordable bus fares for Tendring	Potential but de minimis effect	**0**
Clacton Town Centre pedestrian and cycle infrastructure improvements	Potential but de minimis effect	**0**
Clacton Town Centre Action Plan	Potential but de minimis effect	**0**
Harwich rail line Improvements	Potential but de minimis effect	**0**
Dovercourt pedestrian and cycle infrastructure improvements	Potential but de minimis effect	**0**
Clacton rail line Improvements	Potential but de minimis effect	**0**
Tendring LCWIP Delivery	Potential but de minimis effect	**0**
Dovercourt station footbridge / tunnel	Potential but de minimis effect	**0**
Tendring LCWIP Update	Potential but de minimis effect	**0**
Tendring Bus Network Improvements	Potential but de minimis effect	**0**
Encourage Freeport East to provide transport for workers	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Introducing morden high-quality to Tendring	Potential but de minimis effect	0
A120 Freeport improvements	Potential but de minimis effect	0
A133 Frating to Clacton enhancements	Potential but de minimis effect	0
Clacton Bus Interchange Improvements	Potential but de minimis effect	0
Harwich - Felixstowe foot ferry	Potential but de minimis effect	0
Thorpe Le Soken bypass	Potential but de minimis effect	0
Kirby Cross bus capacity Improvements	Potential but de minimis effect	0
Suggested cycle route: Manningtree to Harwich	Potential but de minimis effect	0
Harwich active travel corridor	Potential but de minimis effect	0
Improve Harwich bus network	Potential but de minimis effect	0
Reinstate X15 route Harwich to Colchester ???	Potential but de minimis effect	0
Harwich Town Bus Route / Route Alteration and New Route	Potential but de minimis effect	0
Harwich to Ipswich New Route	Potential but de minimis effect	0
Tudor Fields cycle Route	Potential but de minimis effect	0
South East Essex:		
Dunton-Basildon Connection	Potential but de minimis effect	0
IDP A127 corridor strategic improvements	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
South Essex, Brentwood - IDP/West Horndon interchange	Potential but de minimis effect	0
Castle Point LCWIP	Potential but de minimis effect	0
Dial a ride to Canvey	Potential but de minimis effect	0
A128 improvement across C2C railway at West Horndon	Potential but de minimis effect	0
Dunton Hills Garden Village Bus Lanes	Potential but de minimis effect	0
Rail station to serve proposed Dunton EC	Potential but de minimis effect	0
A127 strategic package	Potential but de minimis effect	0
Basildon Connectivity improvements	Potential but de minimis effect	0
A13 NMU Crossing Improvements	Potential but de minimis effect	0
Wickford to Basildon bus access improvements	Potential but de minimis effect	0
A13 improvements (Essex)	Potential but de minimis effect	0
A129 bus corridor	Potential but de minimis effect	0
A130 NMU Crossing Improvements	Potential but de minimis effect	0
Dunton Hill - Laindon sustainable corridor	Potential but de minimis effect	0
Wickford Station rebuild/re-opening	Potential but de minimis effect	0
Park and Ride for Basildon Hospital and College	Potential but de minimis effect	0
A127/A130 Fairglen	Potential but de minimis effect	0
Canvey Town Centre	Potential but de minimis effect	0
Wickford High Street Bus Gate	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
West Horndon Station	Potential but de minimis effect	0
South Essex bus metro	Potential but de minimis effect	0
Basildon Urban Area:		
Basildon Sustainable Transport Package	Potential but de minimis effect	0
Basildon LCWIP Delivery	Potential but de minimis effect	0
Pitsea Station improvements	Potential but de minimis effect	0
Basildon Connectivity improvements	Potential but de minimis effect	0
Nether Mayne Improvement	Potential but de minimis effect	0
Fortune of War Roundabout Improvement	Potential but de minimis effect	0
Connections south across rail crossing (C2C)	Potential but de minimis effect	0
Park and Ride for Basildon Hospital and College	Potential but de minimis effect	0
IDP A127 corridor strategic improvements	Potential but de minimis effect	0
A127 strategic package	Potential but de minimis effect	0
South Essex bus metro	Potential but de minimis effect	0
NW Essex:		
Multi Modal Transport Hub at Stansted airport / Airport Surface Access Plans (ASAS)	Potential but de minimis effect	0
Cycle route through Hertfordshire to Bishops Stortford and Stansted Airport	Potential but de minimis effect	0
Uttlesford LCWIP Delivery	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Cycleway linkage from Takeley to Stansted Airport	Potential but de minimis effect	**0**
Cycle/footbridge over A120 to link Birchanger to Bishops Stortford	Potential but de minimis effect	**0**
Saffron Walden bus interchange	Potential but de minimis effect	**0**
Saffron Walden to Great Chesterford cycleway (LCWIP)	Potential but de minimis effect	**0**
Rapid transit links from Cambridge to Uttlesford (formerly CAM).	Potential but de minimis effect	**0**
Great Chesterford/Audley End Station forecourt improvements	Potential but de minimis effect	**0**
Stansted Second Rail Tunnel Bore	Potential but de minimis effect Potential but de minimis effect	**0**
Chesterford Research Park Sustainable mode access improvements to out of town/centrally located employment zones	Potential but de minimis effect	**0**
West Anglia Main Line package	Outside of Essex	**0**
HERT - Watford to Bishops Stortford to Stansted Airport RTS	Potential but de minimis effect	**0**
Saffron Walden relief road	Potential but de minimis effect	**0**
Bishops Stansted Airport fly parking restrictions on residential roads	Potential but de minimis effect	**0**
Stortford Bypass (A120/B1383 junction improvements)	Potential but de minimis effect	**0**
Mid Essex:		

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
South Woodham Integrated Transport Package	Potential but de minimis effect	0
Generals Lane cycle corridor	Potential but de minimis effect	0
Southminster to Burnham cycle route	Potential but de minimis effect	0
Maldon cycle connections	Potential but de minimis effect	0
Greenways along Rivers Blackwater and Crouch	Potential but de minimis effect	0
Southminster branch upgrades (from Wickford Station)	Potential but de minimis effect	0
Blackwater Trail	Potential but de minimis effect	0
Maldon Town LCWIPs	Potential but de minimis effect	0
Completion of Great Waltham to Chelmsford cycleway	Potential but de minimis effect	0
Dengie Bus Network Improvements	Potential but de minimis effect	0
Express bus services from Maldon to key rail stations	Potential but de minimis effect	0
New bus service between South Woodham Ferrers and Maldon	Potential but de minimis effect	0
Maldon Town Upper High Street Improvements	Potential but de minimis effect	0
A12 de-trunking	Potential but de minimis effect	0
Reinstate Maldon to Witham line	Potential but de minimis effect	0
Maldon to SWF Active Travel Link	Potential but de minimis effect	0
Market Hill bus gate (Maldon)	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Chelmsford North East Bypass (CNEB)	Potential but de minimis effect	0
Maldon Park and Ride Scheme	Potential but de minimis effect	0
Development of a Maldon Mobility Hub network and rural bus services	Potential but de minimis effect	0
Chelmsford North East Bypass longer term dualling scheme and slip roads to A12	Potential but de minimis effect	0
Maldon High Street Bus Operations Feasibility Studies - High Street Option 1 -3 & Parking review	Potential but de minimis effect	0
Widford Park and Ride	Potential but de minimis effect	0
A414 Route Strategy	Potential but de minimis effect	0
B1018/1019 bypass to A12 from Maldon	Potential but de minimis effect	0
Chelmsford North East Bypass/section 1B&2	Potential but de minimis effect	0
Improvements to Duke of Wellington Roundabout/B1019	Potential but de minimis effect	0
South Woodham Ferrers (SWF) Bypass	Potential but de minimis effect	0
Danbury Eves Corner Improvements	Potential but de minimis effect	0
B1010/B1021 Junction Improvements	Potential but de minimis effect	0
South Maldon relief road (SMRR)	Potential but de minimis effect	0
B1010 Junction Improvements	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Maldon Town Wide Signage Strategy	Potential but de minimis effect	**0**
Expansion/Improvement of Tesco's Park and Ride service in Maldon	Potential but de minimis effect	**0**
Accessibility between south Maldon town and the town centre (Fambridge Road)	Potential but de minimis effect	**0**
Enhanced Partnership for Maldon District	Potential but de minimis effect	**0**
Footpath provision for villages in Maldon District	Potential but de minimis effect	**0**
Review of the rural bus network in Maldon district - feasibility of providing high quality local feeder bus links to and from high frequency routes	Potential but de minimis effect	**0**
Air Quality Theatre production at Maldon Schools	Potential but de minimis effect	**0**
Footbridge across the canal to connect industrial estates to Heybridge	Potential but de minimis effect	**0**
Introduction of D-DRT service north east of Maldon District	Potential but de minimis effect	**0**
Braintree and North Essex:		
Braintree Sustainable Transport Package	Potential but de minimis effect	**0**
BSIP transformational projects - 'Reach'	Potential but de minimis effect	**0**
Braintree LCWIP corridors	Potential but de minimis effect	**0**
BSIP transformational projects - 'Thrive'	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Braintree to Marks Tey Cycle Route	Potential but de minimis effect	0
Braintree Branch Line passing loop	Potential but de minimis effect	0
DigiGo Bus Scheme Expansion	Potential but de minimis effect	0
Public realm improvements linked to Braintree Town Centre pedestrianisation	Potential but de minimis effect	0
Braintree Station Access Improvements (ITP)	Potential but de minimis effect	0
A12 de-trunking	Potential but de minimis effect	0
Flitch Way improvements	Potential but de minimis effect	0
A131 Braintree to Sudbury route improvements	Potential but de minimis effect	0
Notley Cross Park and Ride (BSIP Scheme)	Potential but de minimis effect	0
Springwood Drive Roundabout capacity improvements	Potential but de minimis effect	0
Marks Farm Roundabout capacity improvements	Potential but de minimis effect	0
Marks Farm Roundabout capacity improvements	Potential but de minimis effect	0
Cargo Bike Hire / Deliveries for Businesses	Potential but de minimis effect	0
A new road connecting Springwood Drive with Panfield Lane	Potential but de minimis effect	0
Braintree to Witham B1037 Improvements	Potential but de minimis effect	0
New roundabout at the junction of Panfield Lane and Churchill Road	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Dualling the A120 between Braintree and Marks Tey	Potential but de minimis effect	0
A120 Millennium slips	Potential but de minimis effect	0
Braintree Rail Line Adjustments	Potential but de minimis effect	0
Halstead Bypass Scheme	Potential but de minimis effect	0
Feasibility into a Mobility Hub for Braintree	Potential but de minimis effect	0
Feasibility into park active for Braintree	Potential but de minimis effect	0
Braintree bus corridor improvements	Potential but de minimis effect	0
Braintree Town centre signage strategy	Potential but de minimis effect	0
Braintree town centre cycle parking	Potential but de minimis effect	0
Braintree town centre gyratory	Potential but de minimis effect	0
Traffic Calming and wider roll out of 20mph zones	Potential but de minimis effect	0
North Essex Rapid Transit	Potential but de minimis effect	0
Improved facilities for pedestrians and cyclists at Porters Field	Potential but de minimis effect	0
Asset Renewal of the Existing Cycle Network in Braintree	Potential but de minimis effect	0
Additional Bus Stop Improvements in Braintree Town Centre and the wider urban area	Potential but de minimis effect	0
Review of footpath provision in satellite settlements	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Chelmsford:		
Springfield Road sustainable transport corridor	Potential but de minimis effect	**0**
Chelmsford Sustainable Transport Package	Potential but de minimis effect	**0**
Parkway sustainable transport corridor	Potential but de minimis effect	**0**
LCWIP 1 Moulsham	Potential but de minimis effect	**0**
Army & Navy Sustainable Transport Package	Potential but de minimis effect	**0**
Baddow Road sustainable transport corridor	Potential but de minimis effect	**0**
Chelmsford LCWIP Delivery	Potential but de minimis effect	**0**
Broomfield sustainable transport corridor	Potential but de minimis effect	**0**
New London Road sustainable transport corridor	Potential but de minimis effect	**0**
Chelmsford Bus Interchange	Potential but de minimis effect	**0**
Widford Park and Ride	Potential but de minimis effect	**0**
New London Road Bus Access Improvements	Potential but de minimis effect	**0**
Essex Regiment Way Sustainable Transport Corridor	Potential but de minimis effect	**0**
Beaulieu Park Station	Potential but de minimis effect	**0**
Broomfield - Chelmsford Garden Community active travel route	Potential but de minimis effect	**0**
Broomfield Road cycle route extension to hospital	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Hammonds Farm (East Garden Community) Sustainable Travel Corridor	Potential but de minimis effect	**0**
LCWIP 3 City Centre to ARU to Springfield (ATF 4)	Potential but de minimis effect	**0**
LCWIP 5 Broomfield Rd (link with STC for Broomfield Rd)	Potential but de minimis effect	**0**
East Chelmsford Cycle Connectivity Links (CCC priority)	Potential but de minimis effect	**0**
Duke Street to City Centre Cycle Route	Potential but de minimis effect	**0**
West Essex:		
Epping to Harlow sustainable corridor	Potential but de minimis effect	**0**
Harlow Bus service review and improvement	Potential but de minimis effect	**0**
Harlow Second Avenue bus lanes	Potential but de minimis effect	**0**
M11 J7 Mitigations	Potential but de minimis effect	**0**
West Anglia Main Line package	Potential but de minimis effect	**0**
Epping LCWIP Delivery	Potential but de minimis effect	**0**
Waltham Abbey LCWIP Delivery	Potential but de minimis effect	**0**
Crossrail 2 – TE does not have a position on CR2	Potential but de minimis effect	**0**
Colchester &CTB Urban Area:		
Colchester City centre Masterplan schemes	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Sustainable corridors Colchester	Potential but de minimis effect	0
Colchester Sustainable Transport Package	Potential but de minimis effect	0
Improved connections to land north of Ipswich Road	Potential but de minimis effect	0
St Botolphs Redevelopment	Potential but de minimis effect	0
ATF active travel schemes in Colchester city centre	Potential but de minimis effect	0
Delivery of new Colchester LCWIP schemes	Potential but de minimis effect	0
Colchester rapid transit	Potential but de minimis effect	0
Crouch Street West	Potential but de minimis effect	0
Colchester Environmental Improvements	Potential but de minimis effect	0
Completion of Colchester LCWIP routes	Potential but de minimis effect	0
North Station area/access	Potential but de minimis effect	0
Colchester Cycling/Walking route improvement	Potential but de minimis effect	0
Extension of existing Colchester LCWIP network - feasibility study	Potential but de minimis effect	0
Improvements to Colchester Bus Station and Interchange	Potential but de minimis effect	0
Park Active/Park and Stride/Park and Choose - feasibility study	Potential but de minimis effect	0
Hythe area improvements study	Potential but de minimis effect	0
Colchester City Centre Interchange Improvements	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Expansion of Essex Pedal Power, including cycle parking	Potential but de minimis effect	0
Implementation of Colchester parking strategy recommendations	Potential but de minimis effect	0
Review of Colchester Park and Ride	Potential but de minimis effect	0
Albert Roundabout Signalisation	Potential but de minimis effect	0
Colne Bank Roundabout improvements	Potential but de minimis effect	0
Zigzag bridge replacement	Potential but de minimis effect	0
Improvements to the Straight Road/London Road junction layout	Potential but de minimis effect	0
Haven Road flooding alleviation	Potential but de minimis effect	0
Colne Causeway bus lane	Potential but de minimis effect	0
Extension of Stanway bypass	Potential but de minimis effect	0
Cowdray Avenue dualling	Potential but de minimis effect	0
Colchester Bus Lane Improvements	Potential but de minimis effect	0
Colchester lower emission zone - feasibility study	Potential but de minimis effect	0
TCBGC mitigation schemes (various)	Potential but de minimis effect	0
Full Colchester gyratory	Potential but de minimis effect	0
Colchester Urban area parking feasibility study	Potential but de minimis effect	0
Implementation of bus priority measures required in urban area	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Hospital bus interchange improvements	Potential but de minimis effect	**0**
Freight management in Colchester Urban Area	Potential but de minimis effect	**0**
Establishment of a Quality Bus Partnership for Colchester	Potential but de minimis effect	**0**
Colchester car club expansion	Potential but de minimis effect	**0**
Improvements to Strategic bus connectivity in Colchester	Potential but de minimis effect	**0**
B1022 Warren Lane/Maldon Road junction improvements	Potential but de minimis effect	**0**
North East Essex:		
Braintree to Marks Tey Cycle Route	Potential but de minimis effect	**0**
DigiGo for Tendring	Potential but de minimis effect	**0**
Tendring Bus Passes	Potential but de minimis effect	**0**
Wivenhoe Trail - feasibility study and investment into route	Potential but de minimis effect	**0**
Sudbury Rail line Improvements	Potential but de minimis effect	**0**
South Colchester hinterland	Potential but de minimis effect	**0**
A12 detrunking	Potential but de minimis effect	**0**
Tendring hydrogen bus programme	Potential but de minimis effect	**0**
Review of Colchester Park and Ride	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
B1022 Warren Lane/Maldon Road junction improvements	Potential but de minimis effect	0
Manningtree Station Interchange	Potential but de minimis effect	0
Coxs Hill / Wignall Street / Long Road Junction improvement	Potential but de minimis effect	0
Coxs Hill / Station Road Roundabout	Potential but de minimis effect	0
Establishment of a Quality Bus Partnership for Colchester	Potential but de minimis effect	0
Improvements to bus infrastructure and access improvements in rural areas to support bus use	Potential but de minimis effect	0
Improvements and increasing usage of Colchester P&R	Potential but de minimis effect	0
Marks Tey lifts	Potential but de minimis effect	0
Demand Responsive Transport in rural areas	Potential but de minimis effect	0
A12 Junction 26 Improvements	Potential but de minimis effect	0
A12 Junction 27 Improvements	Potential but de minimis effect	0
A12 Junction 28 Improvements	Potential but de minimis effect	0
A12 Junction 29 Improvements	Potential but de minimis effect	0
Recommendations from Tendring Bus Network Review	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Suggested cycle route: Manningtree to Mistley	Potential but de minimis effect	**0**
Suggested cycle route: Manningtree to Harwich	Potential but de minimis effect	**0**
Suggested cycle route: Manningtree to Brightlingsea	Potential but de minimis effect	**0**
Potential Flagship Routes	Potential but de minimis effect	**0**
DigiGo for Tendring	Potential but de minimis effect	**0**
BBCT Mitigation Measures - Junction and Links	Potential but de minimis effect	**0**
Highway Improvements: o A120-A133 link road o A120 Braintree to A12 improvements	Potential but de minimis effect	**0**
Improve provisions for school buses outside Manningtree High School	Potential but de minimis effect	**0**
Manningtree School Congestion / Bus Priority	Potential but de minimis effect	**0**
Coxs Hill route alteration	Potential but de minimis effect	**0**
Lawford Development Access / Route Alteration and Bus Priority	Potential but de minimis effect	**0**
Mobility Hub - Manningtree Rail Station (Major interchange)	Potential but de minimis effect	**0**
Mobility Hub - Manningtree High Street (Primary interchange)	Potential but de minimis effect	**0**
Mobility Hub - Mistley High Street (Primary interchange)	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Mobility Hub - Mistley Towers (Secondary Local interchange)	Potential but de minimis effect	**0**
Mobility Hub - Manningtree Industrial Park (Secondary Local interchange)	Potential but de minimis effect	**0**
Mobility Hub - Lawford (Secondary Local interchange)	Potential but de minimis effect	**0**
Relocate bus stops on northern side of A137 / Coxs Hill station roundabout for easier station access	Potential but de minimis effect	**0**
Review feasibility and design cycling leisure routes:- Lawford and Manningtree Station - very fast and steep and difficult to cycle (not ideal option)	Potential but de minimis effect	**0**
Cycle crossing improvements on the A120	Potential but de minimis effect	**0**
Walking improvements on Coxs Hill between the new Summers Park development and the Coxs Hill / Station Road roundabout, including improved street lighting and crossings	Potential but de minimis effect	**0**
Manningtree Level Crossing Replacement and Underpass	Potential but de minimis effect	**0**
Harlow Gilston Urban Area:		
A414 Burnt Mill to Gilston	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Improve connection between Harlow rail station and town centre	Potential but de minimis effect	0
Harlow Town Railway Station	Potential but de minimis effect	0
Harlow STC's (BSIP Scheme)	Potential but de minimis effect	0
Harlow Sustainable Transport Package	Potential but de minimis effect	0
Harlow Southern Way	Potential but de minimis effect	0
Harlow Mill Railway Station	Potential but de minimis effect	0
Harlow second LCWIP	Potential but de minimis effect	0
Harlow Town Centre LCWIP	Potential but de minimis effect	0
Harlow and Gilston Sustainable Transport Corridor	Potential but de minimis effect	0
Harlow Bus service review and improvement	Potential but de minimis effect	0
West Anglia Main Line package	Potential but de minimis effect	0
Harlow Second Avenue bus lanes	Potential but de minimis effect	0
PAH (Princess Alexandra Hospital) improvements	Potential but de minimis effect	0
Harlow Northern bypass	Potential but de minimis effect	0
Harlow Edinburgh Way bus lanes	Potential but de minimis effect	0
Harlow Centre to South Route Connector	Potential but de minimis effect	0
Second Avenue / Tripton Road Bus Lane	Potential but de minimis effect	0
Howard Way / First Avenue	Potential but de minimis effect	0

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
South West Essex:		
South Essex, Brentwood - IDP/West Horndon interchange	Potential but de minimis effect	**0**
IDP Brentwood cycling grid	Potential but de minimis effect	**0**
M25, J28 - Brentwood cycle route (A1023 Brentwood cycling and walking scheme)	Potential but de minimis effect	**0**
Epping LCWIP Delivery	Potential but de minimis effect	**0**
Brentwood LCWIP Delivery	Potential but de minimis effect	**0**
Waltham Abbey LCWIP Delivery	Potential but de minimis effect	**0**
Wilson's Corner redesign	Potential but de minimis effect	**0**
Brentwood Town Centre traffic improvements	Potential but de minimis effect	**0**
South Essex, Brentwood - IDP/Station environments (public realm and accessibility)	Potential but de minimis effect	**0**
M25 / A12 junction 28 improvements	Potential but de minimis effect	**0**
Crossrail 2 – TE does not have a position on CR2	Potential but de minimis effect	**0**
M11 junction 5 'all access' junction scheme	Potential but de minimis effect	**0**
M25, J29 improvements	Potential but de minimis effect	**0**
South Essex:		
Multi Modal Transport Hub at Southend airport/ A127 accessibility/Airport Surface Access Plans (ASAS)	Potential but de minimis effect	**0**
Southend Airport Connection Improvements	Potential but de minimis effect	**0**

Proposed Implementation Plan Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or has a credible impact pathway?	Effect Significance
Rochford LCWIP	Potential but de minimis effect	0
A127 strategic package	Potential but de minimis effect	0
South Essex bus metro	Potential but de minimis effect	0
A13 NMU Crossing Improvements	Potential but de minimis effect	0
A13 improvements (Essex)	Potential but de minimis effect	0
GEML Rail Link to London Gateway	Potential but de minimis effect	0
A13 sustainable corridor	Potential but de minimis effect	0
A127/A130 Fairglen	Potential but de minimis effect	0
Electrify rail access to London Gateway	Potential but de minimis effect	0

Table 14. LTP 4 strategic transport schemes which potentially could result in a likely negative effect on Habitats sites

Proposed Strategic Transport Scheme	Impact Pathway	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site?	Effect significance
A12 Widening J19 - J25 (Chelmsford to Marks Tey)	Water Quality	Yes Assessed under DCO for this NSIP	-
A12 Widening Marks Tey to Colchester	Water Quality	Yes Colne Estuary SPA and Ramsar site	-
A12 Widening Chelmsford Bypass	Water Quality	Yes Assessed under TCPA consent	-
A12 Improvements Colchester to A14 Copdock	Water Quality	Yes Stour & Orwell Estuaries SPA and Ramsar site	-

Proposed Strategic Transport Scheme	Impact Pathway	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site?	Effect significance
A12/ A14 Copdock Junction	Water Quality	Yes Stour & Orwell Estuaries SPA and Ramsar site	-
Essex Thameside improvements	Water Quality	Yes Essex Estuaries SAC	-
Crossrail 2	Water Quality	Yes Lee Valley SPA and Ramsar site	-
Freeport East Access Package	Water quality and Air quality	Yes Stour & Orwell Estuaries SPA and Ramsar site, Essex Estuaries SAC and Colne Estuary SPA and Ramsar site	-
Thames Freeport Access Package	Water quality and Air quality	Yes Thames Estuary & Marshes SPA and Ramsar site	-
Braintree Branch Line improvements	Water Quality	Yes Blackwater Estuary SPA and Ramsar site	-
A133 Frating to Clacton enhancements	Water Quality	Yes Essex Estuaries SAC	-
New Link Road connecting the A133 and A120.	Water Quality	Assessed under TCPA	-
Chelmsford North East Bypass	Water Quality	Yes Blackwater Estuary SPA and Ramsar site	-
A127 strategic package	Water Quality	Yes Benfleet and Southend Marshes SPA and Ramsar site	-
Lower Thames Crossing	Water quality and Air quality	Yes in Kent, Assessed under DCO for this NSIP	-

Proposed Strategic Transport Scheme	Impact Pathway	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site?	Effect significance
Upgrade Wickford to Southminster line	Water quality	Yes, coastal Habitats sites	-

Table 15. LTP4 countywide enhancement schemes which potentially could result in a likely negative effect on Habitats sites

Proposed Enhancement Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site?	Effect Significance
Strategic PROW enhancements to form long distance routes	Yes, coastal Habitats sites	-
A12 Improvements	Yes, coastal Habitats sites	-
Bridges and subways across the A12	Yes, coastal Habitats sites	-

Table 16. LTP 4 Implementation Plan Focus Area schemes which potentially could result in a likely negative effect on Habitats sites

Potential Enhancement Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or credible impact pathway?	Effect Significance
Jaywick - Broadway Placemaking	Yes, coastal Habitats sites	-
England Coast Path connection and tourist routes	Yes, coastal Habitats sites	-
BBCT rail freight terminal	Yes, coastal Habitats sites	-

Potential Enhancement Schemes	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site or credible impact pathway?	Effect Significance
Thames Coastal Protection	Yes, coastal Habitats sites	-
Canvey – surface water flooding	Yes, coastal Habitats sites	-
Bradwell Nuclear Plant links	Yes, coastal Habitats sites	-
Burnham branch line improvements	Yes, coastal Habitats sites	-
Bridges and subways across the A12	Yes, coastal Habitats sites	-
A120-A133 Link Road	Yes, coastal Habitats sites	-
Thames Freeport connection	Yes, coastal Habitats sites	-
Sustainable links from Canvey to Thames Freeport	Yes, coastal Habitats sites	-
Essex Thameside rail network study (passenger, freight)	Yes, coastal Habitats sites	-

Table 17. LTP 4 Implementation Plan Focus Area schemes likely to have a significant effect on Habitats sites

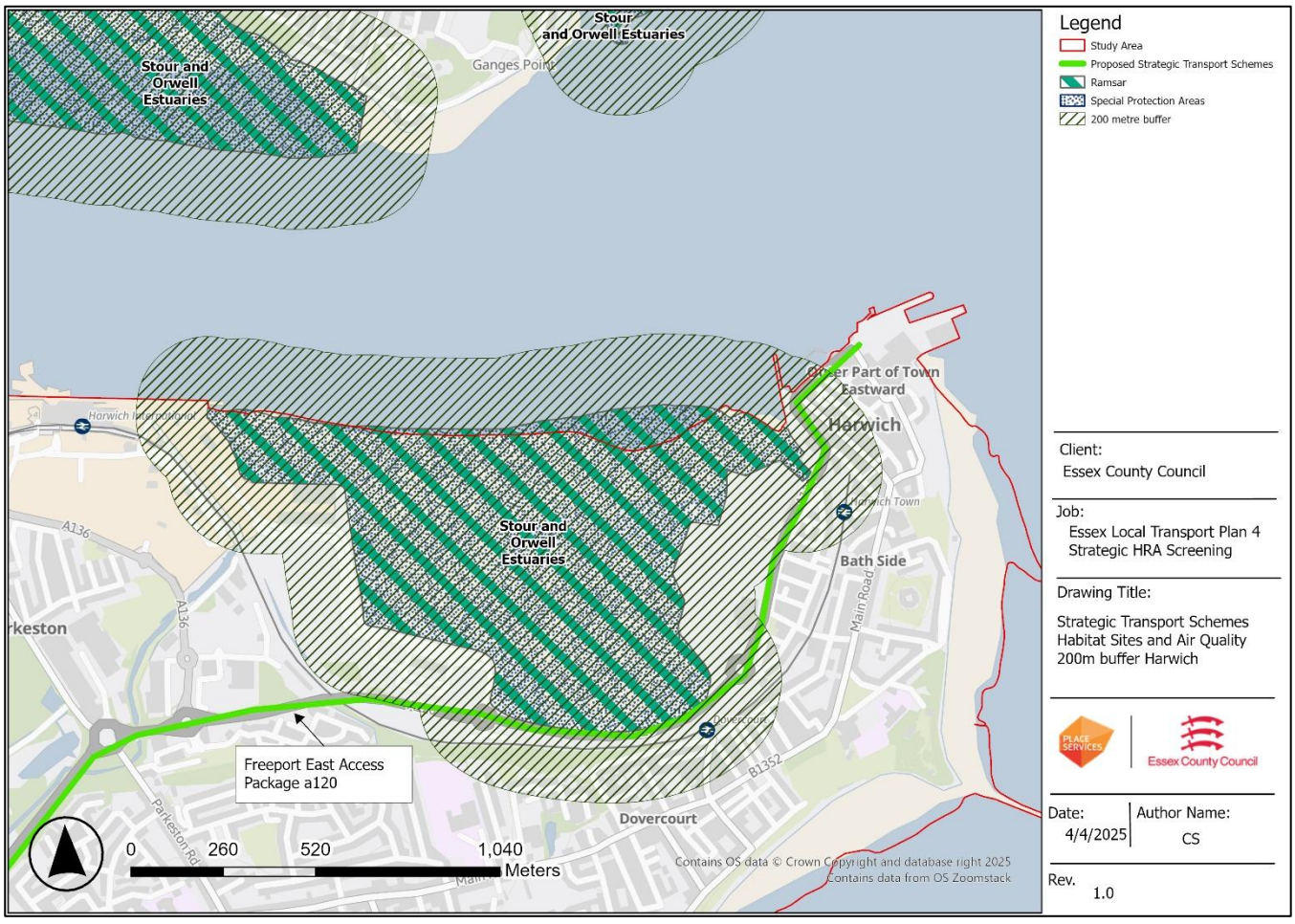
Potential Enhancement Schemes	Impact Pathway	Is the scheme within the Zone of Influence of any SPA/SAC/Ramsar site?	Effect Significance
Improved access to Canvey	Functionally Linked Land & Water Quality	Yes Benfleet and Southend Marshes SPA and Ramsar site	--

4.4 Potential Impacts of schemes in LTP4

4.4.1 There is potential for Likely Significant Effects from several impact pathways (Air quality, disturbance, functionally linked land and water quality) and a project level Habitats Regulations Assessment will be required at application stage in order to demonstrate no Adverse Effect On the Integrity of any Habitats sites within scope of this HRA Screening report.

4.4.2 The proximity of road network to the Stour and Orwell Estuaries SPA and Ramsar site around Bathside Bay lies within 200m. The 200m air quality buffer from roads at Harwich is shown on Figure 3 below. This demonstrates that the project level assessment of likely significant effects from air pollution on the Habitats sites will be needed for the Freeport East Access transport scheme.

Figure 3. Strategic Transport Schemes Habitats Sites and Air Quality 200m buffer Harwich



4.5 In-combination effects

4.5.1 The LTP 4 strategic, countywide and implementation plan schemes listed in Tables 11, 12 and 13 have been screened out for any Likely Significant Effects as they are at a sufficient distance for there to be no negligible effect. Therefore, they do not need to be assessed for their potential in combination effects.

4.5.2 It is not possible to rule out any likely significant effects resulting from the LTP 4 strategic and countywide schemes listed in Tables 14 and 15, and the Implementation Plan Focus Area schemes in Tables 16 and 17.

4.5.3 However, no development could occur through this proposed transport scheme being listed in the LTP4 alone, because it will be implemented through sub-ordinate plans and projects that are more detailed and therefore more appropriate to assess for their effects on a Habitats site and associated sensitive areas.

4.5.4 The potential for an in-combination effect only needs to be considered if negligible effects have been identified and have been assigned to all transport schemes. This is not the result of the HRA screening so there is no need at this stage for an in-combination assessment of likely effects. This will be required at application stage.

4.6 Summary of Screening Results

4.6.1 The HRA screening of policy text recommends that Policy 8 Our Natural Environment is strengthened to include “avoid adverse effects on the integrity of Habitats sites” as indicated below.

Policy 8. Our Natural Environment.

We will aim to reduce the impact of transport on the natural environment to avoid adverse effect on the integrity of Habitats sites, minimise pollution and contribute to biodiversity net gain.

4.6.2 The LTP4 schemes listed in Tables 14, 15, 16 and 17 will need a project level HRA report when full details are available for these works, either alone or in combination with other plans and projects. However, the LTP4 of itself will not result in any Likely Significant Effects on any of the Habitats sites within the scope of this assessment. As a result, Essex County Council does not need to proceed to Stage 2 Appropriate Assessment for the LTP4.

4.6.3 Given the limited information available on the third crossing the ‘mitigation’ in the Local Plan will need to consist of a policy framework that explicitly prevents a proposal coming forward unless it is able to demonstrate that adverse effects on the integrity of European sites can be avoided.

4.6.4 This is in line with advice 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).

5. Recommendations

5.1.1 **As the Essex LTP4 is a strategic plan and does not include sufficient detail to neither predict the exact location and nature of transport related development nor assess its impacts on Habitats sites with confidence and beyond reasonable scientific doubt. It is therefore not possible to progress further than HRA Screening stage for Essex LTP4.**

5.1.2 Based on the 'intention' of the strategic, countywide and implementation plan focus area schemes, this HRA Screening has identified those Habitats sites with the potential to be impacted by the LTP4. Professional judgement was used to assess the likelihood of the developments as detailed in the LTP4 resulting in impacts which could require mitigation measures to avoid Adverse Effect on Integrity of Habitats sites. The potential impacts will need to be assessed at project level and mitigation considered at Stage 2 HRA Appropriate Assessment.

5.1.3 Further assessment at this project level is more appropriate as:

- A greater level of detail and hence certainty is available when making an assessment of the likelihood of significant effects occurring. Potential impacts may be screened out or additional impacts noted once more information relating to the nature or exact location of the proposal or associated works; and
- Further information will allow for more robust avoidance and mitigation measures to be designed and implemented, thereby reducing the overall impact of the proposed project.

5.1.4 **The HRA screening recommends that Policy text for Policy 8 Our Natural Environment** is strengthened to include "*and avoid adverse effects on the integrity of Habitats sites"* as indicated below.

Policy 8. Our Natural Environment.
We will aim to reduce the impact of transport on the natural environment <u>to avoid adverse effect on the integrity of Habitats sites,</u> minimise pollution and contribute to biodiversity net gain.

5.1.5 **This HRA Screening assessment concludes that implementation of the LTP4 and its associated Transport Schemes is unlikely to result in significant effects on the Habitats sites within scope. Although future development driven or supported by the LTP4 has the potential to impact Habitats sites, there is sufficient flexibility within the LTP4 to ensure that future transport development is designed and implemented in a manner that either completely avoids, or mitigates for impacts to Habitats sites to avoid adverse effect on integrity.**

6. Conclusion

5.3.2 This Habitats Regulations Assessment (HRA) screening has considered the potential impacts on Habitats sites likely to result from the LTP4.

5.3.3 In line with the 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 development is likely to result in significant effects on a Habitats site. This HRA screening report has concluded that it is not possible to rule out the potential for likely significant effects without further assessment and possible mitigation for the following LTP4 schemes:

5.3.4 The twelve policies for LTP4 are not considered to result in any significant effects on any Habitats sites either alone or in combination with other plans and projects. All policies have therefore been screened out from further assessment.

5.3.5 The list of LTP 4 schemes which require further assessment are listed in Tables 14, 15, 16 and 17 of this report.

5.3.6 The list of recommendations is provided in Section 5.

5.3.7 This decision is reliant on the application of a number of mitigation measures:

- Preparation of HRAs for the strategies, masterplans and project-level HRAs which should use of best available evidence for future HRAs.
- Specific text to embed mitigation measures into the LTP4.
- Use of strict pollution control measures, enforced by measures such as CEMPs.
- Collaboration with other terrestrial and marine authorities who are also responsible for licensing and permitting in the area.
- Monitoring of the LTP4, particularly for water and air quality.

5.3.8 Since it is not possible to rule out adverse effects on the integrity of many Habitats sites without mitigation due simply to the high-level nature of the LTP4 schemes, 'down-the-line' assessment becomes essential. **Thus, the requirement for project level HRAs should be explicitly enshrined in the LTP**. This is to ensure that decision-makers are aware of the need for project-level HRAs (even if only to confirm no LSE), particularly for the highlighted schemes, and that HRAs must consider effects in combination with other plans and projects. 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 statement to protect Habitats sites from development and any transport scheme.

5.3.9 All future related masterplans, strategies and projects must use the best available evidence. They must be completed in the context of the latest scientific knowledge and evidence base that is available at the time of the assessment.

5.3.10 The risk of issues which span the terrestrial and marine/coastal environments and cut across the Local Highways Authority and other bodies controlling the water environment should be recognised and not overlooked to ensure that they do not fall between planning/ licensing responsibilities, e.g. with respect to port development; water management; and recreational disturbance.

5.3.11 LTP monitoring provision will provide further mitigation. Whilst monitoring is not mitigation in itself, it allows details to be provided about how the LTP has been applied and informs the formal reporting cycle.

5.3.12 An Appropriate Assessment under the Conservation of Habitats and Species Regulations 2017 (as amended) is therefore not possible at this stage and the Essex Local Transport Plan 4 may only be authorised after having ascertained that it will not adversely affect the integrity of these Habitats sites.

5.3.13 Embedded mitigation measures for projects will need to be considered in project-level HRA reports and secured by way of any planning or other consent needed. Therefore, there will be no need for further assessment for this Local Transport Plan 4.

5.3.14 The protective approach of the Essex LTP4 requiring all transport schemes to demonstrate that their design will avoid Adverse Effect on Integrity of Habitats sites.

5.3.15 Subject to Natural England's review, this HRA Screening Report, concludes that, without mitigation embedded, the Essex Local Transport Plan 4 is not predicted to have Likely Significant Effect on the designated features of any Habitats site, either alone or in combination with other plans and projects. The requirement for the Plan to undertake further assessment under the Conservation of Habitats and Species Regulations 2017 (as amended) is therefore screened out.

5.3.16 No further HRA work is necessary and, subject to the formal comments from Natural England, Essex County Council the Local Highways Authority can adopt the Plan.

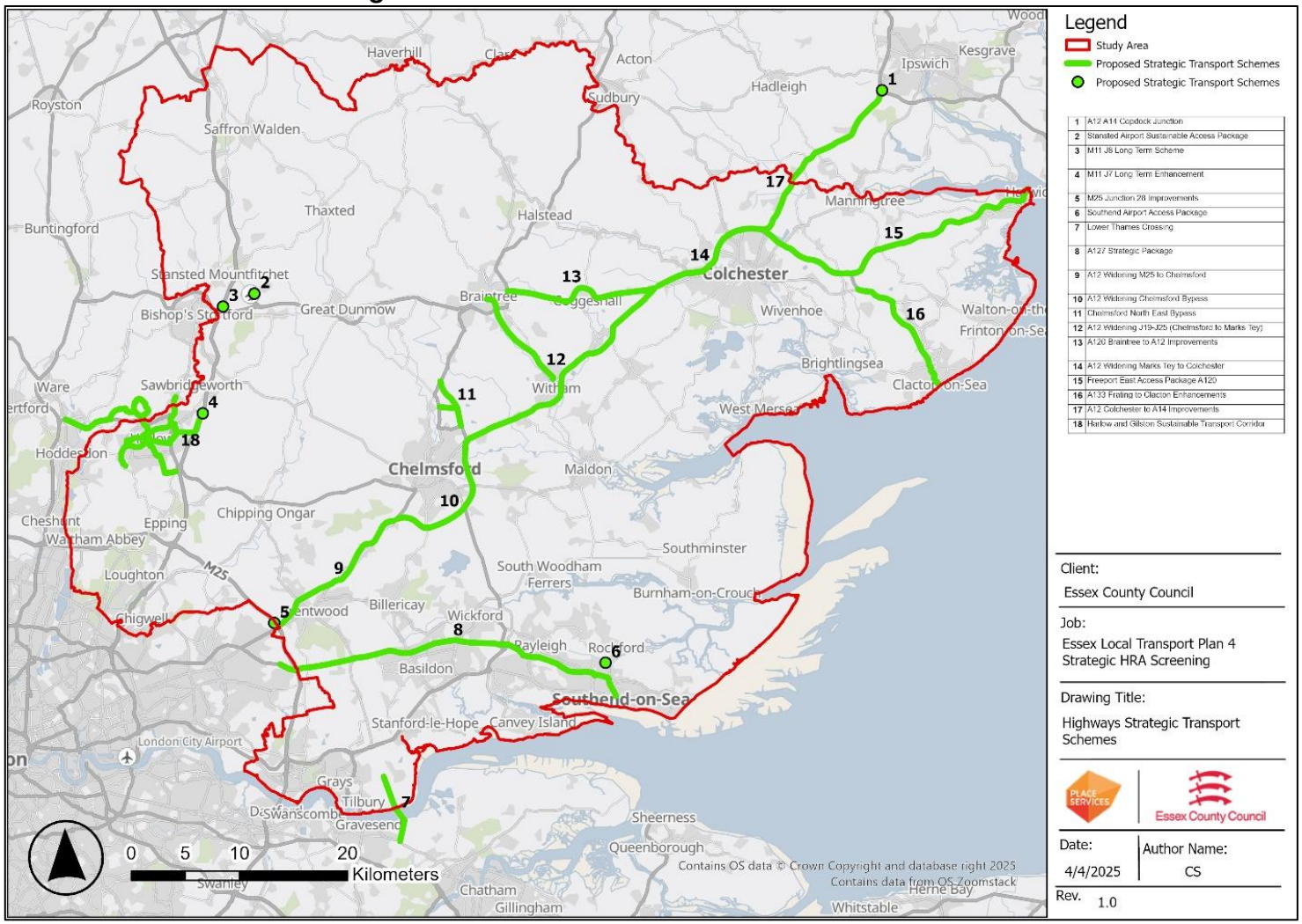
7. References

- Air Pollution Information System - www.apis.ac.uk
- Essex County Council and Essex Highways (2011) Local Transport Plan 3.
- Essex County Council. Local Transport Plan 4. Can be viewed at: Local Transport Plan | Essex County Council
- Essex Air Quality Map. Available at: Air Quality Map | Essex Air
- Essex Air Quality Strategy, Essex Air (Draft). Available at: https://cdn.cms42.com/essexair/reports/Strategy/essex_air_quality_strategy_web_version.pdf
- Gov.uk (May 2019) Pollution Prevention for Businesses. Available at: https://www.gov.uk/guidance/pollution-prevention-for-businesses
- Gov.uk (July 2025) Habitats regulations assessments: protecting a European site - GOV.UK
- IAQM (June 2019). Available from https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2019.pdf
- National Highways Design Manual for Roads and Bridges (DMRB) -LA 105 -Air quality (vertical barriers) (formerly HA 207/07, IAN 170/12, IAN 174/13, IAN 175/13, part of IAN 185/15), Version 0.1.0
- Natural England. June 2018. Available at: (Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations - NEA001
- Natural England (2014) Conservation objectives for European Sites. Available at: http://publications.naturalengland.org.uk/category/6581547796791296
- Mouchel (2011) Habitat Regulations Assessment: Screening Report Essex County Council Local Transport Plan 3
- Tydlesley, D., and Chapman, C. (2013) The Habitats Regulations Assessment Handbook, (July 2025) edition UK: DTA Publications Limited. Available at: https://www.dtapublications.co.uk/

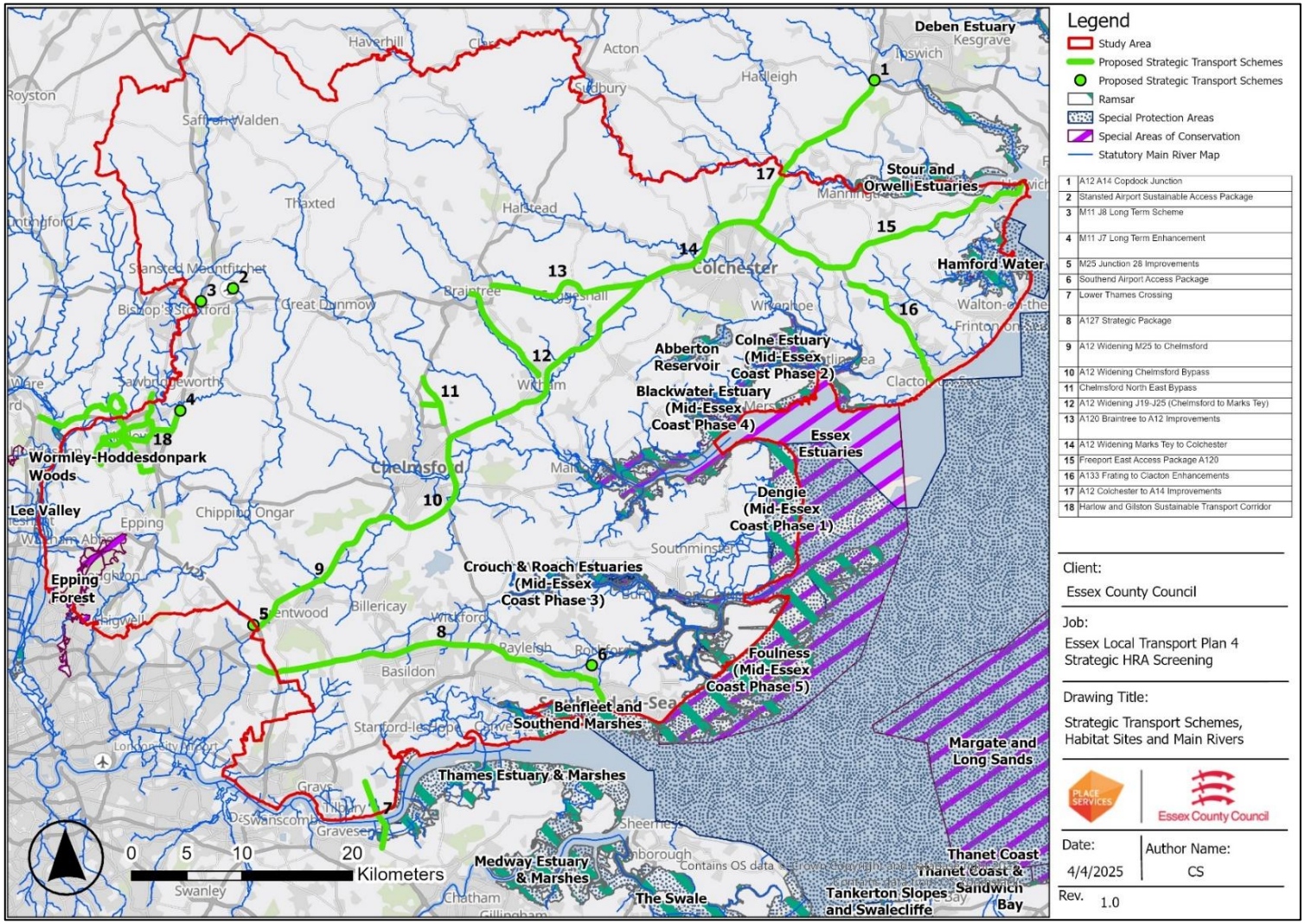
8. Appendix

This page has been left intentionally blank

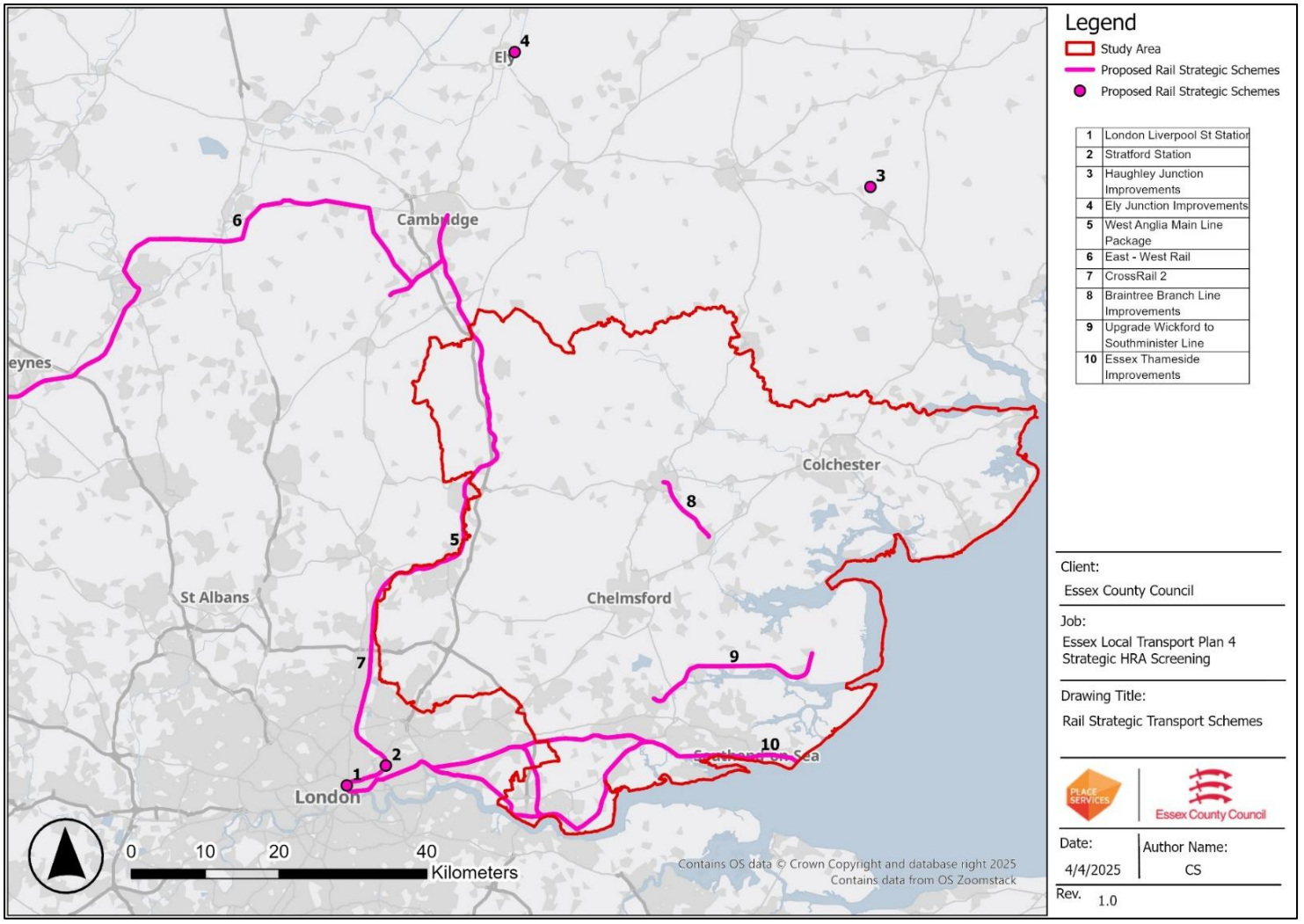
Appendix 1. Location of Essex LTP4 Strategic Schemes



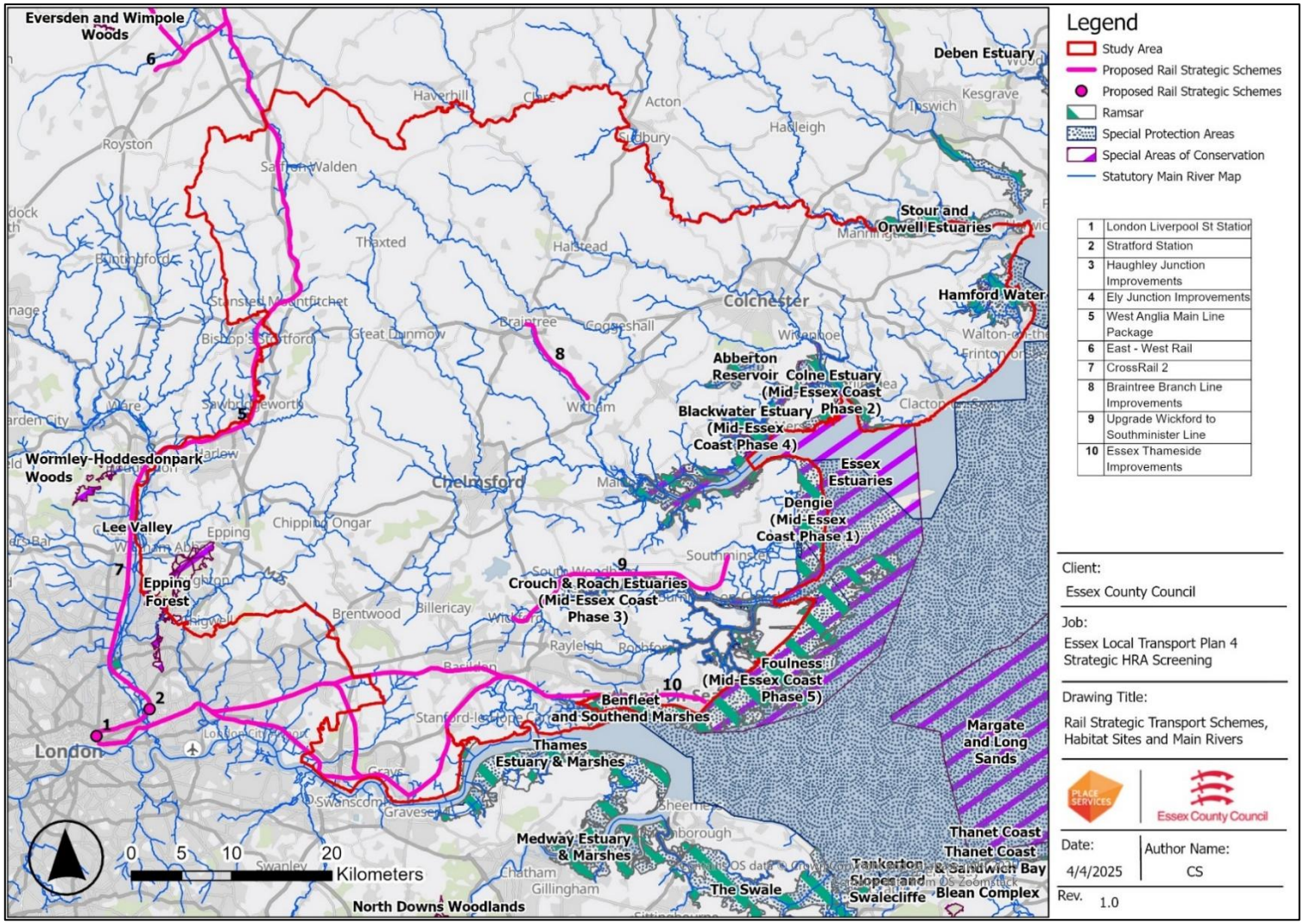
Appendix 2. Habitats sites, Strategic transport schemes and Main rivers in Essex



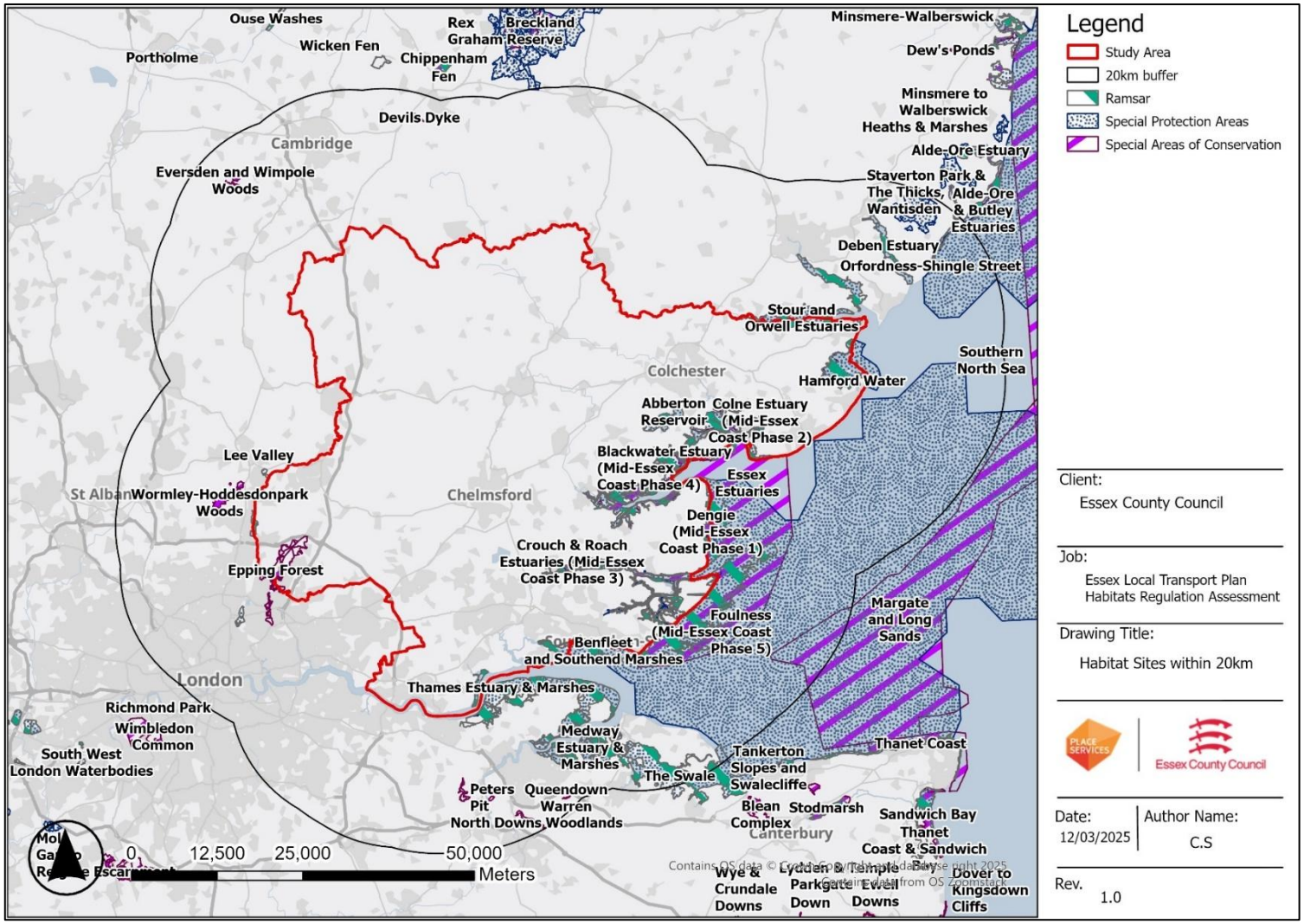
Appendix 3. Location of Strategic rail transport schemes



Appendix 4. Habitats sites, Strategic rail schemes and Main rivers in Essex



Appendix 5. Habitats sites within 20km of Essex



Appendix 6. Habitats sites, Conservation Objectives and Vulnerabilities

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
The Stour and Orwell estuaries **These estuaries straddle the eastern part of the Essex/Suffolk border in eastern England. The estuaries include extensive mud-flats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The mud-flats hold Enteromorpha, Zostera and Salicornia spp. The site also includes an area of low-lying grazing marsh at Shotley Marshes on the south side of the Orwell. In summer, the site supports important numbers of breeding Avocet Recurvirostra avosetta, while in winter they hold major concentrations of waterbirds, especially geese, ducks and waders. The geese also feed, and waders roost, in surrounding areas of agricultural land outside the SPA. The site has close ecological links with the Hamford Water and Mid-Essex Coast SPAs, lying to the south on the same coast.**				
Stour and Orwell Estuaries SPA **EU Code: UK9009121**	**3676.92**	Qualifying features**:** **Annex I species:** **Breeding:** **Pied avocet, Recurvirostra avosetta (breeding)** **Migratory species:**	**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**	**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**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		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 Waterbird assemblage (non breeding): Cormorant Phalacrocorax carbo Pintail Anas acuta Ringed Plover Charadrius hiaticula Grey Plover Pluvialis squatarola Dunlin Calidris alpina alpine Black-tailed Godwit Limosa limosa	qualifying features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of the Birds Directive. Subject to natural change, to maintain or restore: The extent and distribution of the Habitats of the qualifying features; The structure and function of the Habitats of the qualifying features; The supporting processes on which the Habitats of the qualifying features rely;	qualifying SPA birds will be lost or degraded through coastal squeeze, sedimentation and reduced exposure. Public access/disturbance: Stour and Orwell Estuaries is subject to land- and water-based activities, including boating and water sports; walking; bait-digging; fishing; wildfowling; and military overflight training. These activities are likely to impact Habitats supporting breeding and overwintering water birds. A better understanding of which species and Habitats are most susceptible; which types of activity are most disturbing; and which locations and times of year are most sensitive is required to ensure the Estuaries are

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		islandica **Redshank Tringa tetanus** **Shelduck Tadorna tadorna** **Great Crested Grebe Podiceps cristatus** **Curlew Numenius arquata** **Dark-bellied Brent Goose Branta bernicla bernicla** **Wigeon Anas Penelope** **Goldeneye Bucephala clangula** **Oystercatcher Haematopus ostralegus** **Lapwing Vanellus vanellus** **Knot Calidris canutus** **Turnstone Arenaria interpres.** **Further information can be found via Natural England's**	**The populations of the qualifying features;** **The distribution of the qualifying features within the site.**	**appropriately managed.** **Changes in species distribution: Declines in the number of bird species present at Orwell coastline have occurred. This is likely to be the result of changes in population and distribution on an international scale, due to climate change.** **Invasive species: An increase in Spartina anglica may be affecting the growth of Spartina maritime, a key habitat feature for qualifying bird roosting and feeding areas of saltmarsh and mudflat.** **Planning permission- general: The issue of development in combination with other factors is not fully understood. To ensure management is appropriate to the**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Supplementary Advice.		**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**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				for coastal dune Habitats used by breeding terns and hence there is a risk of harmful effects. **Inappropriate coastal management:** **Due to the presence of existing hard sea defences, such as sea walls there is little scope for adaptation to rising sea levels. Any freshwater Habitats behind failing seawalls are likely to be inundated by seawater, which would result in the loss of this habitat within the SPA.** **Fisheries- Commercial and estuarine:** **Commercial fishing activities can be very damaging to inshore marine Habitats and the bird species dependent on the communities they support. Any**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				'amber or green' categorised commercial fishing activities in Habitats Marine Sites are assessed by Kent and Essex Inshore Fisheries Conservation Authority (IFCA). This assessment takes into account any in-combination effects of amber activities and/or appropriate plans or projects.
Stour and Orwell Estuaries Ramsar site **RIS Code: UK11067**	**3676.92**	**Ramsar criterion 2** **Contains seven nationally scarce plants:** **Stiff saltmarsh-grass Puccinellia rupestris** **Small cord-grass Spartina maritime** **Perennial glasswort Sarcocornia perennis** **Lax-flowered sea lavender**	**None available.**	**A key threat identified by RIS was erosion.** **Erosion:** **Natural coastal processes exacerbated by fixed sea defences, port development and maintenance dredging. Erosion is being tackled through sediment replacement for additional erosion that can be attributed to port development and**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Limonium humile **Eelgrasses Zostera angustifolia, Z. marina and Z. noltei.** **Ramsar criterion 5** **Assemblages of international importance; species with peak counts in winter; 63,017 waterfowl.** **Ramsar criterion 6** **Species/ populations occurring at levels of international importance:** **Species with peak counts in spring/autumn:** **Common redshank, Tringa totanus totanus** **Species with peak counts in winter:** **Dark-bellied brent goose, Branta bernicla bernicla**		**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.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Northern pintail, Anas acuta **Grey plover, Pluvialis squatarola** **Red knot, Calidris canutus islandica** **Dunlin, Calidris alpina alpina** **Black-tailed godwit, Limosa limosa islandica** **Common redshank, Tringa totanus tetanus**		
The Deben Estuary **The Deben Estuary lies within Suffolk Coastal District at the southern border of Suffolk. The estuaries include extensive mud-flats, low cliffs, saltmarsh and small areas of vegetated shingle on the lower reaches. The mud-flats hold Enteromorpha, Zostera and Salicornia spp. In summer, the site supports important numbers of breeding Avocet while in winter they hold major concentrations of waterbirds, especially geese, ducks and waders. The geese also feed, and waders roost, in surrounding areas of agricultural land outside the SPA.**				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Deben Estuary SPA **EU Code: UK9009261**	**978.93**	Qualifying **features:** **Dark-bellied brent goose Branta bernicla bernicla (Non-breeding);** **Pied avocet , Recurvirostra avosetta (breeding)** **Further information can be found via Natural England's** Supplementary Advice**.**	**With regard to the individual species and/or assemblage of species for which the site has been classified ("the Qualifying Features" listed below);** **Avoid the deterioration of the habitats of the Qualifying Features, and the significant disturbance of the qualifying features, ensuring the integrity of the site is maintained and the site makes a full contribution to achieving the aims of The Birds Directive.** **Subject to natural change, to maintain or restore:** **The extent and distribution**	**Coastal squeeze:** **The Deben Estuary coastline is undergoing widespread decline in the quality of saltmarsh, and an increase in lower marsh habitats at the expense of mid and upper marsh vegetation communities. This is likely due to 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:** **The Deben Estuary is subject to land and water-based activities, including boating and water sports; walking; wildfowling; and**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			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.	low flying aircrafts. 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: Spartina anglica is encroaching onto estuarine muds. This may reduce bird roosting and feeding areas of saltmarsh and mudflat. Air Pollution- Impacts of atmospheric nitrogen deposition: Modelled aerial deposits of nitrogen within Deben Estuary

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				exceed the threshold limit above which the diversity of saltmarsh vegetation begins to be altered (possibly to reed) and adversely impacted. This is likely being caused by in combination impacts from land spreading and land use practices with high nutrient inputs e.g. outdoor pig farms. **Water Pollution: Inappropriate water quality may impact on the supporting habitats of SPA birds. Eutrophication may be having an influence on reed growth and saltmarsh composition.** **Increased flood events could lead to habitat change/loss of diversity. Nutrient run off from farming operations could**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				exacerbate the issue. Further monitoring and management of key issues are required. **Fisheries: Commercial marine estuarine – In combination impacts from fisheries in European Marine Sites need to be monitored and appropriately managed to avoid potential threats to site condition.**
Deben Estuary Ramsar site **RIS Code: UK11017**	**978.93**	**Ramsar criterion 2** **Supports a population of the mollusc Vertigo angustior (Habitats Directive Annex II (S1014); British Red Data Book Endangered). Martlesham Creek is one of only about fourteen sites in Britain where this species survives** **Ramsar criterion 6 - species/populations occurring at**	**None available.**	**A key threat identified by RIS was erosion.** **Erosion:** **English Nature provides advice to the Environment Agency and coastal local authorities in relation to flood and coastal protection management. This will inform the development of the Suffolk Estuaries strategies and**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		levels of international importance: **Species with peak counts in winter:** **Dark-bellied brent goose, Branta bernicla bernicla,** **Noteworthy fauna:** **Species currently occurring at levels of national importance:** **Species with peak counts in spring/autumn:** **Black-tailed godwit , Limosa limosa islandica** **Common greenshank, Tringa nebularia** **Species with peak counts in winter:** **Bean goose , Anser fabalis fabalis,** **Common shelduck , Tadorna**		**the second generation shoreline management plan.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		tadorna **Pied avocet , Recurvirostra avosetta** **Spotted redshank , Tringa erythropus,** **Common redshank , Tringa totanus totanus,** **Nationally important species occurring on the site:** **Invertebrates:** **Vertigo angustior (Nationally Scarce)** **Vertigo pusilla (Nationally Scarce)**		
Benfleet and Southend Marshes **Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. The site is comprised of an extensive series of saltmarshes, mudflats, and grassland which support a diverse flora and fauna, including internationally important numbers of wintering waterfowl.**				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Benfleet and Southend Marshes SPA **EU Code: UK9009171**	**2283.94**	**Qualifying features:** **Dark-bellied Brent goose; Branta bernicla bernicla (Non-breeding)** **Ringed plover; Charadrius hiaticula (Non-breeding)** **Grey plover; Pluvialis squatarola (Non-breeding)** **Red knot; Calidris canutus (Non-breeding)** **Dunlin; Calidris alpina alpina (Non-breeding)** **Waterbird assemblage** **Further information can be found via Natural England's Supplementary Advice.**	**Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:** **The extent and distribution of the habitats of the qualifying features** **The structure and function of the habitats of the qualifying features** **The supporting processes on which the habitats of the qualifying features rely** **The population of each of the qualifying features, and** **The distribution of the**	**Coastal squeeze:** **Coastal defences exist along much of the coastline here. Sea level rise is also occurring. It is therefore certain that if circumstances do not change, much of the supporting habitats of the SPA birds will be lost/degraded through processes such as: coastal squeeze; sedimentation rates' inability to keep pace with sea level rise; and reduced exposure (the extent and duration) of mudflats and sandflats.** **Public Access/Disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			qualifying features within the site	watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management. **Invasive species:** **Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur. **Changes in species distribution: There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013). These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines **Fisheries- commercial marine and estuarine:** **The extent and impacts of fisheries on private grounds, particularly in the Swale Estuary, needs to be better understood. There are particular concerns regarding the dredging of shellfish within the SPAs which are a food source for the protected birds. Commercial fishing activities categorised as 'amber or green' under Defra's revised approach to commercial**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				fisheries in European Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent & Essex IFCA. **Invasive species:** **Freshwater non-native invasive species such as pennywort, crassula, parrots feather etc. can engulf ditches, leading to loss of habitat for diving ducks. Although there are some mechanisms in place to ensure ditch management, more baseline information is needed, particularly on those species for which ditch management is not the solution. Spartina anglica may be increasing at the expense of other saltmarsh habitats with**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				adverse implications for SPA bird roost areas in Benfleet & Southend Marshes. **Vehicles- Illicit:** **The illicit use of motor vehicles (often bikes) occurs across the area. This can cause disturbance to SPA birds. This activity was identified as a medium risk during the 2009 EMS risk review project and is still occurring. Whilst various mechanisms are in place to prevent the use of vehicles they are clearly not entirely effective.** **Air Pollution- risk of atmospheric nitrogen deposition:** **Nitrogen deposition exceeds site-relevant critical loads.**
Benfleet and	**2251.31**	**Ramsar criterion 5**	**None available.**	**None available.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Southend Marshes Ramsar site **RIS Code: UK11006**		**Assemblages of international importance; species with peak counts in winter; 32867 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 spring/autumn:** **Branta bernicla bernicla; Dark-bellied brent goose** **Species with peak counts in winter:** **Charadrius hiaticula; Ringed plover** **Pluvialis squatarola; Grey plover** **Species/populations identified subsequent to designation for**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		possible future consideration under criterion 6. **Species with peak counts in winter:** **Calidris alpina alpina; Dunlin**		
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)**	**4395.15**	**Qualifying features:** **Dark-bellied brent goose; Branta bernicla bernicla (Non-breeding)** **Common pochard; Aythya ferina**	**Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the**	**Coastal Squeeze:** **Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
EU Code: UK9009245		**(Breeding)** **Hen harrier; Circus cyaneus (Non-breeding)** **Ringed plover; Charadrius hiaticula (Breeding)** **Grey plover; Pluvialis squatarola (Non-breeding)** **Dunlin; Calidris alpina alpina (Non-breeding)** **Black-tailed godwit; Limosa limosa islandica (Non-breeding)** **Little tern; Sterna albifrons (Breeding)** **Waterbird assemblage** **Further information can be found via Natural England's** Supplementary Advice**.**	**aims of the Wild Birds Directive, by maintaining or restoring:** **The extent and distribution of the habitats of the qualifying features** **The structure and function of the habitats of the qualifying features** **The supporting processes on which the habitats of the qualifying features rely** **The population of each of the qualifying features, and,** **The distribution of the qualifying features within the site.**	**landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.** **Public access /disturbance:**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats. **Planning permission: general Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				types of development. **Changes in species distributions:** **Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change.** **Invasive species:** **An increase in Pacific oyster Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species. **Fishing:** **Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species dependent on the communities they support.** **Air Pollution- risk of atmospheric**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				nitrogen deposition: Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.
Blackwater Estuary Ramsar site **(Mid-Essex Coast Phase 4)** **RIS Code:**	**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, includes a total of 3,237**	**None available.**	**None available.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
UK11007		**ha that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.** **Ramsar criterion 2** **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:** **Damselfly; Lestes dryas,** **Flies; Aedes flavescens, Erioptera bivittata, Hybomitra expollicata** **Spiders; Heliophanus auratus and Trichopterna cito;**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Rare: **Beetles; Baris scolopacea, Philonthus punctus, Graptodytes bilineatus and Malachius vulneratus,** **Flies; Campsicemus magius and Myopites eximia, the moths Idaea ochrata and Malacosoma castrensis and** **Spiders; Euophrys.** **Ramsar criterion 3** **This site supports 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**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		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:** **Grey plover; Pluvialis squatarola** **Dunlin; Calidris alpina alpina** **Black-tailed godwit; Limosa limosa islandica** **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
		Common shelduck; Tadorna tadorna **European golden plover; Pluvialis apricaria apricaria** **Common redshank ; Tringa totanus tetanus**		
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) **The Rivers Crouch and Roach are situated in South Essex. The River Crouch occupies a shallow valley between two ridges of London Clay, whilst the River Roach is set predominantly between areas of brick earth and loams with patches of sand and gravel. The intertidal zone along the Rivers Crouch and Roach is 'squeezed' between the sea walls of both banks and the river channel. This leaves a relatively narrow strip of tidal mud unlike other estuaries in the county, which, nonetheless, is used by significant numbers of birds. One species is present in internationally important numbers, and three other species of wader and wildfowl occur in nationally important numbers. Additional interest is provided by the aquatic and terrestrial invertebrates and by an outstanding assemblage of nationally scarce plants**				
Crouch & Roach Estuaries SPA	**1735.58**	**Qualifying Features:** **Dark-bellied brent goose; Branta**	**Ensure that the integrity of the site is maintained or**	**Coastal Squeeze:** **Coastal defences along much of**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
(Mid-Essex Coast Phase 3) **EU Code: UK9009244**		**bernicla bernicla (Non-breeding)** **Waterbird assemblage** **Further information can be found via Natural England's Supplementary Advice.**	**restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:** **The extent and distribution of the habitats of the qualifying features** **The structure and function of the habitats of the qualifying features** **The supporting processes on which the habitats of the qualifying features rely** **The population of each of the qualifying features, and,** **The distribution of the qualifying features within the site.**	**the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				protected behind seawalls. **Public access /disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats.** **Planning permission- general:** **Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				overview of the relative sensitivities of different habitats, species and locations to different types of development. **Changes in species distributions:** **Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change.** **Invasive species:** **An increase in Pacific oyster Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species. **Fishing:** **Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				dependent on the communities they support. **Air Pollution- risk of atmospheric nitrogen deposition:** **Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.**
Crouch & Roach Estuaries	**1735.58**	**Ramsar criterion 2** **Supports an appreciable**	**None available.**	**None available.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Ramsar site **(Mid-Essex Coast Phase 3)** **RIS Code: UK11058**		**assemblage of rare, vulnerable or endangered species or subspecies of plant and animal including 13 nationally scarce plant species:** **Slender Hare's Ear Bupleurum tenuissimum,** **Divided Sedge Carex divisa,** **Sea Barley Hordeum marinum,** **Golden-Samphire Inula crithmoides,** **Lax Flowered Sea-Lavender Limonium humile,** **Curved Hard-Grass Parapholis incurva,** **Borrer's Saltmarsh grass Puccinellia fasciculata,** **Stiff Saltmarsh Grass Puccinellia rupestris,**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Spiral Tasselweed Ruppia cirrhosa, **One-Flowered Glasswort Salicornia pusilla,** **Small Cord-Grass Spartina maritima,** **Shrubby Seablite Suaeda vera** **Sea Clover Trifolium squamosum.** **Several important invertebrate species are also present on the site, including** **Scarce Emerald Damselfly Lestes dryas,** **Shorefly Parydroptera discomyzina,** **Rare Soldier Fly Stratiomys singularior,** **Large Horsefly Hybomitra expollicata,**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Beetles Graptodytes bilineatus and Malachius vulneratus, **Ground Lackey Moths Malacosoma castrensis and Eucosoma catoprana.** **Ramsar criterion 5** **Assemblages of international importance; species with peak counts in winter; 16970 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:** **Dark-bellied brent goose; Branta bernicla bernicla**		

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)** **EU Code: UK9009242**	**3127.23**	**Qualifying features:** **Dark-bellied brent goose; Branta bernicla bernicla (Non-breeding)** **Grey plover; Pluvialis squatarola (Non-breeding)** **Hen harrier; Circus cyaneus (Non-breeding)** **Knot; Calidris canutus (Non-breeding)** **Waterbird assemblage (Non-breeding)** **Further information can be found**	**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**	**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**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		via Natural England's Supplementary Advice**.**	**qualifying features** **the supporting processes on which the habitats of the qualifying features rely** **the populations of qualifying features** **the distribution of qualifying features within the site**	**reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.** **Public access /disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce**

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

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				possibly linked to climate change. **Invasive species:** **An increase in Pacific oyster Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.** **Fishing:** **Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats**

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

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.
Dengie Ramsar Site **(Mid-Essex Coast Phase 1)** **EU Code: 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**	**None available.**	**None available.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		scarce plants: **Sea Kale Crambe maritima,** **Sea Barley Hordeum marinum,** **Golden Samphire Inula crithmoides,** **Lax Flowered Sea Lavender Limonium humile,** **Glassworts Sarcocornia perennis and Salicornia pusilla,** **Small Cord-Grass Spartina maritima,** **Shrubby Sea-Blite Suaeda vera,** **Eelgrasses Zostera angustifolia, Z. marina and Z. noltei.** **The invertebrate fauna includes the following Red Data Book species:** **Weevil Baris scolopacea,**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Horsefly Atylotus latistriatus and **Jumping Spider Euophrys browningi.** **Ramsar criterion 3** **This site supports 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; 43828 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**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		winter: **Common redshank; Tringa totanus tetanus** **Species/populations identified subsequent to designation for possible future consideration under criterion 6.** **Species with peak counts in winter:** **Dark-bellied brent goose; Branta bernicla bernicla** **Eurasian oystercatcher; Haematopus ostralegus ostralegus** **Grey plover; Pluvialis squatarol** **Bar-tailed godwit; Limosa lapponica lapponica** **Red knot; Calidris canutus**		
Essex Estuaries				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
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 **EU Code: UK0013690**	**46109.95**	**Qualifying features:** **Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks** **Estuaries** **Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats.** **Salicornia and other annuals colonizing mud and sand; Glasswort and other annuals colonising mud and sand** **Spartina swards (Spartinion maritimae); Cord-grass swards** **Atlantic salt meadows (Glauco-**	**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**	**Coastal Squeeze:** **Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Puccinellietalia maritimae) **Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)**	**on which qualifying natural habitats rely**	**the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.** **Public access /disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats.** **Planning permission: general** **Several of the issues affecting the**

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

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species. **Fishing:** **Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species dependent on the communities they support. **Air Pollution- risk of atmospheric nitrogen deposition:** **Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				breeding areas caused by nitrogen deposition.
Foulness **Foulness is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mudflats and sandflats which support nationally rare and nationally scarce plants, and nationally and internationally important populations of breeding, migratory and wintering waterfowl**				
Foulness SPA **(Mid-Essex Coast Phase 5)** **EU Code: UK9009246**	**10968.9**	**Qualifying features:** **Hen harrier; Circus cyaneus (Non-breeding)** **Dark-bellied brent goose; Branta bernicla bernicla(Non-breeding)** **Eurasian oystercatcher; Haematopus ostralegus ostralegus (Non-breeding)** **Grey plover; Pluvialis squatarol (Non-breeding)** **Bar-tailed godwit; Limosa lapponica lapponica (Non-**	**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**	**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**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		breeding) **Red knot; Calidris canutus (Non-breeding)** **Pied avocet; Recurvirostra avosetta (Breeding)** **Ringed plover; Charadrius hiaticula; (Breeding)** **Common redshank; Tringa totanus (Non-breeding)** **Sandwich tern; Sterna sandvicensis (Breeding)** **Common tern; Sterna hirundo (Breeding)** **Little tern; Sterna albifrons (Breeding)** **Waterbird assemblage** **Further information can be found via Natural England's**	**qualifying features** **The supporting processes on which the habitats of the qualifying features rely** **The population of each of the qualifying features, and,** **The distribution of the qualifying features within the site.**	**reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.** **Public access /disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Supplementary Advice.		**physical disturbance to habitats.** **Planning permission: general** **Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.** **Changes in species distributions:** **Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels at a national or continental scale,**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				possibly linked to climate change. **Invasive species:** **An increase in Pacific oyster Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.** **Fishing:** **Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or damaging the intertidal mudflats**

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

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.
Foulness Ramsar site **(Mid Essex Coast Phase 5)** **RISCode: UK11026**	**10968.9**	**Ramsar criterion 2** **The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates.** **Ramsar criterion 3** **The site contains extensive saltmarsh habitat, with areas supporting full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.** **Ramsar criterion 5**	**None available**	**None available**

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; 82148 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 spring/autumn:** **Dark-bellied brent goose; Branta bernicla bernicla** **Grey plover; Pluvialis squatarola** **Red knot; Calidris canutus** **Species with peak counts in winter:** **Bar-tailed godwit; Limosa lapponica lapponica**		

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 **EU Code: UK9020309**	**392451.66**	**Qualifying features:** **Red-throated diver; Gavia stellata (Non-breeding)** **Common tern; Sterna hirundo (Breeding)** **Little tern; Sternula albifrons (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**	**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**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site	Management Organisation. For activities categorised as 'green', these assessments should take account of any in-combination effects of amber activities, and/or appropriate plans or projects, in the site. The gear types being assessed are towed demersal gear and dredges, and suction dredges for cockles as well as static/passive fishing gear methods such as set gillnets and drift netting represent potentially the most serious direct risk from fishing activity to the birds themselves. Disturbance and displacement effects may arise from boat movements associated with fishing activities. Removal of fish and larger molluscs can have a significant

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				impact on the structure and functioning of benthic communities. **Entanglement in static fishing nets is an important cause of death for red-throated divers in the UK waters. Netting is widespread across the sandbanks but is seasonal and occurs primarily when the Red-throated diver population is not at its peak. The scale of by-catch within the site has been assessed by the Kent & Essex IFCA, and was not found to be problematic and so can be deemed to be low-risk.**
Thames Estuary & Marshes **A complex of brackish, floodplain grazing marsh ditches, saline lagoons and intertidal saltmarsh and mudflat. These habitats together support internationally important numbers of wintering waterfowl. The saltmarsh and grazing marsh are of international importance for their diverse assemblages of wetland plants and invertebrates**				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Thames Estuary & Marshes SPA **EU Code: UK9012021**	**4838.94**	**Qualifying features:** **Hen harrier; Circus cyaneus (Non-breeding)** **Pied avocet; Recurvirostra avosetta (Non-breeding)** **Ringed plover; Charadrius hiaticula (Non-breeding)** **Grey plover; Pluvialis squatarola (Non-breeding)** **Red knot; Calidris canutus (Non-breeding)** **Dunlin; Calidris alpina alpina (Non-breeding)** **Black-tailed godwit; Limosa limosa islandica (Non-breeding)** **Common redshank; Tringa totanus (Non-breeding)** **Waterbird assemblage**	**Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:** **The extent and distribution of the habitats of the qualifying features** **The structure and function of the habitats of the qualifying features** **The supporting processes on which the habitats of the qualifying features rely** **The population of each of the qualifying features, and,** **The distribution of the**	**Coastal squeeze:** **Coastal defences exist along much of the coastline here. Sea level rise is also occurring. It is therefore certain that if circumstances do not change, much of the supporting habitats of the SPA birds will be lost/degraded through processes such as: coastal squeeze; sedimentation rates' inability to keep pace with sea level rise; and reduced exposure (the extent and duration) of mudflats and sandflats.** **Public Access/Disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and**

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**.**	**qualifying features within the site.**	**watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management. **Invasive species:** **Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur. **Changes in species distribution: There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013). These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines **Fisheries- commercial marine and estuarine:** **The extent and impacts of fisheries on private grounds, particularly in the Swale Estuary, needs to be better understood. There are particular concerns regarding the dredging of shellfish within the SPAs which are a food source for the protected birds. Commercial fishing activities categorised as 'amber or green' under Defra's revised approach to commercial**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				fisheries in European Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent & Essex IFCA. **Invasive species:** **Freshwater non-native invasive species such as pennywort, crassula, parrots feather etc. can engulf ditches, leading to loss of habitat for diving ducks. Although there are some mechanisms in place to ensure ditch management, more baseline information is needed, particularly on those species for which ditch management is not the solution. Spartina anglica may be increasing at the expense of other saltmarsh habitats with**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				adverse implications for SPA bird roost areas in Benfleet & Southend Marshes. **Vehicles- Illicit:** **The illicit use of motor vehicles (often bikes) occurs across the area. This can cause disturbance to SPA birds. This activity was identified as a medium risk during the 2009 EMS risk review project and is still occuring. Whilst various mechanisms are in place to prevent the use of vehicles they are clearly not entirely effective.** **Air Pollution- risk of atmospheric nitrogen deposition:** **Nitrogen deposition exceeds site-relevant critical loads.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Thames Estuary & Marshes Ramsar site **RIS Code: UK11069**	**5588.5**	**Ramsar criterion 2** **The site supports one endangered plant species and at least 14 nationally scarce plants of wetland habitats. The site also supports more than 20 British Red Data Book invertebrates.** **Ramsar criterion 5** **Assemblages of international importance; species with peak counts in winter; 45118 waterfowl (5 year peak mean 1998/99-2002/2003).** **Ramsar criterion 6** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** **Ringed plover; Charadrius**	**None available**	**None available**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		hiaticula **Black-tailed godwit; Limosa limosa islandica** **Species with peak counts in winter:** **Grey plover; Pluvialis squatarola (Non-breeding)** **Red knot; Calidris canutus (Non-breeding)** **Dunlin; Calidris alpina alpina (Non-breeding)** **Common redshank; Tringa totanus tetanus**		
Hamford Water **Hamford Water is a large, shallow estuarine basin comprising tidal creeks and islands, intertidal mud and sand flats, and saltmarsh supporting rare plants and internationally important species/populations of migratory waterfowl.**				
Hamford Water	**2187.21**	**Qualifying features:**	**Ensure that the integrity of the site is maintained or**	**Climate change:**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
SAC **EU Code: UK0030377**		**Fisher's estuarine moth Gortyna borelii lunata** **Further information can be found via Natural England's** Supplementary Advice**.**	**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 the habitats of qualifying species** **The structure and function of the habitats of qualifying species** **The supporting processes on which the habitats of qualifying species rely** **The populations of qualifying species, and,** **The distribution of qualifying species within**	**The overall vulnerability of this SAC to climate change has been assessed by Natural England (2015) as being high, taking into account the sensitivity, fragmentation, topography and management of its supporting habitats.** **Air Pollution:** **The supporting habitat of this feature is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of the habitat's substrate, accelerating or damaging plant growth, altering its vegetation structure and composition (including food-plants) and reducing supporting habitat quality and population**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			the site.	viability of this feature. Water quality: Hog's fennel grows along the banks of borrow-dykes and ditches and is therefore likely to be sensitive to changes in water quality. As Fisher's estuarine moth spends its pupal and some of its larval life cycle stage below ground it may be affected by ground water levels. Succession: Scrub encroaching is resulting in a loss of suitable grassland habitat for the moth. There are efforts to control and reduce scrub at the worst affected sites. Clearing scrub and restoring grassland will also provide opportunities for landward
Hamford Water SPA EU Code: UK9009131A	2187.21	Qualifying features: Dark-bellied brent goose; Branta bernicla bernicla (Non-breeding) Common shelduck; Tadorna tadorna (Non-breeding) Eurasian teal; Anas crecca (Non-breeding) Pied avocet; Recurvirostra avosetta (Non-breeding) Ringed plover; Charadrius hiaticula (Non-breeding) Grey plover; Pluvialis squatarola (Non-breeding) Black-tailed godwit ; Limosa limosa islandica (Non-breeding) Common redshank; Tringa totanus	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	

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		(Non-breeding) **Little tern; Sternula albifrons (Breeding)** **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.**	**migration of hog's fennel and Fisher's estuarine moth, away from the threats of sea level rise.**
Hamford Water Ramsar site **RIS Code: UK11028**	**2187.21**	**Ramsar criterion 6** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** **Ringed plover; Charadrius hiaticula** **Common redshank; Tringa totanus tetanus** **Species with peak counts in winter:** **Dark-bellied brent goose; Branta**	**None Available**	**None Available**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		bernicla bernicla **Black-tailed godwit; Limosa limosa islandica** **Species/populations identified subsequent to designation for possible future consideration under criterion 6.** **Species with peak counts in winter:** **Grey plover; Pluvialis squatarola (Non-breeding)**		
Abberton Reservoir **Abberton Reservoir is a large storage reservoir built in a long shallow valley. It is the largest freshwater body in Essex and is one of the most important reservoirs in Britain for wildfowl. It is less than 8km from the coast and its primary role is as a roost for the local estuarine wildfowl population.**				
Abberton Reservoir SPA **EU Code:**	**718.31**	**Qualifying features:** **Great crested grebe; Podiceps cristatus (Non-breeding)**	**Ensure that the integrity of the site is maintained or restored as appropriate, and**	**Air quality:** **The structure and function of the habitats which support this SPA**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
UK9009141		Great cormorant; Phalacrocorax carbo (Breeding) Mute swan; Cygnus olor; (Non-breeding) Eurasian wigeon; Anas penelope (Non-breeding) Gadwall; Anas strepera; (Non-breeding) Eurasian teal; Anas crecca (Non-breeding) Northern shoveler; Anas clypeata (Non-breeding) Common pochard; Aythya ferina (Non-breeding) Tufted duck; Aythya fuligula (Non-breeding) Common goldeneye; Bucephala clangula (Non-breeding)	ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.	feature may be sensitive to changes in air quality. Exceeding critical values for air pollutants may result in changes to the chemical status of its habitat substrate, accelerating or damaging plant growth, altering vegetation structure and composition and thereby affecting the quality and availability of nesting, feeding or roosting habitats. Management: The availability of an abundant food supply is critically important for successful breeding, adult fitness and survival and the overall sustainability of the population. As a result, inappropriate management and direct or indirect impacts which

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Common coot; Fulica atra (Non-breeding) **Waterbird assemblage** **Further information can be found via Natural England's** Supplementary Advice**.**		**may affect the distribution, abundance and availability of prey may adversely affect the population.** **Water quality/quantity:** **For many SPA features which are dependent on wetland habitats supported by surface water, maintaining the quality and quantity of water supply will be critical, especially at certain times of year during key stages of their life cycle. Poor water quality and inadequate quantities of water can adversely affect the availability and suitability of breeding, rearing, feeding and roosting habitats. Typically, meeting the surface water and groundwater environmental standards set out by the Water**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				Framework Directive (WFD 2000/60/EC) will also be sufficient to support the SPA Conservation Objectives but in some cases more stringent standards may be needed to support the SPA feature. Further site-specific investigations may be required to establish appropriate standards for the SPA.
Abberton Reservoir Ramsar **RIS Code: UK11001**	**718.31**	**Ramsar criterion 5** **Assemblages of international importance; species with peak counts in winter; 23787 waterfowl (5 year peak mean 1998/99-2002/2003)** **Ramsar criterion 6** **Qualifying Species/populations (as**	**None available.**	**None available.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		identified at designation): **Species with peak counts in spring/autumn:** **Gadwall , Anas strepera strepera** **Northern shoveler , Anas clypeata** **Species with peak counts in winter:** **Eurasian wigeon , Anas Penelope** **Species/populations identified subsequent to designation for possible future consideration under criterion 6.** **Species with peak counts in winter:** **Mute swan, Cygnus olor,** **Common pochard, Aythya farina**		

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 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 SPA **EU code: UK9009243**	**2701.43**	**Qualifying features:** **Dark-bellied brent goose; Branta bernicla bernicla (Non-breeding)** **Common pochard; Aythya ferina (Breeding)** **Hen harrier; Circus cyaneus (Non-breeding)** **Ringed plover; Charadrius hiaticula (Breeding)** **Common 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**	**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**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		Little tern; Sterna albifrons (Breeding) **Waterbird assemblage**	**qualifying features** **The supporting processes on which the habitats of the qualifying features rely** **The population of each of the qualifying features, and,** **The distribution of the qualifying features within the site.**	**new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the area of the Mid Essex Coast SPAs are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.** **Public access /disturbance:** **Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				powerboating, may produce physical disturbance to habitats. **Planning permission- general:** **Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.** **Changes in species distributions:** **Declines have occurred in the numbers of some of the waterbird species using the Essex Estuaries SIP area but these may be due to changes in their distributions or population levels**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				at a national or continental scale, possibly linked to climate change. **Invasive species:** **An increase in Pacific oyster Crassostrea gigas settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. Invasive common cord grass may adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.** **Fishing:** **Recreational bait digging may impact waterbirds e.g. by reducing prey availability, or**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				damaging the intertidal mudflats and sandflats and associated communities. The extent of the activity and potential impacts on site features are not currently well understood. Certain forms of commercial fishing, e.g. bottom towed fishing gear; can be very damaging to inshore marine habitats and the bird species dependent on the communities they support. **Air Pollution- risk of atmospheric nitrogen deposition:** **Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.
Colne Estuary Ramsar Site **RIS Code: UK11015**	**2701.43**	**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** **The site supports 12 species of nationally scarce plants and at least 38 British Red Data Book**	**None available.**	**None available.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		invertebrate species. **Ramsar criterion 3** **This site supports 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; 32041 waterfowl (5 year peak mean 1998/99-2002/2003)** **Ramsar criterion 6** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in winter:** **Dark-bellied brent goose; Branta**		

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
		bernicla bernicla, **Common redshank; Tringa totanus totanus,** **Species/populations identified subsequent to designation for possible future consideration under criterion 6.** **Species with peak counts in winter:** **Black-tailed godwit ; Limosa limosa islandica**		
Epping Forest **Epping Forest is a large ancient wood-pasture with habitats of high nature conservation value including ancient semi-natural woodland, old grassland plains, wet and dry heathland and scattered wetland. The semi-natural woodland is particularly extensive but the Forest plains are also a major feature and contain a variety of unimproved acid grasslands.** **The semi-natural woodlands of Epping Forest include important beech Fagus sylvatica forests on acid soils, which are important for a range of rare epiphytic species, including the moss Zygodon forsteri. The long history of pollarding, and resultant large number of veteran trees, ensures that the site is also rich in fungi and invertebrates associated with decaying timber. Records of stag beetle Lucanus cervus are widespread and frequent. Areas of acidic grassland transitional with**			

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
heathland are generally dominated by a mixture of fine-leaved grasses. In marshier areas, purple moor-grass Molinia caerulea frequently becomes dominant. Broad-leaved herbs typical of acidic grassland and heathland are frequent, including heather Calluna vulgaris. The site also contains an example of wet dwarf-shrub heath with both heather and cross-leaved heath Erica tetralix.				
Epping Forest SAC **EU Code: UK0012720**	**1630.74**	**Qualifying features:** **Northern Atlantic wet heaths with Erica tetralix; Wet heathland with cross-leaved heath** **European dry heaths** **Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion); Beech forests on acid soils** **Stag beetle; Lucanus cervus** **Further information can be found via Natural England's Supplementary Advice.**	**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 and habitats of qualifying species** **The structure and function (including typical species) of qualifying natural**	**Air Quality:** **This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it. Nitrogen deposition exceeds site-relevant critical loads for ecosystem protection. Some parts of the site are assessed as in unfavourable condition for reasons linked to air**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			habitats The structure and function of the habitats of qualifying species The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.	pollution impacts. Under-grazing: The quality and diversity of the SAC features requires targeted management best achieved through grazing to: minimise scrub invasion; minimise robust grass domination, and maximise the species diversity of heathland plant communities. Changes in Species Distribution: Beech tree health and recruitment may not be coping sufficiently with environmental conditions to sustain its presence and representation within the SAC feature. This may be linked to climate change as well as other factors such as air quality, recreational pressure and water

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				availability. **Public Access/Disturbance:** **Epping Forest is subject to high recreational pressure. There is a high general level of footfall in Epping Forest throughout the year, including periods of significant use, and resulting in a diverse range of impacts which include mountain biking and unmanaged fires. Population and visitor numbers are likely to continue to increase** **Hydrology:** **Wet heath is dependent on suitable ground water levels. There is a threat of prolonged drying out through climate change.** **Water Pollution:**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				Surface run-off of poor quality water from roads with elevated levels of pollutants, nutrients and salinity may be affecting wet heath, probably mostly around the edges. **Invasive Species:** **Heather beetle has locally impacted on some heathland areas. Vigilance is required to survey it and increase awareness of its likely effects and signs of impact.** **Diseases:** **Tree diseases such as Phytopthora present a real threat to Beech.**
Lee Valley				

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
The Lee Valley comprises a series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits along approximately 24 km of the valley. These water bodies support internationally important numbers of wintering gadwall and shoveler and nationally important numbers of several other bird species. The site also contains a range of wetland and valley bottom habitats, both man-made and semi-natural, which support a diverse range of wetland fauna and flora.				
Lee Valley SPA **EU Code: UK9012111**	**451.29**	**Qualifying features:** **Botaurus stellaris; Great bittern (Non-breeding)** **Anas strepera; Gadwall (Non-breeding)** **Anas clypeata; Northern shoveler (Non-breeding)**	**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 the habitats of qualifying species** **The structure and function of the habitats of qualifying species** **The supporting processes**	**Water Pollution:** **The vegetation and invertebrates provide food for the ducks, while fish provide food for the bitterns; and the habitat mosaic needs to vary from clear open water with abundant aquatic vegetation to moderately eutrophic conditions. Changes in water quality need to be managed to prevent loss of suitable habitat and food sources.** **Hydrological changes:** **Reservoir levels linked to operational requirements and all water bodies subject to natural fluctuations accounting for**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
			on which the habitats of qualifying species rely The populations of qualifying species, and, The distribution of qualifying species within the site.	abstraction and climatic change. Public Access/Disturbance: Areas of the SPA are subject to a range of recreational pressures including watersports, angling and dog walking. This has the potential to affect SPA populations directly or indirectly. Inappropriate scrub control: The reedbed habitats, muddy fringes, and bankside all provide habitat as part of the mosaic for the SPA birds. Scrub control is necessary to ensure these habitats are maintained. Fisheries: Fish stocking: Fish population and species composition needs to be appropriate to ensure suitable habitats including food resource

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
				and water quality are maintained for SPA bird species. **Invasive species:** **Azolla and/or invasive aquatic blanket weeds will adversely affect aquatic habitat (food sources).** **Inappropriate cutting/mowing:** **The reedbed requires rotational management for bittern. This is dependent upon funding availability.** **Air Pollution: risk of atmospheric nitrogen Deposition:** **Nitrogen deposition exceeds site relevant critical loads.**

Site name	Area (ha)	Qualifying Features	Conservation objectives (only available for SACs & SPAs)	Key vulnerabilities / factors affecting site integrity
Lee Valley Ramsar Site **RIS Code:** UK11034	**447.87**	**Ramsar Criterion 2** **The site supports the nationally scarce plant species whorled water - milfoil Myriophyllum verticillatum and the rare or vulnerable invertebrate Micronecta minutissima (a water-boatman).** **Ramsar criterion 6** **Qualifying Species/populations (as identified at designation):** **Species with peak counts in spring/autumn:** **Northern shoveler , Anas clypeata** **Species with peak counts in winter:** **Gadwall , Anas strepera strepera**	**None available**	**None available**

Appendix 7. LTP4 Policies

Policy 1. Understanding the travel needs of people and businesses of Essex.
We will work with partners to ensure that the travel needs of people and businesses in Essex is clearly understood in how transport services are planned and delivered, including making effective use of the latest digital technology.
Supporting Text
The Local Transport Plan has been developed to prioritise peoples' and business' experiences of using transport services. Our engagement with people and businesses is crucial for Essex to reach its economic, social, and environmental goals. We will aim to consider the needs of all transport users in Essex by working together with people and businesses to understand how they make their transport choices. This evidence will inform where we target our future budget for maintenance, safety, accessibility, sustainability and connectivity improvements. We will work with our partners to optimise the provision of transport services and network capacity across Essex so that they are used efficiently. We will aim to make use of the full range of transport and non-transport data to provide up to date and accurate information to allow people and businesses to make informed decisions about their travel choices. **To do this we will work with our partners to:** • **Put the people and businesses of Essex at the heart of our plans by ensuring that we understand their travel needs.** • **Use the full range of available data and analytical techniques to understand when, why and how people travel. This will include existing and emerging data sources from government and the public sector, our own surveys and data, and relevant third party sources.** • **Connect data sources digitally to understand and explain the impact of travel needs in Essex.** • **Use this evidence and our overarching vision for transport to develop a local vision for transport in every Local Plan.** • **Develop an evidence-led performance framework to underpin future decision making.** • **Provide easy access to good quality information on local travel, including through the use of digital technology.**

- **Collaborate with a wide range of partners to improve travel in Essex and across neighbouring local authorities where necessary.**
- **Raise awareness of the non-travel and travel options available to people and businesses.**
- **Raise awareness of the impacts of individual and collective travel choices, and the benefits of walking, cycling, scooting or using public transport for different types of journey, by adopting the principles of our 'Safer, Greener, Healthier' travel campaign.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Meaningful Lives Matter – our plan for a more inclusive Essex.**
- **Safer, Greener, Healthier Campaign.**
- **Sustainable Modes of Travel Strategy.**
- **District and City Transport Strategies.**
- **Digital Strategy for Essex.**

Policy 2. Access to Key Services.
We will work with partners and service providers to ensure that everyone living, working and investing in Essex can access key services with a particular focus on resolving inequalities in access to the transport network.
Supporting Text
We are committed to ensuring that everyone has the opportunity to access key services . We will work closely with partners and service providers to ensure that everyone can access these essential services. An important feature of this policy is a constant effort to make transport infrastructure universally accessible, with a particular focus on removing barriers for people with health conditions or requiring mobility aid. We will support measures that enable residents to make greater use of local services and facilities which help build stronger communities. We are committed to using new and existing technology to ensure travel information is understandable and available in a range of formats, so that it is accessible to everyone. **To do this we will work with our partners and service providers to:** • **Provide the opportunity for everyone to access key services such as and not limited to health care, education, training, leisure, retail and good jobs, including in rural areas.** • **Make key services accessible to everyone.** • **Design, build, operate and maintain transport infrastructure so that it is accessible, easy and safe to use by everyone all the time by removing barriers to travel for individuals with disabilities, limited mobility or long-term limiting health conditions, and those within society who are disadvantaged.** • **Plan and deliver coherent walking and cycling routes that connect people with key services.** • **Identify opportunities to improve public transport access and journey times to key services with a particular focus on hospitals and health surgeries.** • **Improve the integration of travel options, including using high quality mobility hub solutions as a focus for public and shared transport at accessible locations (such as bus stops and rail stations) or alongside other public, retail and community services.**

- **Ensure that staff are available to help passengers throughout their journeys on buses and trains and at bus and rail stations.**
- **Use new and emerging technologies to provide reliable, static and real time travel information to passengers, ensuring that it is available in a range of formats and is accessible to everyone.**
- **Encourage and support innovation in how key services are provided and travel is purchased, such as through digital technology.**
- **Support the introduction of multi-operator and fully integrated 'smart' ticketing, and make the case for simpler and better rail ticketing.**
- **Support the roll out of gigabit broadband (connections with speeds of at least one gigabit per second) and ongoing improvements to mobile (5G, 6G) coverage to enable home working and online access to services, so that people can choose to travel less to use these services - especially in rural areas.**
- **Support initiatives to improve access to digital technology where cost or skills may be an issue.**
- **Promote our Essex Wellbeing service to residents and organisations.**
- **Provide local rural communities with voluntary support to achieve the skills, resources and expertise necessary to achieve a thriving and sustainable future.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Sustainable Modes of Travel Strategy.**
- **Walking and Cycling Strategies and Cycle Action Plans.**
- **Local Cycling and Walking Infrastructure Plans.**
- **Essex Bus Service Improvement Plan.**
- **Mobility Hubs and Integrated Transport Halts Implementation Guide.**
- **Essex Rail Strategy.**

- **Rapid Transit Framework and High Quality Public Transport and Bus Contribution Guide for new developments.**
- **District and City Transport Strategies.**
- **Development Management Guidance and Policies.**
- **Meaningful Lives Matter – our plan for a more inclusive Essex.**
- **Essex Joint Health and Wellbeing Strategy.**
- **Digital Strategy for Essex.**

Policy 3. Sustainable and Active Travel Choices.
We will encourage existing communities and require new developments to maximise the use of sustainable forms of travel for a healthier, safer, and more resilient Essex, with better access to a wider range of opportunities.
Supporting Text
Our commitment to sustainable and active travel is unwavering. We want to encourage more active travel throughout people's lives especially for shorter everyday trips such as travelling to school, work and to see friends. **We will work closely with partners, developers and service providers to require the use of more environmentally friendly transportation options as part of all new developments. We will work together with local communities, businesses and other organisations to raise awareness of travel choices, their impacts and their benefits to enable a change in how and when people choose to travel, by adopting the principles of our 'Safer, Greener, Healthier' travel campaign.** **We also actively support the take-up of innovative technologies that enable environmentally friendly travel. Our approach includes developing effective travel plans and advice on how to deliver a more sustainable mode share for workplaces, schools, and other activities that generate significant levels of traffic. Furthermore, we require robust travel planning for proposed developments, aligning with our current development management policies and guidance (see policy 6). As part of our vision, we will invest in and maintain essential infrastructure to facilitate sustainable, affordable, easy, and attractive transport options across Essex.** **To do this we will work with our partners, developers and service providers to:** • **Provide attractive, safe, convenient, inclusive and high quality sustainable and active forms of travel including facilities for their users designed in line with the latest design standards and guidance** • **Promote and enhance access by sustainable modes of transport to key multi-modal transport hubs such as railway stations, bus stations, ports and airports.** • **Support the adoption of new technology regarding sustainable and active travel.** • **Implement shared transport options including car clubs, bike hire, lift share, digital demand responsive transport and community transport.**

- **Deliver high quality rapid transit networks where feasible to improve connections within urban areas, between urban areas and with key multi-modal transport hubs.**
- **Improve the integration of travel options, including using high quality mobility hub solutions as a focus for public and shared transport at accessible locations (such as bus stops and rail stations) or alongside other public, retail and community services.**
- **Develop and deliver long-term plans for improving our core cycling and walking networks through Local Cycling and Walking Infrastructure Plans. These will plan coherent walking and cycling routes that connect people to key services and open spaces.**
- **Enable more children to walk and cycle to school through providing safe, direct routes; traffic free environments outside school gates; cycle and road safety training, and behaviour change campaigns.**
- **Ensure that the public rights of way network (PROW) is integrated with other walking and cycling networks, is well maintained and easy to use by walkers, cyclists and equestrians.**
- **Sustain and improve the existing green infrastructure network to encourage active travel; improve access to and awareness of green spaces, facilities and activities available to the public; and to create green corridors for wildlife and climate mitigation and adaptation such as flooding, shading and air quality.**
- **Deliver green infrastructure (GI) in line with the Essex Green Infrastructure Standards, 2022, which outlines nine principles and standards for the protection, enhancement, creation, and management of GI in Essex.**
- **Require Travel Plans to be implemented and monitored for new residential development, new and existing workplaces, schools and other locations that attract a significant number of people in line with our development management policies and guidance.**
- **Promote the health benefits of walking and cycling.**
- **Widen access to active travel through schemes such as 'Essex Pedal Power'.**

The planning of new development should also align with Policy 6: Integrated Planning and Transport.

The strategies and plans which underpin this policy and which will guide its application include:

- **Sustainable Modes of Travel Strategy.**
- **Safer, Greener, Healthier Campaign.**
- **Walking and Cycling Strategies and Cycle Action Plans.**
- **Local Cycling and Walking Infrastructure Plans.**
- **Essex Bus Service Improvement Plan.**
- **Mobility Hubs and Integrated Transport Halts Implementation Guide.**
- **Essex Rail Strategy.**
- **Rapid Transit Framework and High Quality Public Transport and Bus Contribution Guide for new developments.**
- **Rights of Way Improvement Plan.**
- **District and City Transport Strategies.**
- **Development Management Guidance and Policies including the Essex Design Guide.**
- **Transport Assessment Guide for Large-Scale Developments and Garden Communities – A Guide for Developers.**
- **Travel Plan Guide for Large-Scale Developments and Garden Communities: A Guide for Developers.**
- **Essex Green Infrastructure Strategy and Green Infrastructure Standards.**
- **Essex Joint Health and Wellbeing Strategy.**

Policy 4. Being Safe and Feeling Safe.
We will ensure that travel in Essex is safe and feels safe for all users of the transport network.
Supporting Text
Our commitment is to achieve zero road fatalities by 2040. As an interim goal, we aim to halve the number of deaths and serious injuries by 2030. We will follow a 'safe systems' approach. This means ensuring that all components of the road system – vehicles, infrastructure, speed limits, road users, and post-crash care – work together to deliver better safety outcomes for all road users. We will maintain a strong relationship with the Safer Essex Roads Partnership – made up of partners from Essex County Council, Southend City Council, Thurrock Council, National Highways, Essex Police, Essex County Fire and Rescue Service, The Police Fire and Crime Commissioner for Essex, The Essex and Herts Air Ambulance Trust, East of England Ambulance Service and The Safer Roads Foundation. We will build on existing practices to monitor casualty and vehicle collision data for new and existing infrastructure to spot emerging safety issues and act on them. We are also committed to creating an environment where everyone feels safe and secure when travelling around Essex, collaborating with the police and public transport operators to reduce crime and the fear of crime on the transport network. **To do this we will work with partners to:** • **Achieve 'Vision Zero'. We believe that the only acceptable number of deaths on the roads is zero and we aspire to achieve this. As an interim measure we will aim to halve the number of deaths and serious injuries by 2030.** • **Follow a 'safe systems' approach that ensures that all elements of the road system (vehicles, infrastructure, speed limits, road users, and post-crash care) work together to deliver better safety outcomes for all road users.** • **Continue to work within the strong working framework provided by the Safer Essex Roads Partnership.** • **Proactively monitor and evaluate casualty and collision data for new and existing infrastructure to spot emerging safety issues and act on them.** • **Address excessive speed and other reckless behaviour (including drink and drug driving and mobile phone use) related to serious injuries and deaths.**

- **Develop targeted campaigns and road safety training and education initiatives aimed at specific high-risk groups.**
- **Ensure Safety Audits are undertaken of all proposed designs of new highway schemes or proposals to materially alter the existing public highway.**
- **Help to reduce crime and the fear of crime through the design, maintenance and operation of the transport network, including public transport services.**
- **Promote well-designed neighbourhoods for both new developments and existing places.**
- **Improve the security of car parking and cycling parking at transport interchanges such as bus and rail stations and mobility hubs.**
- **Promote training initiatives such as our Essex Bystander Intervention Awareness training and technology such as the Railway Guardian app that improve safety and confidence when travelling.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Place and Movement Approach.**
- **Safer, Greener, Healthier Campaign.**
- **Road Safety Strategy.**
- **Speed Management Strategy.**
- **Traffic Management Strategy.**
- **Highways Infrastructure Asset Management Plan including Highway Maintenance and Inspections Strategies.**
- **Walking and Cycling Strategies and Cycle Action Plans.**
- **Local Cycling and Walking Infrastructure Plans.**
- **Essex Bus Service Improvement Plan.**
- **Mobility Hubs and Integrated Transport Halts Implementation Guide.**
- **Essex Rail Strategy.**

- **District and City Transport Strategies.**

Policy 5. Our Built Environment.
We will aim to project the historic and built environment from the harmful effects of transport and strive to make places more people focussed with an emphasis on placemaking to make spaces safe and accessible for all.
Supporting Text
Our highway management strategy centres around a 'Place and Movement' approach. We prioritise designing and implementing transport enhancements while preserving the historical and built environment. Our focus is on creating well-designed neighbourhoods and places in Essex that emphasise a sense of place, where people are willing to spend more time and interact with other people, while incorporating principles of movement. This applies equally to existing places as well as new ones. **To do this we will work with partners and other statutory bodies to:** • **Apply the Place and Movement approach to the management of the highway network for both existing settlements and new developments.** • **Prioritise well-designed neighbourhoods and built environments that feature a clear sense of place by incorporating our place and movement principles and an improved public realm.** • **Apply our 'avoid-shift-improve' approach to planning transport and new developments.** • **Support measures that enable residents to use local services and facilities, creating stronger communities based around the walkable neighbourhood principles.** • **Minimise the community severance effects of roads and other transport infrastructure on people moving around our places by foot or by cycle.** • **Design and implement transport improvements and maintenance works that retain the integrity of the historic and built environment including its setting.** • **Address existing air quality issues through the application of the Air Quality Strategy.** • **Develop effective and deliverable Air Quality Action Plans where Air Quality Management Areas have been declared, in relation to transport emissions.**

- **Limit or reduce the negative impacts of development and transport infrastructure on air quality and minimise new exposure of people to existing sources of air pollution.**
- **Minimise the visual and noise impacts of transport where this adversely impacts significant numbers of people or places categorised as 'noise important areas' such as schools. Reducing noise helps to create better places where people are willing to spend more time and interact with each other.**
- **Make the highway network and surrounding built environment more resilient to extreme weather, ensuring well-designed sustainable drainage systems (SuDS) and natural flood management approaches are applied wherever possible.**
- **Promote a SuDS first approach and only deliver traditional drainage solutions where SuDS are not an option. We do not adopt shared SUDS schemes where surface water runoff from non-highway areas mixes with surface water runoff from the adopted highway.**
- **Ensure that long-term maintenance responsibility for SuDS lies with the developer and any subsequent Stewardship company on larger developments.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Place and Movement Approach.**
- **Traffic Management Strategy.**
- **Development Management Guidance and Policies including the Essex Design Guide, Essex Developers' Guide to Infrastructure Contributions, Highways Technical Manual, A New Development Model for Essex, Well-Designed Neighbourhoods Design Guide, Essex Healthy Places Guidance, Development Management Policies, Parking Guidance, and Sustainable Drainage Design Guide.**
- **District and City Transport Strategies.**
- **Essex Climate Action Plan and Essex Climate Adaption Plan Framework.**
- **Local Flood Risk Management Strategy.**
- **Essex Air Quality Strategy.**

Policy 6. Integrating Planning and Transport.
We will work with partners to put people and places at the heart of our decisions to secure new development at the most appropriate and sustainable locations. We will consider land use planning and travel planning together, to help reduce the number and length of journeys that people need to make.
Supporting Text
Our approach to new development prioritises sustainability, inclusivity, and accessibility. We expect developments to be strategically located, providing a balanced mix of homes, services, and employment opportunities. Collaborating closely with local planning authorities and relevant bodies, we will ensure that new developments integrate active and sustainable transport solutions. **Our commitment includes assessing transportation needs at every stage of the Plan making process. We will collaborate with local planning authorities and other relevant bodies to influence the location and design of development to reduce the need to travel and reduce dependency on the private car. This will include regular communication on transport evidence base, schemes, plans, and priorities and how these link with place-making and master-planning of new developments. This policy applies to all Local Plans, Neighbourhood Plans, Development Master Plans, Masterplans for an Airport's Statutory Plan and Airport Surface Access Strategies amongst others.** **To achieve this we will work in collaboration with local planning authorities and other relevant organisations (such as Active Travel England, Network Rail/Great British Railways, providers of public and sustainable transport, National Highways, ports, airports, promoters and developers) to ensure that:** • **The approach to planning all growth and its transport requirements is 'vision-led'. A 'Local Vision for Transport' in line with this Local Transport Plan will be agreed at the start of the Plan making and Strategy development process. It's important that this vision is credible and validated by evidence. The transport vision for the development cannot be developed in isolation; it must consider the operation of the existing transport network and its current users. All subsequent transport and supporting measures should then be designed to help achieve this vision. In most cases, the vision will require sufficient funding and measures that help to change the travel choices of the existing community as well as the residents of the new communities.** • **Sustainable transport principles are embedded into the location and design of future developments. New developments should be located in places with**

existing, or have the potential for, high levels of inclusive and affordable sustainable transport access to services, homes and employment, helping to reduce car dependency.

- **New developments should be located in proximity to the existing transport network and designed to prioritise and maximise opportunities for active and sustainable public transport within the development. Their connections to existing transport networks should be designed to help ensure that new developments are properly integrated into existing places, and that these are the right places for growth.**
- **The scale, design and density of development supports people access a wide range of local jobs and key services that are more likely to be accessible by walking and public transport. We support optimising the density of new development in city and town centres and other locations that are well served by public transport and near public transport hubs/ interchanges. Higher densities provide more customers for public transport, shops and services, making better public transport services and wider consumer choice more financially viable, reducing the need to travel by the car.**
- **New developments are supported by the necessary digital and energy infrastructure to support our 'avoid-shift-improve' approach to planning transport and development.**
- **At all stages of Plan and Strategy preparation the specific site and cumulative impacts of growth are assessed over the short, medium and long-term in terms of opportunities for active and sustainable interventions and then necessary network improvements.**
- **Land or routes that may be required for transport uses during the period of this Local Transport Plan are protected from any development that may compromise the use of that land in future for transport purposes.**
- **Development comes forward in line with this Local Transport Plan and our Development Management Policies. This includes the need to undertake Transport Assessments, demonstrating how the Local Vision for Transport will be met, and how traffic impacts (including cumulatively) on access, capacity and safety will be monitored, managed and where necessary mitigated to achieve that agreed vision. Transport assessments should consider a wide range of impacts and consider all modes and include 'reasonable' scenarios agreed with and approved by Essex County Council.**

- **Developments are marketed to new residents and businesses on the basis that there will be a greater degree of travel choice and that this needs to be used.**

We will work with our local planning authorities to require all new development:

- **At all stages of planning to comply with our 'Place and Movement Approach' to balance the location-specific needs of cars, buses, goods vehicles, and other motorised traffic, with the needs of cyclists, pedestrians, residents, shoppers, and local businesses, in both urban, suburban and rural locations.**
- **To embed inclusive design and 'Healthy Streets' principles into their design.**
- **To support the implementation of 'walkable neighbourhood principles' in the redesign of existing neighbourhoods and design of new neighbourhoods providing attractive local spaces, easy access to local and wider services and facilities.**
- **To be designed and delivered in line with our Essex Healthy Places Guidance. Developers should produce a Health Impact Assessment and use the Essex Healthy Places Checklist as part of their application to ensure the impact of travel and transport – both positive and negative – is considered regarding the health and wellbeing of residents and communities.**

We will work with partners to make the most effective use of all available funding sources to deliver growth by co-ordinating the delivery of Council and development funded works; securing developer contributions/works (Section 106 / Section 278 agreements), Community Infrastructure Levy (CIL) monies; Government major scheme and grant funding and exploring innovative funding mechanisms with partners. Our Developers' Guide to Infrastructure Contributions details the scope and range of contributions towards infrastructure which we may seek from developers and landowners to mitigate the impact and make development acceptable in planning terms. It provides detailed guidance for developers with regards Transport Assessments/Statements; Works versus Contributions; Traffic Regulation Orders; Commuted Sums; Sustainable Travel (Travel Plans); Passenger Transport; and Public Rights of Way.

We will implement the parking standards required within new development in relation to the private car and electric vehicles (EVs), powered two-wheelers (PTWs), disabled motorists, and cyclists considering the latest guidance and standards:

- **Development will be required to provide vehicular and cycle parking taking into account the adopted Essex Planning Officers' Association Parking Standards Part 1, or successor document.**

- **Proposals for new Garden Communities and large-scale development will be required to provide vehicular and cycle parking having regard to the Essex Planning Officers' Association Parking Standards Part 2, or successor document.**

Further policies relating to types of development are listed below.

Garden Communities and Other Large Scale Developments

The scale and ambition of development will involve us working with partners, developers and other statutory bodies to:

- **Establish Transport Review Groups which are bodies that have the ongoing responsibility to work with all parties to help achieve the goals of the Travel Plan and other transport measures agreed at the planning stage. Essex County Council as the highway authority will always have the final say on protecting the interests of local residents and businesses.**

- **Set realistic and evidence-based modal split targets (the number of trips by walking, cycling, public transport and private vehicle) for movement, set up and pay for a 'monitor and manage' approach, and make funding available to address any failure to meet modal share targets.**

For Garden Communities we expect that at least 50% of trips will be made by active and sustainable modes of travel rising to at least 60% once a development is complete, with these targets to be agreed by Essex County Council. There is no automatic assumption that a Garden Community will achieve these targets and we would expect the ambition to be reflected in the proposed transport measures. Modal share targets should be actively monitored throughout the phasing of the development and upon full occupation via the relevant Travel Plan. Permission for latter phases of development may not be given if modal split targets for early phases are not being met.

Schools

We will work with partners to:

- **Establish a safe environment around schools including the promotion of a traffic-free public realm around school entrances.**

- **Promote the provision of healthy school streets, by establishing and improving safe direct walking and cycling routes to schools (including off site provision).**
- **Reduce school run traffic and disperse it away from school entrances.**
- **Enforce low traffic speeds around schools and the walking routes pupils use.**
- **Establish 'school street zones' where motor traffic is controlled in the area at the start and the end of the school day.**
- **Ensure footways around schools are clear and wide enough for parents with pushchairs to pass (3 metre minimum width).**
- **Facilitate full and equal access for pupils with disabilities.**
- **Plant trees and / or hedges to enhance air quality and reduce exposure to poor air quality.**
- **Use landscaping and carefully selected street materials to reduce noise.**

Supporting Strategies and Plans

This policy will be supported by the following strategies and plans:

- **Place and Movement.**
- **Safer, Greener, Healthier Campaign.**
- **Essex Design Guide and supporting documents and guidance such as Essex Developer Contributor Guide, Highways Technical Manual, A New Development Model for Essex, Well-Designed Neighbourhoods Design Guide, New Street Types Model for Essex, Development Management Policies, Essex Healthy Places Guidance and Sustainable Drainage Design Guide, Mobility Hubs, Essex Planning Officers Association (EPOA) Parking Standards Part 1 – Parking Standards & EPOA Parking Standards Part 2 - Garden Communities and Large-Scale Development, Transport Assessment and Travel Plan Guidance.**
- **The Department for Transport's forthcoming Connectivity Assessment Tool[9] will provide a useful means of assessing the relative suitability of different sites for development and the sustainable transport interventions necessary**

[9] Land use and transport planning: DfT Science Advisory Council paper - GOV.UK

and will be used to help inform early stages of Local Plan preparation with regards site selection.

- **Local Cycling and Walking Infrastructure Plans.**
- **Rapid Transit Framework and High Quality Public Transport and Bus Contribution Guide for new developments.**
- **Essex Rail Strategy.**
- **Electric Vehicle Charging Infrastructure Strategy.**
- **Traffic Management Strategy.**
- **District and City Transport Strategies.**
- **Essex Sector Development Strategy and Economic Growth Strategy.**
- **Housing Strategy.**
- **Essex Climate Action Plan.**
- **Essex Green Infrastructure Strategy.**
- **Digital Strategy for Essex.**

Policy 7. Carbon Reduction.
We are committed to the decarbonisation of transport within Essex by 2050; and to implement measures to ensure our transport system is resilient to the impacts of climate change.
Supporting Text
We are committed to decarbonising transport in alignment with the recommendations of the Essex Climate Action Commission (ECAC), which have been endorsed by Essex County Council (ECC) and form the basis of the ECC Climate Action Plan. We will ensure that schemes being developed consider the effects of climate change. Additionally, we will prioritise decarbonising our highway network operations and maintenance through the Essex Highways Decarbonisation Strategy. **Our climate change risks are embedded across all transport operations to ensure the continued efficient movement of people and goods, referencing the relevant adaptation plans. We will design our transport system and network to be resilient to weather-related impacts of climate change to ensure that we can provide people with reliable transport access to key facilities and services. We will work together with our partners, local businesses and authorities to assess and mitigate carbon impacts.** **To do this we will implement the recommendations set out in the Essex Climate Action Commission to decarbonise transport by 2050. We will implement an 'Avoid, Shift and Improve' approach, as follows:** • **'Avoid' – avoid or reduce unnecessary private car journeys , particularly over short distances;** • **'Shift' - deliver a behaviour change so that residents shift to more sustainable modes, such as walking, cycling, public transport or train; and** • **'Improve' - where road journeys are essential improve vehicle efficiency by reducing the reliance on fossil fuelled vehicles and encouraging electric vehicles.** **We will apply the Essex Decarbonisation Strategy to decarbonise and minimise the carbon dioxide emissions associated with the operation and maintenance of our highway network. We will also adopt measures to improve energy efficiency and further reduce carbon emissions arising from our own activities.** **Development proposals will be required to demonstrate how they will mitigate, adapt and be resilient to a changing climate while continuing to support the efficient**

movement of people and goods. New developments will be required to consider how the number and length of journeys that people need to make can be reduced by considering access to services (including by digital technology) and integrating land use planning and travel planning (see policies 2 and 6). And where these journeys need to be made how sustainable forms of travel can be maximised (see policy 3).

We will work with partners to support the transition to zero and low emission vehicles through:

- **Increasing infrastructure provision for charging electric vehicles (EV) considering the Essex Electric Vehicle Charge Point Strategy and EPOA Parking Standards – Part 1.**
- **Exploring the supply of renewable energy to electric vehicle charge points.**
- **Enabling the conversion of public transport, taxis and freight vehicles to cleaner fuels or zero emission technology.**
- **Promoting alternatives for commercial vehicles including last mile local deliveries by e-cargo bikes and on foot, use of parcel lockers, and community mobility hubs.**
- **Supporting technological advances and smarter sustainable transport options, including autonomous vehicles, micromobility (such as e-bikes, e-cargo bikes, e-scooters), demand responsive public transport (such as DigiGo), smart EV charging and the future of flight for short to medium range journeys (such as drones, electric vertical take-off and landing vehicles, and electric, hydrogen or hybrid aircraft).**

The strategies and plans which underpin this policy and which will guide its application include:

- **Essex Climate Action Plan and Climate Adaptation Plan Framework.**
- **Sustainable Modes of Travel Strategy.**
- **Safer, Greener, Healthier Campaign.**
- **Essex Highways Decarbonisation Strategy.**
- **Development Management Guidance and Policies.**
- **Transport Assessment Guide for Large-Scale Developments and Garden Communities – A Guide for Developers.**

- **Travel Plan Guide for Large-Scale Developments and Garden Communities: A Guide for Developers.**
- **Essex Electric Vehicle Charge Point Strategy and EPOA Parking Standards – Part 1.**
- **District and City Transport Strategies.**

Policy 8. Our Natural Environment.
We will aim to reduce the impact of transport on the natural environment to minimise pollution and contribute to biodiversity net gain.
Supporting Text
Our approach to transport improvements and maintenance prioritises environmental integrity. We will design and implement projects that safeguard natural habitats, biodiversity, the historic landscape, and water quality. This includes meeting the requirements of the Biodiversity Duty and delivering the Biodiversity Plan. Additionally, we address air quality concerns by applying our Air Quality Strategy and implementing suitable measures within designated Air Quality Management Areas. Our commitment extends to minimising visual and noise impacts associated with transport. **To do this we will work with our partners and other statutory bodies where relevant to:** • **Manage the Highways estate in line with the biodiversity opportunities set out in the Local Nature Recovery Strategy and in line with our Biodiversity Duty.** • **Consider opportunities for biodiversity enhancement from the earliest stages of the design of transport projects and new developments.** • **Design and implement transport improvements and maintenance works that retain the integrity of natural habitats and the natural and historic landscape; improve water quality; prevent flooding; deliver an overall net gain in biodiversity; and support adaptation to climate change.** • **Enhance, protect and create an inclusive network of multipurpose green infrastructure (GI) and green spaces that provide many functions (such as active travel, flood management, improved air quality, habitats, shade, recreation, and interesting things for people to see), with these properly integrated into our places.** • **Deliver GI in line with our principles and standards for the protection, enhancement, creation, and management of GI in Essex.** • **Ensure that residents and visitors can access and enjoy the countryside (including key visitor attractions) via public rights of way and GI, without negatively impacting highly sensitive environments.**

- **Address air quality issues through the application of the Air Quality Strategy.**
- **Develop effective and deliverable Air Quality Action Plans where Air Quality Management Areas have been declared in response to transport emissions.**
- **Minimise the visual and noise impacts of transport on our historic and protected landscapes.**
- **Increase sustainable drainage and tree cover alongside appropriate sections of our transport network to reduce water runoff into the environment, and provide increased protection from flooding and hot weather.**
- **Create a pollution reduction strategy that improves the quality of surface water runoff entering nearby bodies of water from our highway infrastructure.**
- **Promote flood resilience to the highway network and surrounding built environment, ensuring well-designed sustainable drainage systems (SuDS) and natural flood management approaches are applied wherever possible.**
- **Promote a SuDS first approach and only deliver traditional drainage solutions where SuDS are not an option. We do not adopt shared SUDS schemes where surface water runoff from non-highway areas mixes with surface water runoff from the adopted highway.**
- **Ensure that long-term maintenance responsibility for SuDS lies with the developer and any subsequent Stewardship company on larger developments.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Essex Climate Action Plan and Climate Adaptation Plan Framework.**
- **Local Nature Recovery Strategy.**
- **Biodiversity Duty Plan.**
- **Green Infrastructure Strategy and Standards.**
- **Essex Highways Strategy for managing our Green Estate.**
- **Development Management Guidance and Policies.**
- **Traffic Management Strategy.**

- **Highways Infrastructure Asset Management Plan including Highway Maintenance and Inspections Strategies.**
- **Essex Air Quality Strategy.**
- **Local Flood Risk Management Strategy.**

Policy 9. Maintenance and Asset Management.

We will work with Partners to ensure that the transport network is safe to use, resilient to the impacts of climate change, and fit for purpose, especially during periods of adverse weather.

Supporting Text

It is essential for the economy of Essex that the transport network is available for all to use. This requires efficient maintenance and management of the network and its associated infrastructure.

Our commitment to the maintenance and the long-term stewardship of our transportation infrastructure involves the following key actions:

- **We will conduct regular inspections and monitoring of our road, cycleway, and footway networks, bridges, street lights, and other roadside structures.**
- **We will diligently maintain all highway assets, including cycleways and Public Rights of Way, ensuring they meet appropriate standards while providing value for money to both travellers and taxpayers.**
- **We will manage the Highways estate in line with the biodiversity opportunities set out in the Local Nature Recovery Strategy and in line with our Biodiversity Duty.**
- **We will develop maintenance programmes for tasks such as cutting verges, maintaining hedgerows, and cleaning drains and culverts. These efforts are essential to prevent flooding, meet our Biodiversity Duty, and to adapt to climate change.**
- **We will prioritise gritting and salting in accordance with the current ECC policy to minimise disruptions across the Essex transport network.**
- **We will take a proactive approach to making our infrastructure more resilient to the impacts of climate change.**

Supporting this we will:

- **Maintain all our transport infrastructure, including cycleways, footways and public rights of way (PROW) to appropriate standards that offer value for money to the travelling public and the Essex taxpayer.**

- **Consider our 'place and movement' framework when making decisions about future maintenance and management of the network.**
- **Use detailed local knowledge and data to design and implement programmes of maintenance works that retain the integrity of natural habitats and the natural and historic landscape; improve water quality; prevent flooding; deliver an overall net gain in biodiversity; and support adaptation to climate change.**
- **Secure maintenance fees known as 'commuted sums for maintenance' from new developments through developer contributions/works (Section 106 / Section 278 agreements) and/or Community Infrastructure Levy (CIL) monies.**
- **Regularly inspect and monitor the condition of our road, cycleway and footway networks, bridges and other structures, street lights, other roadside infrastructure and PROW.**
- **Manage and maintain our highway infrastructure to reduce waste, through increased use of sustainable products and processes, and recycled materials.**
- **Work collaboratively with partners and other third parties to co-ordinate maintenance works across our transport networks and minimise disruption to the travelling public. This will include close working with organisations such as National Highways, neighbouring local transport authorities, major generators of traffic such as ports and airports, and utility companies.**
- **Grit and salt the network in line with current ECC policy[10].**
- **Regularly review where our transport infrastructure is at increased risk from climate change and take an active role in flood defence, coastal protection, and conservation to reduce the risks and impacts on our communities and our transport network.**
- **Work collaboratively with partners (through activities such as the Coastal Forum) to provide a joined-up approach to the management of coastal issues in Essex.**
- **Proactively make our infrastructure more resilient to climate change – such as planting more trees in appropriate and safe locations along our streets, and**

[10] https://www.essexhighways.org/uploads/docs/maintenance-and-inspections-strategy-winter.pdf

using green spaces and sustainable drainage systems (SuDS) to reduce the risk and impacts of climate change on our infrastructure.

- **Promote a SuDS first approach and only deliver traditional drainage solutions where SuDS are not an option. We do not adopt shared SUDS schemes where surface water runoff from non-highway areas can mix with surface water runoff from the adopted highway.**
- **Ensure that long-term maintenance responsibility for SuDS lies with the developer and any subsequent Stewardship company on larger developments.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Transport Asset Management Plan.**
- **Highways Maintenance Strategy.**
- **Maintenance Strategy: Winter.**
- **Traffic Management Strategy.**
- **Rights of Way Improvement Plan.**
- **Place and Movement Approach.**
- **Essex Climate Action Plan and Climate Adaptation Plan Framework.**
- **Essex Highways Decarbonisation Strategy.**
- **Local Nature Recovery Strategy.**
- **Biodiversity Duty Plan.**
- **Essex Highways Strategy for managing our Green Estate.**
- **Sustainable drainage systems Design Guide.**
- **Minerals and Waste Local Plans.**

Policy 10. Connectivity and Journey Reliability for All Modes of Transport.
We will work with Partners to ensure that our transport networks support sustainable and high quality places which promote connectivity and reliable journeys for all.
Supporting Text
We aim to prioritise journey reliability across all modes of transport for the movement of people and goods. We will work alongside partners to identify, develop and deliver essential enhancements to the network to improve the economy and overall quality of life for people in Essex. This will include strategic investments in nationally significant rail and road infrastructure where appropriate. **We propose to adopt a 'Place and Movement' approach to manage our transport network, to strike the right balance the individual needs and characteristics of the different places as well as the journeys people want to make between them.** **To do this we will work with our partners to:** • **Take a vision-led approach to planning new development and supporting infrastructure from the outset of the plan making process.** • **Locate new development close to the existing transport network.** • **Make it easy for everyone to move around new development and to wider areas by walking, cycling and public transport.** • **Consider connectivity needs both within Essex and across our boundaries into neighbouring areas.** • **Identify, make the case for and deliver essential improvements to the network including nationally significant rail and road connections.** • **Identify and deliver improved connectivity between rural areas and key services in towns and cities.** • **Support the delivery of improved rail station and line capacity (passengers and freight), line speed enhancements, better frequencies (to at least two trains per hour for every Essex station), and better links to places such as London, London Stansted Airport, Cambridge and East Anglia.** • **Implement high quality public transport solutions in appropriate locations, by applying measures consistent with our 'Rapid Transit System Operational**

Model' to offer a fast, frequent and reliable service with an affordable and accessible ticketing and fares policy.

- **Focus on improving people's journey experience to and from rail stations, bus stations and rapid transit halts to make end-to-end journeys quicker and easier for everyone.**
- **Secure better public spaces and access around our rail stations and bus stations.**
- **Seek opportunities to reallocate road space to create better walking and cycling routes and faster routes for buses.**
- **Improve the quality of service and fares information and extend and improve the availability of static and real-time passenger information at stops/stations, on vehicles/trains and digitally via apps.**
- **Improve the journey time reliability of bus services, through measures including bus priority lanes/corridors/gates, and traffic signal priority.**

We will support relevant international ports and airports within and outside Essex:

- **Prepare and implement effective Surface Access Strategies and masterplans that provide multi-modal passenger and freight access proportionate to their scale, operation and role.**
- **Develop measures to enable multi-modal passenger and freight links to our ports and make port operations more efficient.**

Furthermore our management of the network will:

- **Be carried out in line with the Traffic Management Act, monitoring and managing the impact of traffic through the Essex Traffic Control Centre.**
- **Seek to minimise disruption by co-ordinating and managing the impact of roadworks undertaken by the County Council, National Highways, utility companies and developers.**
- **Make effective use of all available funding sources to deliver the transport infrastructure necessary for sustainable growth and to meet our wider outcomes.**

The strategies and plans which underpin this policy and which will guide its application include:

- **Place and Movement Approach.**
- **Local Cycling and Walking Infrastructure Plans.**
- **Traffic Management Strategy.**
- **Speed Management Strategy.**
- **Highway Authority Enforcement Policy.**
- **Bus Service Improvement Plan.**
- **Mobility Hubs and Integrated Transport Halts Implementation Guide.**
- **Essex Rail Strategy.**
- **Rapid Transit Framework and High Quality Public Transport and Bus Contribution Guide for new developments.**
- **Development Management Guidance and Policies.**
- **District and City Transport Strategies.**
- **Economic Growth Strategy.**
- **Digital Strategy for Essex.**

Policy 11. Freight Movement.
We will work with Partners to support the efficient and sustainable movement of freight
Supporting Text
We actively promote the shift of freight from road to rail transport and other low carbon modes, reducing congestion and environmental impact. It's important that the sustainable distribution of goods considers how the choice of transport mode, route and last mile delivery solution minimises the impact on our people, places and transport network. **We will work with partners to reduce the impact of freight and delivery vehicles in neighbourhoods, urban centres and villages. We will embrace innovative technologies and alternative fuels to enhance efficiency and reduce emissions. Through collaborative efforts with Transport East, National Highways, Network Rail/Great British Railways, the air and rail freight sector, and road haulage industry, we will promote essential improvements to nationally significant road and rail connections, including rest and parking facilities for freight drivers.** **To do this we will work with our partners and operators to:** • **Ensure that heavy goods vehicles use identified lorry routes, with a focus on the strategic road network (SRN) and major road network (MRN), where this is the most appropriate route.** • **Encourage a shift of freight from road transport to rail transport and other less environmentally impactful modes.** • **Facilitate and promote the delivery of infrastructure for clean technologies within the air freight sector and the links with freeports within and neighbouring the county.** • **Support the sustainable distribution of goods with a focus on improving last mile deliveries and enabling the decarbonisation of deliveries.** • **Promote alternatives to using conventional lorries and vans for last mile deliveries in our communities. These will include options such as e-cargo bikes, on foot delivery, parcel lockers, community mobility hubs.** • **Support innovation and research in new technology (such as autonomous vehicles, delivery robots, drones, electric vertical take-off and landing**

vehicles, and electric, hydrogen or hybrid aircraft), low and zero carbon solutions, and alternative fuels.

- **Identify and deliver essential improvements to nationally important road and rail connections including improved journey time reliability on strategic routes and appropriate rest and parking facilities for freight drivers.**
- **Support London Stansted and Southend Airports prepare and implement effective Surface Access Strategies and masterplans that provide freight access proportionate to their scale, operation and function.**
- **Develop measures to enable multi-modal freight links to ports within and outside Essex and make port operations more efficient.**

Recognising the 24 hour nature of freight distribution we will continue to work with airports and freight operators to ensure that consideration is given to the impact of noise. We work with local planning authorities, Environmental Health and relevant partners through the Airport Consultative Committees (statutory) as well as other non-statutory meetings to ensure that this is considered, and seek to reduce noise exposure experienced by people living/residing in areas that experience the negative impacts of night freight movements.

The strategies and plans which underpin this policy and which will guide its application include:

- **Place and Movement.**
- **Essex Rail Strategy.**
- **Essex Design Guide.**
- **Traffic Management Strategy.**
- **Development Management Policies.**
- **District and City Transport Strategies.**
- **Mobility Hubs and Integrated Transport Halts Implementation Guide.**
- **Economic Growth Strategy.**

Policy 12. Sustainable Transport.
We will support a sustainable transport network that assists inclusive economic growth and connectivity and enables access to key services.
Supporting Text
We are committed to giving people access to inclusive, reliable and affordable sustainable transport options to access the education, training and employment opportunities and wider services they need to fulfil their potential. This is especially important for those living in rural areas or places without access to nearby alternatives to private vehicles. **This involves creating and maintaining infrastructure that caters to all modes of sustainable transport, including high quality public transport and new types of shared mobility such as electric bikes and scooters, community transport, demand responsive transport and car clubs. We aim to collaborate closely with commercial bus and rail operators to enhance service quality, reliability, punctuality, and accessibility. By using new technologies, such as digital apps, we aim to support multi-operator and fully integrated ticketing solutions.** **To do this we will work with our partners to:** • **Examine and address any inequalities that exist in the transport network by tackling barriers to travel such as accessibility, complexity of the transport system and security.** • **Review opportunities to improve journey time reliability for buses, cyclists and pedestrians through the provision of appropriate infrastructure improvements.** • **Work with bus and rail operators to improve service reliability, punctuality and accessibility, increase passenger numbers, and the integration between bus and rail services and other active and sustainable modes.** • **Provide inclusive and affordable access to services via the implementation of shared community and demand responsive transport, especially for those living in rural areas or places (also known as 'transport deserts') without access to nearby alternatives to private vehicles.** • **Use new and emerging technologies such as digital apps to provide real time information to passengers and support the introduction of multi operator and 'smart' fully integrated ticketing.**

- **Seek funding to implement cycling and walking improvements set out in Local Cycling and Walking Infrastructure Plans (LCWIPs) from government, developers and other potential sources.**
- **Improve access to local services by integrating the public rights of way network, walking and cycling networks to form, direct, safe and accessible routes providing additional health and wellbeing benefits.**
- **Support the principle of establishing multipurpose green infrastructure to promote sustainable and active travel movements and contribute to health and wellbeing.**
- **Provide measures to enable more children to walk and cycle to school safely, such as a traffic free environment outside of school and cycle and road safety training.**
- **Support international gateways at London Stansted and Southend Airports prepare and implement effective Surface Access Strategies and masterplans that provide multi-modal passenger and freight access proportionate to their scale, operation and function.**
- **Support measures to enable multi-modal passenger and freight access to key international ports such as Freeport East Harwich and to maximise the efficiency of port operations.**

Local planning authorities should use the outputs from LCWIPs as a key part of their evidence base when preparing Local Plans and Neighbourhood Plans (and other policy documents). LCWIPs will help them to identify walking and cycling routes to include into site specific policies and in Infrastructure Delivery Plans.

LCWIPs provide a prioritised plan of preferred routes and core zones which can be used to inform and prioritise future government (including Active Travel England) funded opportunities in the short, medium and long term; secure developer funding towards walking and cycling infrastructure including when responding to specific planning applications; and link to wider sustainable transport networks such as bus, rail and rapid transit. We will seek to develop LCWIPs in all areas across Essex as and when resources become available.

Essex County Council, in collaboration with consultants, are preparing LCWIPs for specific towns, cities and districts. We are also preparing a countywide LCWIP to ensure connectivity is provided between local planning authority areas.

The strategies and plans which underpin this policy and which will guide its application include:

- **Sustainable Modes of Travel Strategy.**
- **Local Cycling and Walking Infrastructure Plans.**
- **Bus Service Improvement Plan.**
- **Rapid Transit Strategy.**
- **Essex Rail Strategy.**
- **Traffic Management Strategy.**
- **Development Management Policies and Guidance.**
- **Travel Plan Guidance for large scale developments and garden communities.**
- **District and City Transport Strategies.**

Clients:
Essex County Council

Report title:
Essex Local Transport Plan 4 –
Strategic HRA Screening Report

Place Services

Essex County Council

County Hall, Chelmsford, Essex CM1 1QH

T: +44 (0)333 013 6840

E: enquiries@placeservices.co.uk

www.placeservices.co.uk

July 2025

PLACE SERVICES

Essex County Council