



Thurrock Borough Local Plan Habitats Regulations Assessment Draft Local Plan

Thurrock Local Council

Final report
Prepared by LUC
July 2026

Version	Status	Prepared	Checked	Approved	Date
1	Draft report – for client comments	S Hockings	R Turner	Jon Pearson and David Green	20/02/2026
2	Draft report – updated with client comments and revised Local Plan; received May 2026.	S. Hockings	D. Green	David Green	01/06/2026
3	Final report	S. Hockings	D. Green	David Green	03/07/2026



Contents

Chapter 1 **6**

Executive Summary

Chapter 2 **9**

Introduction

Thurrock Local Plan	9
Context of the Local Plan	11
The requirement to undertake Habitats Regulations Assessment of	
Development Plans	12
Stages of Habitat Regulations Assessment	14
Requirements of the Habitats Regulations	17
Case Law Changes	18
Structure of this Report	22

Chapter 3 **23**

Thurrock Local Plan

Spatial Vision for Thurrock	23
Local Plan Objectives	24
Strategic Policies	25
Place Policies and Site Allocations	25
Development Management Policies	31

Chapter 4 **34**

Method

Screening Assessment	34
Appropriate Assessment	41

Chapter 5 **44**

Screening Assessment

HRA Screening of Policies	44
Screening of Impacts	51
Summary of Screening Assessment	76

Chapter 6**79****Appropriate Assessment**

Physical damage and habitat loss – functionally linked land	81
Non-physical disturbance (noise, vibration and light) – onsite and functionally linked land	98
Non-toxic contamination	101
Air pollution	103
Recreation	111
Water Quantity	117
Water Quality	122

Chapter 7**129****Conclusion and next steps**

Next steps	133
------------	-----

Appendix A**135****Figures****Appendix B****139****Attributes of Habitats sites**

Thames Estuary and Marshes SPA (4802.47ha, 0km)	139
Thames Estuary and Marshes Ramsar site (5588.59ha)	144
Benfleet and Southend Marshes SPA (2251.31ha)	146
Benfleet and Southend Marshes Ramsar site (2251.31ha)	151
Medway Estuary and Marshes SPA (4684.36ha)	152
Medway Estuary and Marshes Ramsar site (4696.74ha)	162
North Downs Woodland SAC (287.58ha)	166
Outer Thames Estuary SPA (379268.14ha)	168
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA (1735.58ha)	171
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site (1735.58ha)	176
Essex Estuaries SAC (46140.82ha)	178
Peters Pit SAC (28.3ha)	182
Foulness (Mid-Essex Coast Phase 5) SPA (10968.9ha)	183
Foulness (Mid-Essex Coast Phase 5) Ramsar site (10932.95ha)	187
Epping Forest SAC (1604.95ha)	188
The Swale SPA (6514.71ha)	192
The Swale Ramsar site (6514.71ha)	195

Thurrock Borough Local Plan Habitats Regulations Assessment	July 2026
Blackwater Estuary (Mid-Essex Coast Phase 4) SPA (4403.38)	197
Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site	204

Appendix C	207
Screening Assessment	
Strategic Policies	
Places and Site Allocations	
Development Management Policies	

References	320
-------------------	------------

Table of Tables

Table 5.1: Summary of Screening Assessment – Sites within 15km of Thurrock Borough (Likely significant effect = LSE)	77
Table 6.1: Summary qualifying features and their sensitivities to air pollution and the relevant critical loads for each broad habitat type.	104
Table 6.2: Appropriate Assessment Summary– Sites within 15km of Thurrock Borough. (AEol = Adverse Effect on Integrity)	126

Chapter 1

Executive Summary

1.1 This Habitat Regulations Assessment (HRA) Report has been prepared by LUC, on behalf of Thurrock Borough Council (the Council) in relation to the Regulation 19 Consultation Draft of the Thurrock Local Plan (July 2026).

1.2 HRA is an iterative process, which the Council is required to undertake by law to assess the potential effects of a development plan on one or more sites afforded the highest level of protection in the UK. A plan will only progress a development plan if it considers that the plan will not adversely affect the integrity of any 'Habitats site', including Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar sites. The requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves. This assessment is based on a precautionary principle, whereby if uncertainty or doubt remains, an adverse effect is assumed

Findings

1.3 The HRA of the Draft Local Plan Regulation 19 has comprised of two stages:

- a Screening Assessment, which set out policies and impact types for which likely significant effects are predicted or cannot be ruled out prior to mitigation and avoidance measures, followed by
- an Appropriate Assessment, which considered the impacts of the Local Plan (either alone or in combination with other projects or plans) on the integrity of Habitats sites with respect to their conservation objectives and to their structure and function

1.4 At the Screening stage, likely significant effects on Habitats sites, either alone or in combination with other policies and proposals, could not be ruled out in relation to a number of impact types. The findings of the Appropriate Assessment in relation to these impact types are summarised below:

- **Physical damage and loss – functionally linked land only** – the Appropriate Assessment concluded potential adverse effect on integrity as a result of offsite physical damage and loss in relation to Thames Estuary and Marshes SPA and Ramsar site. A number of the plan's development site allocations were identified as having moderate or high suitability to support qualifying bird species and therefore, mitigation measures are required.

- **Non-physical disturbance – onsite and functionally linked land** – the Appropriate Assessment concluded potential adverse effect on integrity as a result of non-physical disturbance onsite, and of functionally linked land in relation to Thames Estuary and Marshes SPA and Ramsar site. Mitigation measures will be required to prevent noise, vibration and light disturbance within the habitat sites and on functionally linked land within 2.5km of the Thames Estuary and Marshes SPA and Ramsar site.
- **Non-toxic contamination** - the Appropriate Assessment concluded no adverse effect on integrity as a result of non-toxic contamination in relation to Thames Estuary and Marshes SPA and Ramsar Site as long as best practice construction methods are carried out at project level.
- **Air pollution** – the Appropriate Assessment concluded that adverse effects as a result of air pollution in relation to Thames Estuary and Marshes SPA and Ramsar Site and Medway Estuary and Marshes SPA and Ramsar site due to in combination effects with the Lower Thames Crossing (LTC) could not be ruled out. Therefore, in order to determine the requirements for mitigation in relation to increase air pollution, traffic data will be required to determine whether proposed growth will result in an exceedance of 1000 Annual Average Daily Traffic (AADT). This will be required to ensure that a conclusion can be made as to whether there is potential for an adverse effect on the integrity of these Habitats sites.
- **Recreation** – the Appropriate Assessment concluded no adverse effect on integrity as a result of recreational pressure in relation to Thames Estuary and Marshes SPA and Ramsar Site, and Outer Thames Estuary SPA. Mitigation is provided through the Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy as well as through open space provision in the local plan, including Policy DM28 – Open Space, Sports and Leisure.
- **Water Quantity** – the Appropriate Assessment concluded no adverse effect on integrity as a result of water quantity in relation to Essex Estuaries SAC, Crouch and Roach Estuaries Ramsar site and SPA, Foulness Ramsar site and SPA, Colne Estuary Ramsar site and SPA, Blackwater Estuary Ramsar site and SPA, Dengie Ramsar site and SPA, Thames Estuary and Marshes Ramsar site and SPA, Abberton Reservoir Ramsar site and SPA and Stour and Orwell Estuaries Ramsar Site and SPA. Mitigation will be provided through the WRMP 2024 and through safeguarding and policy protection in the Local Plan.
- **Water Quality** – the Appropriate Assessment concluded no adverse effect on integrity as a result of water quality in relation to Thames Estuary and Marshes SPA and Ramsar site. Mitigation will be provided through the Drainage and

Wastewater Management Plan and through safeguarding and policy protection in the Local Plan

This HRA concluded that no adverse effects on integrity of Habitats sites cannot be reached in relation to physical damage and loss via functionally linked land, non-physical disturbance onsite and via functionally linked land, and air pollution without mitigation and further AADT traffic modelling data. Until such time as the Local Plan is updated to reflect the recommended mitigation measures and the AADT traffic modelling data is provided, a conclusion of no adverse effect on integrity cannot be reached.

Next Steps

1.5 HRA is an iterative process and as such is expected to be updated in light of newly available evidence and comments from key consultees. As part of consultation on the Draft Thurrock Local Plan (Parts 1 and 2), this report should be subject to consultation with Natural England, as well as the Environment Agency, to confirm that the conclusions of the assessment are considered appropriate at this stage of plan-making.

1.6 At the next stage of plan-making, the HRA report will be submitted to the Secretary of State for Examination along with the Local Plan.

1.7 Given the conclusion of adverse effect on integrity in relation to air pollution in relation to Thames Estuary and Marshes SPA and Ramsar site and Medway Estuary and Marshes SPA and Ramsar site, additional evidence will be required to inform further HRA before the plan can be adopted.

Key Evidence Required for Appropriate Assessment

1.8 The following key evidence will be required to inform further HRA:

- Road traffic AADT calculations are required to determine whether thresholds are exceeded in-combination with other plans and projects as a result of the Local Plan. If AADT thresholds are exceeded air quality modelling will be required to understand whether the Plan will result in adverse effect on integrity and whether avoidance and mitigation measures can be applied which would prevent an adverse effect on integrity

Chapter 2

Introduction

2.1 LUC was commissioned by Thurrock Borough Council (hereafter referred to as ‘the Council’) to carry out a Habitats Regulations Assessment (HRA) of its Regulation 19 Local Plan report. This iteration of the HRA relates to the Regulation 19 Local Plan and should be read in conjunction with that document.

2.2 It should be noted that this report is in an ‘Accessible format’, which means it has been formatted to meet the requirements of the Public Sector Bodies (Websites and Mobile Applications) Accessibility Regulations (2018), as set out in the Web Content Accessibility Guidelines (WCAG 2.1). This means it has to have larger font, larger spacing between lines and headings, less information presented in tables, ‘alt text’ provided for all figures and it is able to be read by screen-reading software.

Thurrock Local Plan

2.3 The Council commenced work on its new Local Plan in February 2014 in order to respond to a number of issues including:

- the need for a more up-to-date statutory planning framework to coordinate the delivery of the Council’s ambitious growth strategy for Thurrock;
- the revocation of the East of England Plan and the requirement for local planning authorities to undertake a fresh assessment of their future development needs;
- the need for the Council to identify a deliverable five-year housing land supply and bring forward more sites for development to support economic growth; and
- a need to consider the possible impacts of the route and location of the proposed Lower Thames Crossing.

2.4 The first Local Plan Issues and Options document (Stage 1) was published for consultation in February 2016 [See reference 1] while the second Local Plan Issues and Options (Stage 2) consultation took place from December 2018 to March 2019 [See reference 2]. Following on from this consultation, the Council piloted the Prince’s Foundation Design Charette in Aveley in late 2019. In early 2020, the

Council rolled out this process to other locations to work with local stakeholders to build a better understanding of the need and opportunities for growth and investment throughout the Borough. This exercise was severely delayed as a result of the COVID-19 pandemic and was formally completed in March 2022.

2.5 Public consultation was undertaken by the Council on the Initial Proposals Local Plan document between December 2023 and February 2024. The Initial Proposals document set out information about the suggested structure of the emerging Local Plan. It also included information about the Council's initial proposals for how places in Thurrock might grow, change, and adapt in the future alongside a series of alternative options.

2.6 The Thurrock Design Charter was subject to consultation alongside the Initial Proposals document as a first step towards a Design Guide for the Borough. The Design Charter set out high-level design principles for all development in the Borough, including new homes, commercial development, public spaces and landscapes.

2.7 It is intended that the Local Plan will be submitted before the end of 2026 and that the Examination take place during 2027. The Plan would then be adopted and become the formal up to date Local Plan for Thurrock.

2.8 The Publication Local Plan comprises the following main sections:

- A Spatial Vision for Thurrock – setting out an aspirational vision of how the Borough will look at the end of the plan period in 2044.
- Objectives outlining how the Council aims to deliver the Vision and administer the Local Plan policies.
- Strategic Policies that set the direction for how the Local Plan sees the places in Thurrock developing and changing.
- Development Management Policies that, alongside the Strategic Policies, will be used to guide and assess the detail of proposals requiring planning permission.

- Place Policies that set out the range of housing and employment provision and other land use considerations at settlements and other areas in the plan area. This includes the allocation of specific sites for development.

Context of the Local Plan

2.9 All local planning authorities must prepare a Local Plan that sets out a planning framework for their area. It includes how much development should be permitted and how it should be distributed around the borough. By law, it must be used when deciding future planning applications.

2.10 A "Regulation 19" local plan is the proposed submission version of a local plan, representing the final draft before it is sent to a planning inspector for independent examination

2.11 The Council is preparing a single Local Plan document which will become the principal Development Plan Document for Thurrock, setting out the overall planning framework to support growth and development across the whole borough. The Local Plan will identify the strategic priorities and long-term vision for the area, ensuring that the development needs of the borough are met over the next twenty years.

2.12 The Thurrock Local Plan: Initial Proposals Consultation (Regulation 18) was a public consultation that ran from December 18, 2023, to February 19, 2024. The consultation sought public feedback on initial proposals for the new local plan, which will set policies on issues like housing, employment, and development sites within Thurrock. A new Local Development Scheme (LDS) was approved by Cabinet at its meeting on Wednesday 9 October 2024. The LDS sets out the timetable for producing the new Local Plan and other planning policy documents. The LDS sets out the adoption of the new Local Plan by the Council in the spring of 2028.

2.13 The Local Plan will contain a spatial strategy which identifies specific locations for delivering development needs such as housing, employment, retail, leisure, and infrastructure. The Local Plan vision, strategic policies, site allocation policies, and development management policies will be used in the determination of planning applications which will help to realise the overall strategy (**Chapter 3**).

The requirement to undertake Habitats Regulations Assessment of Development Plans

2.14 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in 2007 [See reference 3]; the currently applicable version is the Habitats Regulations 2017, as amended [See reference 4]. When preparing the development plans, Thurrock Council is therefore required by law to carry out an HRA. The Council can commission consultants to undertake HRA work on its behalf and this (the work documented in this report) is then reported to and considered by Thurrock Council as the 'competent authority'. The Council will consider this work and would usually [See reference 5] only progress a Plan if it considers that the Plan will not adversely affect the integrity [See reference 6] of any Habitats site', as defined below. The requirement for authorities to comply with the Habitats Regulations when preparing a Plan is also noted in the Government's online Planning Practice Guidance (PPG) [See reference 7].

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

- SACs are designated for particular habitat types (specified in Annex 1 of the EU Habitats Directive [See reference 8]) and species (Annex II). The listed habitat types and species (excluding birds) are those considered to be most in need of conservation at a Habitats level. Before EU exit day, designation of SACs also had regard to the coherence of the 'Natura 2000' network of Habitats sites. After EU exit day, regard is had to the importance of such sites for the coherence of the UK's 'national site network'.
- SPAs are classified for rare and vulnerable birds (Annex I of the EU Birds Directive [See reference 9]), and for regularly occurring migratory species not listed in Annex I.

2.16 The term 'European sites' was previously commonly used in HRA to refer to 'Natura 2000' sites [See reference 10] and Ramsar sites (international designated under the Ramsar Convention). However, a Government Policy Paper [See reference 11] on changes to the Habitats Regulations 2017 post-Brexit states that:

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

2.17 Although Ramsar sites do not form part of the new national site network, Government guidance [See reference 12] states that:

“Any proposals affecting the following sites would also require an HRA because these are protected by government policy:

- Proposed SACs
- Potential SPAs
- Ramsar sites – wetland of international importance (both listed and proposed)
- Area secured as sites compensation for damage to a Habitat site.”

2.18 Furthermore, the NPPF [See reference 13] and practice guidance [See reference 14] currently state that competent authorities responsible for carrying out HRA should treat Ramsar sites in the same way as SACs and SPAs. The legislative requirement for HRA does not apply to other nationally designated wildlife sites such as Sites of Special Scientific Interest or National Nature Reserves.

2.19 In line with feedback from Natural England on other recent HRAs, this report uses the term 'Habitats sites' rather than 'European sites' or 'national site network' to refer to SAC, SPA and Ramsar sites, the latter which does not form part of the national site network.

2.20 The overall purpose of the HRA is to conclude whether or not a proposal or policy, or whole development plan would adversely affect the integrity of the Habitats site in question. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle. Where uncertainty or doubt remains, an adverse effect should be assumed.

Stages of Habitat Regulations Assessment

2.21 The HRA should be undertaken by the 'competent authority', in this case Thurrock Council. LUC has been commissioned by the Council to carry out HRA work on its behalf, and the outputs will be reported to and considered by the Council, as the competent authority, before adopting the Plan. The HRA also typically requires close working with Natural England as the statutory nature conservation body in order to obtain the necessary information, agree the process, outcomes and mitigation proposals. The Environment Agency, while not a statutory consultee for the HRA, is also in a strong position to provide advice and information throughout the process as it is required to undertake HRA for its existing licences and future licensing of activities.

2.22 The HRA of plans is undertaken in stages (as described below) and should conclude whether or not a proposal would adversely affect the integrity of the Habitats site in question.

2.23 HRAs are carried out at all levels of plan making, including higher tier plans such as national plans to lower tier Local Transport Plans and Local Plans and at a project level. The process for carrying out an HRA is the same for any plan level or project. However, HRAs carried out for local level plans and projects will be more specific to a certain area or development proposal covering a smaller area than an HRA of a national plan. In turn, project-level HRAs will be able to be more specific again.

2.24 The HRA process should inform the preparation of a plan by seeking to avoid adverse effects on the integrity of Habitats sites. Therefore, the outcome of an HRA

will help to inform whether a plan should be adopted. If it is determined that adverse effects are unavoidable, recommendations are made through the HRA to ensure that mitigation is included in the policies within the plan to ensure the delivery of appropriate mitigation. This will reduce the likelihood or severity of any adverse impact on Habitats sites. Mitigation could include the requirement for project-level/site specific HRAs for specific proposals within a plan.

2.25 The section below summarises the stages involved in carrying out an HRA, based on various guidance documents [\[See reference 15\]](#), [\[See reference 16\]](#). This HRA presents the methodology and findings of Stage 1: Screening and Stage 2: Appropriate Assessment.

Stage 1: Screening (the ‘Significance Test’)

Task

- Description of the development plan and confirmation that it is not directly connected with or necessary to the management of Habitats sites.
- Identification of potentially affected Habitats sites and their conservation objectives [\[See reference 17\]](#).
- Review of other plans and projects.
- Assessment of likely significant effects of the development plan alone or in combination with other plans and projects, prior to consideration of avoidance or reduction (‘mitigation’) measures [\[See reference 18\]](#).

Outcome

- Where effects are unlikely, prepare a ‘finding of no significant effect report’.
- Where effects are judged likely, or there is a lack of information to prove otherwise, proceed to Stage 2.

Stage 2: Appropriate Assessment (the ‘Integrity Test’)

Task

- Information gathering (development plan and data on Habitats sites [See reference 19]).
- Impact prediction.
- Evaluation of development plan impacts in view of conservation objectives of Habitats sites.
- Where impacts are considered to directly or indirectly affect qualifying features of Habitats sites, identify how these effects will be avoided or reduced (‘mitigation’).

Outcome

- Appropriate Assessment report describing the plan, Habitats site baseline conditions, the adverse effects of the plan on the Habitats site, how these effects will be avoided through, firstly, avoidance, and secondly, mitigation including the delivery mechanisms and timescale for these mitigation measures.
- If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.

Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation

Task

- Demonstrate no alternatives exist.
- Identify and demonstrate ‘imperative reasons of overriding public interest’ (IROPI). Different tests apply depending on whether the Habitats Site(s) that may be affected hosts a ‘priority’ habitat type or species (indicated by an asterisk in Annexes I and II of the Habitats Directive). The plan needs to be:
 - Imperative – essential that it proceeds for public interest reasons.

- In the public interest – it has benefits for the public, not just for private interests, including benefits of a social or economic nature (if no priority habitat type or species); or (if there are priority habitat types or species) the reasons must relate to human health, public safety, or benefits of primary importance to the environment.
- Overriding – the public interest outweighs the harm, or risk of harm, to the integrity of the Habitats Site
- Submit a written request to obtain the opinion of the Secretary of State as to whether there are IROPI.
- If the SoS opinion confirms IROPI, identify potential compensatory measures. These must ensure that the overall coherence of the National Site Network is protected.

Outcome

- The Local Plan can only be adopted if the Secretary of State agrees that it has imperative reasons of overriding public interest, and that the necessary compensatory measures can be secured. Guidance notes that this stage is very unlikely to be needed for Local Plans. National plans or policy statements and major projects are more likely to have a high level of public interest and be able to show they are imperative and overriding.

Requirements of the Habitats Regulations

2.26 In assessing the effects of the Local Plan in accordance with Regulation 105 of the Habitats Regulations (as amended) [\[See reference 20\]](#), there are potentially two tests to be applied by the competent authority: a ‘Significance Test’, followed, if necessary, by an Appropriate Assessment which will inform the ‘Integrity Test’. The relevant sequence of questions is as follows:

- Step 1: Under Reg. 105(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not –
- Step 2: Under Reg. 105(1)(a) consider whether the plan is likely to have a significant effect on the site, either alone or in combination with other plans or projects (the ‘Significance Test’). [These two steps are undertaken as part of Stage 1: Screening outlined above.] If Yes –

- Step 3: Under Reg. 105(1), make an Appropriate Assessment of the implications for the site in view of its current conservation objectives (the 'Integrity Test'). In so doing, it is mandatory under Reg. 105(2) to consult Natural England, and optional under Reg. 105(3) to take the opinion of the general public. [This step is undertaken during Stage 2: Appropriate Assessment outlined above.]
- Step 4: In accordance with Reg.105(4), but subject to Reg.107, give effect to the land use plan only after having ascertained that the plan will not adversely affect the integrity of the Habitats site.

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

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

Case Law Changes

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

2.30 The *People over Wind*, *Peter Sweetman v Coillte Teoranta* (April 2018) judgment ruled that Article 6(3) of the Habitats Directive should be interpreted as

meaning that mitigation measures should be assessed as part of an Appropriate Assessment and should not be taken into account at the screening stage of an HRA. The precise wording of the ruling is as follows:

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

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

2.32 The approach to this HRA is also consistent with the *Holohan v An Bord Pleanala* (November 2018) CJEU judgment which stated that:

Article 6(3) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora must be interpreted as meaning that an ‘appropriate assessment’ must, on the one hand, catalogue the entirety of the habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the conservation objectives of the site. Article 6(3) of Directive 92/43 must be interpreted as meaning that the competent authority is permitted to grant to a plan or project consent which leaves the developer free to determine subsequently certain parameters relating to the construction phase, such as the location of the construction compound and haul routes, only if that authority is certain that the development consent granted establishes conditions that are strict enough to guarantee that those parameters will not adversely affect the integrity of the site.

Article 6(3) of Directive 92/43 must be interpreted as meaning that, where the competent authority rejects the findings in a scientific expert opinion recommending that additional information be obtained, the ‘appropriate assessment’ must include an explicit and detailed statement of reasons capable

of dispelling all reasonable scientific doubt concerning the effects of the work envisaged on the site concerned.

2.33 In undertaking this HRA, LUC considered the potential effects on species and habitats, including those not listed as qualifying features, to result in secondary effects upon the qualifying features of Habitats sites, including the potential for complex interactions and dependences. In addition, the potential for offsite impacts, such as through impacts to functionally linked land, and/or species and habitats located beyond the boundaries of Habitats site that may be important in supporting the ecological processes of the qualifying features, has also been fully considered in this HRA.

2.34 Similarly, effects on both qualifying and supporting habitats and species on functionally linked land (FLL) or habitat are being considered in the HRA, in line with the High Court judgment in *RSPB and others v Secretary of State and London Ashford Airport Ltd* [2014 EWHC 1523 Admin] (paragraph 27), which stated that:

“There is no authority on the significance of the non-statutory status of the FLL. However, the fact that the FLL was not within a protected site does not mean that the effect which a deterioration in its quality or function could have on a protected site is to be ignored. The indirect effect was still protected. Although the question of its legal status was mooted, I am satisfied That while no particular legal status attaches to FLL, the fact that land is functionally linked to protected land means that the indirectly adverse effects on a protected site, produced by effects on FLL, are scrutinised in the same legal framework just as are the direct effects of acts carried out on the protected site itself. That is the only sensible and purposive approach where a species or effect is not confined by a line on a map or boundary fence. This is particularly important where the boundaries of designated sites are drawn tightly as may be the UK practice”.

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

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

2.37 In light of this judgment, this HRA will therefore consider traffic growth based on the effects of development from the Local Plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

2.38 The 2018 ‘Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu (Dutch Nitrogen)’ judgment stated that:

“...the positive effects of the autonomous decrease in the nitrogen deposition...be taken into account in the appropriate assessment..., it is important that the autonomous decrease in the nitrogen deposition be monitored and, if it transpires that the decrease is less favourable than had been assumed in the appropriate assessment, that adjustments, if required, be made.”

2.39 The Dutch Nitrogen judgment also states that according to previous case law:

“...it is only when it is sufficiently certain that a measure will make an effective contribution to avoiding harm to the integrity of the site concerned, by guaranteeing beyond all reasonable doubt that the plan or project at issue will not adversely affect the integrity of that site, that such a measure may be taken into consideration in the ‘appropriate assessment’ within the meaning of Article 6(3) of the Habitats Directive.”

2.40 The HRA of the Local Plan therefore will only consider the existence of conservation and/or preventative measures if the expected benefits of those measures are certain at the time of the assessment.

Structure of this Report

2.41 Chapter 1 provided an Executive Summary, and this chapter (**Chapter 2**) has introduced the requirement to undertake an HRA described. The remainder of the report is structured into the following sections:

- Chapter 3: **Thurrock Local Plan** - summarises the content of the Thurrock Local Plan which is the subject of this HRA report.
- Chapter 4: **Method** - sets out the approach taken and the tasks carried out during the HRA.
- Chapter 5: **Screening Assessment** - summarises the findings of the HRA screening and concludes as to whether significant effects on Habitats sites are likely to result from the implementation of the Local Plan and, if so, will require further assessment at the Appropriate Assessment stage.
- Chapter 6: **Appropriate Assessment** – describes the findings of the Appropriate Assessment stage of the HRA.
- Chapter 7: **Conclusion and next steps** – summarises the conclusions of the Screening Assessment and Appropriate Assessment and describes the next steps to be undertaken.

Chapter 3

Thurrock Local Plan

3.1 This chapter summaries the content of the Regulation 19 version of the Thurrock Local Plan, including the Local Plan spatial vision, strategic policies, site allocation policies/place selections and local Development Management Policies (DMP).

Spatial Vision for Thurrock

3.2 The Local plans set out the Council's vision for Thurrock, including how Thurrock will change and grow and what it will look and be like for its communities and businesses by the end of the Local Plan Period in 2044. This reflects the Council's wider vision and strategies but focuses on what this means spatially, what physical change will happen and where and how that will help to meet wider objectives.

3.3 The Strategic Policies that follow the vision set the overall strategy for change and growth in Thurrock, while the Place sections address what this will mean for each of the borough's Places and Settlements. This is followed by a series of Local Plan Development Management Policies that set out the specific requirements for different types of development that require planning approval.

Thurrock 2024 – the Spatial vision

By 2044, Thurrock's places and communities will have grown and positively changed, with many new homes, meeting its housing needs, and with a diverse and thriving economy providing high quality employment opportunities for its residents. The infrastructure needed to support growth, the schools, health facilities, transport links and local services will have been delivered alongside new development. Existing town and Local Centres will have diversified to provide attractive places for people to access their needs locally and it will be possible for people to choose to walk and cycle or use public transport to get around. Alongside an improved natural environment, local parks and green spaces, Thurrock's towns and villages will be places where its residents can thrive and their health and wellbeing will have significantly improved.

Also, by this time, a significant number of new homes will have been built in the Borough. This growth will have been delivered largely within and around existing towns, away from the villages and will be shaped by a strengthened and enhanced Green Belt. Port and other industrial and logistics growth will have been focused along the River Thames, with an increase in good quality spaces

for small and medium sized businesses here and in and around the town centres and transport hubs. The regeneration of Purfleet-on-Thames will be advancing, with many new homes, a new town centre, improved transport connections and improvements to the river front environment. A new settlement at West Horndon, will have been fully planned and delivery of the first of 10,000 new homes along with supporting infrastructure will be underway. The expansion of Aveley, South Ockenden, Chadwell St Mary and East Tilbury will also have contributed to this growth. The port, logistics and industrial growth associated with the Freeport will also have provided a significant and diverse range of high-quality employment opportunities for local residents that will contribute towards a growth in prosperity.

Housing availability in the villages will have increased through small scale developments which help them to protect and enhance their rural and historic character. The natural environment in Thurrock, will have been enhanced through delivery of the Essex Nature Recovery Strategy and application of Biodiversity Net Gain. The protected areas and their habitats will be thriving, while local people will have access to enhanced parks and paths and other public spaces. The design and location of new development along with these enhancements will also contribute towards adapting to and mitigating the impacts of Climate Change.

Thurrock will have become a clean, green and safe borough where opportunities at ports, businesses and sustainable housing growth have been harnessed to significantly improve the health, wellbeing and life opportunities for its residents.

Local Plan Objectives

3.4 The Local Plan objectives outline how the Council aims to deliver the vision and administer planning policies. The Council seeks to establish a positive and proactive approach to development proposals which accord with the Development Plan.

- Objective 1: Resilient Healthy Communities
- Objective 2: Support economic growth and resilience
- Objective 3: Increasing housing development and land supply
- Objective 4: Effectively Managing Climate Change
- Objective 5: Protect, enhance and conserve existing environments and creating new environmental assets
- Objective 6: Providing sufficient Infrastructure

- Objective 7: Planning for the Transport and Movement needs generated by growth

Strategic Policies

3.5 To make the vision for Thurrock a reality, this Plan includes eleven strategic policies that set the direction for how the Plan sees the borough developing and changing, along with the detailed Development Management Policies which will be used to guide and assess the detail of proposals requiring planning permission. These 11 policies combine with the vision to set the overall strategy for the future of Thurrock.

3.6 To understand how well the strategy laid out in the Plan is performing, a range of strategic monitoring indicators have been set. Annual 'Authority Monitoring Reports' will be published to provide information on progress towards achieving the strategy in the Plan based on these indicators.

3.7 The 11 strategic policies are:

- Policy SP01: Development Requirements and Spatial Strategy
- Policy SP02: Healthy, inclusive places and high-quality new development
- Policy SP03: The Economy and skills
- Policy SP04: Thurrock's Centres and their Futures
- Policy SP05: Housing
- Policy SP06: Sustainable Development and Climate Change
- Policy SP07: Environment
- Policy SP08: Infrastructure
- Policy SP09: Transport and Movement
- Policy SP10: Circular economy and waste
- Policy SP11: Minerals

Place Policies and Site Allocations

3.8 To support the Strategic policies, the Local plan proposes Place Policies and Site Allocations, split into strategic and non-strategic Site Allocations across the regions of Thurrock Borough. For each region, a vision and area profile is provided within the

Plan, along with supporting Place Policies, which set out the key goals and projects for the region. A total of 103 Place Policies and Site Allocations are presented in the Local Plan, including; 21 Place Policies are provided, and these are supported by 18 strategic and 64 non-strategic Site Allocations that identify the locations in which development will take place within the Borough.

3.9 Place Policies and Site Allocations are listed below by region, as set out in the Local Plan.

Grays, West Thurrock and Purfleet-on-Thames

- Policy PP01: Purfleet Port
- Policy PP02: Lakeside Regional Town Centre
- Policy PP03: Grays Town Centre
- Policy PP04: Local Green Space in Grays, West Thurrock and Purfleet-on-Thames

Strategic Site Allocations:

- Policy SS01: Grays Shopping Centre, High Street, Grays
- Policy SS02: Purfleet-on-Thames Regeneration
- Policy SS03: Former Arena Essex site and fishing lake, Lakeside

Non-strategic Site Allocations:

- Policy NS01: Blackshots Estate redevelopment - parcel a North Site
- Policy NS02: Land adjacent to Brookmans Avenue and North of Long Lane, Grays
- Policy NS03: Land North of Stifford Clays Road, Grays
- Policy NS04: Land East of the A1012, Grays
- Policy NS05: Land East of Malvern Road, Grays
- Policy NS06: Land North of Manor Road, Grays
- Policy NS07: Whitehall Works, Whitehall Lane, Grays
- Policy NS08: Telephone Exchange, Bradleigh Avenue, Grays
- Policy NS09: Land Adjacent Dell Road and Orsett Road, Grays
- Policy NS10: Gas Valve Compound Drake Road Chafford Hundred Grays

- Policy NS11: Rippleside Metalworks, Thames Road, Grays
- Policy NS12: Crown Road and Darnley Road Car Parks, Grays
- Policy NS13: Land at Hillside, Devonshire Close
- Policy NS14: Land North of Magnet Road
- Policy NS15: Thurrock Shopping Park Site, West Thurrock
- Policy NS16: Kerneos Site, South of London Road, West Thurrock
- Policy NS17: Land east of Ship Lane adjacent to A1306 and Junction 31 of M25, Purfleet-on-Thames
- Policy NS18: Land South of Burnley Road, West Thurrock
- Policy NS19: Land East of Stoneness Road, West Thurrock
- Policy NS20: Land at eastern end of Manor Way Industrial Estate
- Policy NS32: Land south of South Essex College, Thurrock Campus, Grays

Tilbury, Easy Tilbury and Chadwell St Mary

- Policy PP05: Port of Tilbury, Tilbury 2 and Tilbury 3
- Policy PP06: Tilbury Ferry and Cruise Terminal
- Policy PP07: Tilbury District Centre
- Policy PP08: Local Green Space in Tilbury, East Tilbury and Chadwell St Mary
- Policy PP09: North Thames Marshes Ecology Masterplan

Strategic Site Allocations:

- Policy SS04: Land West of East Tilbury
- PolicySS05: Land East of Chadwell St Mary
- Policy SS06: Land West of Brentwood Road, Chadwell St Mary
- PolicySS07: Tilbury3

Non-strategic Site Allocations:

- Policy NS21: Tilbury Football Club, Chadfields, Tilbury
- Policy NS22: Car Park, Coronation Avenue, East Tilbury

- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS25: Land at Linford Road and Turnpike Lane, Chadwell St Mary
- Policy NS26: Land at St Johns Road, Chadwell St Mary
- Policy NS27: Garage site east of Vigerons Way, Chadwell St Mary
- Policy NS28: 11 River View, Chadwell St Mary
- Policy NS29: Land North of B149 Wood View and River View, Chadwell St Mary
- Policy NS30: Chadfields
- Policy NS31: Lower Crescent, Linford
- Policy NS33: Land to the North West of Thames Industrial Estate, East Tilbury
- Policy NS34: Land to the South West of Thames Industrial Estate, East Tilbury

Standford-le-Hope and Corringham

- Policy PP10: London Gateway Port
- Policy PP11: Stanford-le-Hope District Centre
- Policy PP12: Local Green Space in Stanford-le-Hope and Corringham
- Policy PP13: Rail improvements in Stanford-le-Hope
- Policy PP14: Corringham District Centre
- Policy PP15: New Transport Interchange in Corringham
- Policy PP16: Sustainable Connections with Canvey Island

Strategic Site Allocations:

- Policy SS08: Land to the Northeast of Corringham
- Policy SS09: London Gateway Logistics Park
- Policy SS10: Thames Enterprise Park and Thames Oilport

Non-strategic Site Allocations:

- Policy NS35: Land to the east of Butts Lane, Stanford le Hope
- Policy NS36: Whitwell Court, Stanford-le-Hope

- Policy NS37: Land to the rear of Fairview Avenue
- Policy NS38: Land at Wharf Road, Stanford-le-Hope
- Policy NS39: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS40: Land at Lyndhurst Road, Corringham
- Policy NS41: Former Police Station, Gordon Road, Corringham
- Policy NS42: The Springhouse, Corringham
- Policy NS43: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS44: Land west of Church Road, Corringham
- Policy NS45: Manor View
- Policy NS46: The Paddock

Aveley and South Ockendon

- Policy PP17: Aveley Local Centre
- Policy PP18: South Ockendon District Centre
- Policy PP19: Local Green Space in South Ockendon

Strategic Site Allocations:

- Policy SS11: Land south of Aveley
- Policy SS12: Land to the west of Romford Road
- Policy SS13: Land south-east of South Ockendon
- Policy SS14: Land north-east of South Ockendon
- Policy SS15: Land north of South Ockendon
- Policy SS16: Distribution Centre, Arisdale Avenue, South Ockendon
- Policy SS17: Buckles Lane, South Ockendon

Non-strategic Site Allocations:

- Policy NS47: Land west of Park Lane, Aveley
- Policy NS48: Former St Michaels Church Hall, Mill Lane, Aveley
- Policy NS49: Land at former library & public hall, Purfleet Road, Aveley

- Policy NS50: Former Prince of Wales Public House, West Road, South Ockendon
- Policy NS51: Land & garages to rear of 20-24 and 34-44 Anton Road, South Ockendon
- Policy NS52: Land adjoining Tamarisk Road, South Ockendon
- Policy NS53: Land east of South Road & adj. Echo Farm & Mollands Lane, South Ockendon
- Policy NS54: Former Culver Centre & land to rear, Daiglen Drive, South Ockendon
- Policy NS55: Land east of South Road & north of Buckles Lane, South Ockendon
- Policy NS56: 1 to 431 odds, Broxburn Drive, South Ockendon
- Policy NS57: Jack O Lantern, Daiglen Drive, South Ockendon
- Policy NS58: Belhus Park Boxing Club, Darenth Lane, South Ockendon
- Policy NS59: The Willows
- Policy NS60: Holy Lands
- Policy NS61: Extension to Hangmans Wood Industrial Estate

Rural Thurrock

- Policy PP20 Local Green Space in Rural Thurrock
- Policy PP21 Infill Development within Village Boundaries

Non-strategic Site Allocations:

- Policy NS62: Land north of Church Road, Bulphan
- Policy NS63: Land south of School Lane, Orsett
- Policy NS64: Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

West Horndon

Strategic Site Allocations:

- Policy SS18: West Horndon New Town

Development Management Policies

3.10 Development Management policies (DM policies) are set out in the Local Plan to guide and assess the detail of proposals requiring planning permission and will combine with the vision to set the overall strategy for the future of Thurrock. Ten categories have been set out, which each contain up to 14 DM policies. The categories and associated DM policies are listed below.

- Climate Change and Sustainable Development
 - DM Policy 01: Operational Carbon
 - DM Policy 02: Embodied Carbon
 - DM Policy 03: Water Efficient Development
 - DM Policy 04: Integrating renewable development
 - DM Policy 05: Reducing Waste and promoting a Circular Economy
 - DM Policy 06: Contaminated Land
 - DM Policy 07: Construction Environmental Management
- Economy, Employment and Skills
 - DM Policy 08: Protecting Existing Employment Areas
 - DM Policy 09: Employment Uses Outside Designated Employment Areas
 - DM Policy 10: Business, Employment and Skills
- Housing
 - DM Policy 11: Housing Mix
 - DM Policy 12: Maximising the delivery of Affordable Housing
 - DM Policy 13: Gypsy, Traveller and Travelling Showpeople Sites
 - DM Policy 14: Ensuring that specialist housing needs are met
 - DM Policy 15: Self & Custom Build Housing
 - DM Policy 16: Build to Rent Housing
 - DM Policy 17: Housing in Multiple Occupation
- Centres, Retail and Services
 - DM Policy 18: Primary Shopping Areas
 - DM Policy 19: Centre Sequential Test
 - DM Policy 20: Local Impact Assessment

- DM Policy 21: Hot Food Takeaways
- DM Policy 22: Local Shops
- Natural Environment and Landscape
 - DM Policy 23: Thames Estuary Marshes Special Protection Area Zone of Influence
 - DM Policy 24: Biodiversity and Geodiversity
 - DM Policy 25: Trees and Hedgerows
 - DM Policy 26: Landscape Character
 - DM Policy 27: Open Spaces, Sports and Recreation
 - DM Policy 28: Riverside Uses, including River-dependent, River-related and Adjacent Uses
 - DM Policy 29: Managing Flood Risk and Riverside Design
 - DM Policy 30: Minimising Pollution and Impacts on Amenity, Health and Safety
- Infrastructure
 - DM Policy 31: Utilities
 - DM Policy 32: Space for Culture
 - DM Policy 33: Community, Health, Leisure and Cultural Facilities
 - DM Policy 34: Education and Early Years Childcare
 - DM Policy 35: Digital Communications Infrastructure
 - DM Policy 36: Delivery of Infrastructure
- Travel, Transport and Movement
 - DM Policy 37: Active Travel, Transport and Cycling
 - DM Policy 38: Parking and Electric Vehicle Charging
- Greenbelt
 - DM Policy 39: Development in the Green Belt
- Good Design
 - DM Policy 40: Cohesive and Distinctive Places
 - DM Policy 41: Delivering Great Design
 - DM Policy 42: Health Impact Assessments
 - DM Policy 43: Design of Residential Development

- DM Policy 44: Householder Alterations and Extensions
- DM Policy 45: Commerce & Industrial Development
- DM Policy 46: Mixed-Use Development
- DM Policy 47: Layout, Streets and Public Realm
- DM Policy 48: Accessibility and Inclusive Design
- DM Policy 49: Design of Landscape and Green-Blue Infrastructure (GBI)
- DM Policy 50: Design of parking, servicing and utilities
- DM Policy 51: Sustainable Design
- DM Policy 52: Advertisements, Signage and Shop Fronts
- DM Policy 53: Tall Buildings
- Heritage
 - DM Policy 54: Designated Heritage Assets
 - DM Policy 55: Conservation Areas
 - DM Policy 56: Archaeological Assets and Archaeological Priority Areas
 - DM Policy 57: Non-Designated Heritage Assets

Chapter 4

Method

4.1 This chapter describes the methodology that is being used for the HRA of the Local Plan. At this Regulation 19 stage of plan-making, this includes Stage 1: Screening and Stage 2: Appropriate Assessment.

4.2 The methodology undertaken for the HRA is set out in more detail below.

Screening Assessment

4.3 HRA Screening of the Local Plan has been undertaken in line with current guidance and seeks to meet the requirements of the Habitats Regulations. The tasks that were undertaken during the Screening stage of the HRA are described below. The findings of the HRA Screening are summarised in **Chapter 4** and detailed in **Appendix C**, identifying the policies and impact types for which likely significant effects are predicted or cannot be ruled out prior to mitigation and avoidance measures.

4.4 The purpose of the Screening stage is to:

- Identify all aspects of the plan which would have no effect on a Habitats site, so that they can be eliminated from further consideration in respect of this.
- Identify aspects of the plan that would have no likely significant effect on a Habitats site, alone or in combination with other plans or projects.
- Identify those aspects of the plan where it is not possible to rule out likely significant effects on a Habitats site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require Appropriate Assessment.

Identification of Habitats sites and factors contributing to their integrity

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

4.6 Geographical Information Systems (GIS) data have been used to map the locations and boundaries of Habitats sites in and within 15km of the Thurrock Borough boundary, using publicly available data from Natural England (**Figure 1**). All Habitats sites lying partially or wholly within 15km have been included. A distance of 15km is generally considered appropriate for identifying potential impact pathways. Habitats sites located beyond 15km can be included if they share functional ecological connectivity to the plan area, for example via river systems. Several Habitat sites beyond the 15km buffer were identified because of a pathway for potential effects.

- Epping Forest SAC – this habitat site was included given it's links to the borough through the M25, a strategic road which residents of Thurrock may rely upon as a key commuting corridor. As the M25 lies within 200m of Epping Forest, increased traffic as a result of development with Thurrock may impact this Habitat site.
- Essex Estuaries SAC, Foulness SPA and Ramsar site, The Swale SPA and Ramsar site and Blackwater Estuary SPA and Ramsar site – these habitat sites were included as they are hydrologically linked to Thurrock.

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

4.8 While the boundary of a Habitats site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the population will not necessarily remain in the site all the time.

Sometimes, the mobility of qualifying species is considerable and may extend so far from the key habitat that forms the SAC or SPA that it would be entirely impractical to attempt to designate or classify all of the land or sea that may conceivably be used by the species [See reference 21]. This HRA therefore considers whether any Habitats sites make use of functionally linked habitats and the impacts that could affect those habitats.

4.9 Habitats sites identified for inclusion in this HRA are listed below in **Table 4.1** and are mapped in **Appendix A**. Detailed information about each Habitats site is provided in **Appendix B**, described with reference to Standard Data Forms for the SPAs and SACs, and Natural England's Site Improvement Plans [See reference 22]. Natural England's conservation objectives [See reference 23] for the SPAs and SACs have also been reviewed. These state that site integrity must be maintained or restored by maintaining or restoring the habitats of qualifying features, the supporting processes on which they rely, and populations of qualifying species.

Table 4.1 : Habitat sites included within this HRA - SAC

Habitats sites	Distance from Thurrock Borough (km)
North Downs Woodlands SAC	9.13
Essex Estuaries SAC	10.74
Peters Pit SAC	12.54
Epping Forest SAC	16.25

Table 4.2 : Habitat sites included within this HRA - SPA

Habitats sites	Distance from Thurrock Borough (km)
Thames Estuary & Marshes SPA	0.00
Benfleet and Southend Marshes SPA	3.08
Medway Estuary & Marshes SPA	8.61
Outer Thames Estuary SPA	9.33
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) SPA	10.74
Foulness (Mid-Essex Coast Phase 5) SPA	15.85
The Swale SPA	18.50
Blackwater Estuary SPA	23.01

Table 4.3: Habitat sites included within this HRA - Ramsar sites

Habitats sites	Distance from Thurrock Borough (km)
Thames Estuary & Marshes Ramsar site	0.00
Benfleet and Southend Marshes Ramsar site	3.08
Medway Estuary & Marshes Ramsar site	8.61
Crouch & Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	10.74
Foulness (Mid-Essex Coast Phase 5) Ramsar site	15.85
The Swale Ramsar site	18.50
Blackwater Estuary Ramsar site	23.01

Assessment of ‘Likely Significant Effects’ of the Thurrock Local Plan

4.10 As required by Regulation 105 of the Conservation of Habitats and Species Regulations 2017 [\[See reference 24\]](#) (as amended), an assessment has been undertaken of the ‘likely significant effects’ of the plan. The assessment has been prepared in order to identify which policies or site allocations would be likely to have a significant effect on Habitats sites. The Screening assessment has been conducted without taking mitigation into account, in accordance with the ‘People over Wind’ judgment.

4.11 Consideration was given to the potential for the development proposed to result in significant effects associated with:

- Physical damage and loss (on- and off-site)
- Non-physical disturbance (noise, vibration, light)
- Non-toxic contamination
- Increased air pollution
- Increased recreation pressure

■ Reduced water quality and quantity

4.12 This thematic / impact category approach also allowed for consideration to be given to the cumulative effects of the site allocations rather than focussing exclusively on individual developments provided for by the Local Plan.

4.13 A risk-based approach involving the application of the precautionary principle was adopted in the assessment, such that a conclusion of ‘no significant effect’ was only reached where it was considered very unlikely, based on current knowledge and the information available, that a proposal in the Local Plan would have a significant effect on the integrity of a Habitats site.

4.14 A Screening assessment was prepared (**Appendix C**) to document consideration of the potential for likely significant effects resulting from each policy and potential site allocation in the plan.

4.15 For some types of impacts, the potential for likely significant effects was determined on a proximity basis. This approach and the assumptions applied are described in more detail in **Chapter 4**

Interpretation of ‘Likely Significant Effects’

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

4.17 In the Waddenzee case [\[See reference 25\]](#) the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 in the Habitats Regulations), including that:

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

4.18 A relevant opinion delivered to the Court of Justice of the European Union commented that:

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

4.19 This opinion (the ‘Sweetman’ case) therefore allows for the authorisation of plans and projects whose possible effects, along or in combination, can be considered ‘trivial’ or de minimis; referring to such cases as those “that have no appreciable effect on the site”. In practice such effects could be screened out as having no likely significant effect – they would be ‘insignificant’.

4.20 The HRA Screening Assessment therefore considers whether the Local Plan policies could have likely significant effects either alone or in combination.

Mitigation provided by the Thurrock Local Plan

4.21 Some of the potential effects of the plan could be mitigated through the implementation of other policies in the Local Plan itself, such as the provision of renewable and low carbon energy generation and the move towards Net Zero Energy and Carbon in operation (which could help mitigate increased air pollution at Habitats sites). Nevertheless, in accordance with the ‘People over Wind’ judgement, avoidance and mitigation measures cannot be relied upon at the Screening Stage, and therefore, where such measures exist, they will be considered at the Appropriate Assessment stage for impacts and policies where likely significant effects, either alone or in-combination, could not be ruled out.

Assessment of potential in-combination effects

4.22 Regulation 105 of the Habitats Regulations 2017 requires an Appropriate Assessment where “a land use plan is likely to have a significant effect on a Habitats

site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site". Therefore, where likely insignificant effects are identified for the Local Plan alone, it is necessary to consider whether these may become significant effects in combination with the effects of other plans or projects.

4.23 Where the Local Plan is likely to have an effect on its own, but it is not likely to be significant, the in-combination assessment at the Screening stage will need to determine whether there may also be the same types of effect from other plans or projects that could combine with Local Plan to produce a significant effect. If so, this likely significant effect arising from Local Plan in combination with other plans or projects, would then need to be considered through the Appropriate Assessment stage to determine if significant effect would have an adverse effect on integrity of the relevant Habitats site. Where the Screening assessment has concluded that there is no impact pathway between development proposed in Local Plan and the conditions necessary to maintain qualifying features of a Habitats site, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stages. This approach accords with recent guidance on HRA.

4.24 If impact pathways are found to exist for a particular effect but it is not likely to be significant from Local Plan alone, the in-combination assessment will identify which other plans and programmes could result in the same impact on the same Habitats site. This will focus on planned growth (including housing, employment, transport, minerals and waste) around the affected site, or along the impact corridor.

4.25 The potential for in-combination impacts will therefore focus on plans prepared by local authorities that overlap with Habitats sites that are within the scope of this HRA. The findings of any associated HRA work for those plans will be reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with Local Plan will also be identified and reviewed.

4.26 The online HRA Handbook suggests the following plans and projects may be relevant to consider as part of the in-combination assessment:

- Planning applications lodged but not yet determined, including refusals subject to an outstanding appeal or legal challenge;

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

4.27 The need for in-combination assessment also arises at the Appropriate Assessment stage, as discussed in the section below.

Appropriate Assessment

4.28 Following the Screening stage, if likely significant effects on Habitats sites are unable to be ruled out, the plan-making authority is required under Regulation 105 of the Habitats Regulations to make an 'Appropriate Assessment' of the implications of the plan Habitats sites, in view of their conservation objectives. Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of Habitats sites with respect to their conservation objectives and to their structure and function **[See reference 26]**. This includes consideration of plans and projects with the potential for in-combination effects, where relevant.

Assessing the effects on site integrity

4.29 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. the habitats and species for which it has been designated) and to ensure their continued viability. In line with the Holohan judgement, effects on species and habitats not listed as qualifying features that could nevertheless result in secondary effects upon the qualifying features of Habitats sites also need to be considered. The Appropriate Assessment would therefore build on the information set out in

Appendix B of this report to consider the characteristics of supporting habitats and species that could be affected by impacts identified at the screening stage.

4.30 A high degree of integrity at a site is considered to exist where the potential to meet a site's conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support.

4.31 A conclusion would need to be reached as to whether or not a plan would adversely affect the integrity of any Habitats sites. Assessing the effects on the site(s) integrity involves considering whether the predicted impacts of the plan policies and/or site allocations (either alone or in combination) have the potential to:

- Cause delays to the achievement of conservation objectives for the site.
- Interrupt progress towards the achievement of conservation objectives for the site.
- Disrupt those factors that help to maintain the favourable conditions of the site.
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem.
- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants).
- Interfere with anticipated natural changes to the site.
- Reduce the extent of key habitats or the population of key species.
- Reduce the diversity of the site.
- Result in disturbance that could affect the population, density or balance between key species.
- Result in fragmentation.
- Result in the loss of key features [\[See reference 27\]](#).

4.32 The conservation objectives for each SAC and SPA (as set out in **Appendix B**) are generally to maintain the qualifying features in favourable condition. Natural England does not define conservation objectives for Ramsar sites, but these can often be inferred from those for co-located SAC or SPA features. The Site Improvement Plans for each site provide an overview of the issues (both current and predicted) affecting the condition of the designated features on the site(s) and outline the priority measures required to improve the condition of the features. An Appropriate Assessment would draw on these to help understand what is needed to maintain the integrity of the Habitats sites.

4.33 For each Habitats sites where an uncertain or likely significant effect was identified in relation to the Strategy, the Appropriate Assessment would set out the potential impacts and make a judgement (based on the information available) on whether the impact will have an adverse effect on the integrity of the Habitats sites. Consideration would be given to the potential for mitigation measures to be implemented that could reduce the likelihood or severity of the potential impacts such that there would not be an adverse effect on the integrity of the Habitats sites.

Chapter 5

Screening Assessment

5.1 As described in the **Chapter 3**, a Screening Assessment was carried out in order to identify the likely significant effects of the Local Plan on the scoped-in Habitats sites. The detailed Screening Assessment, which sets out the decision-making process used for this assessment can be found in **Appendix C** and the findings are summarised below.

HRA Screening of Policies

No 'likely significant effect' predicted

5.2 The following policies from the Regulation 19 Local Plan (July 2026) are not expected to directly result in development and therefore they will not result in significant effects on Habitats sites.

- Policy SP02: Healthy, inclusive places and high-quality new development
- Policy SP06: Sustainable Development and Climate Change
- Policy SP07: Environmental
- Policy SP09: Transport and Movement
- Policy SP10: Circular economy and waste
- Policy PP01: Purfleet Port
- Policy PP02: Lakeside Regional Town Centre
- Policy PP03: Grays Town Centre
- Policy PP04: Local Green Space in Grays, West Thurrock and Purfleet-on-Thames
- Policy PP05: Port of Tilbury, Tilbury 2 and Tilbury 3
- Policy PP06: Tilbury Ferry and Cruise Terminal
- Policy PP07: Tilbury District Centre
- Policy PP08: Local Green Space in Tilbury, East Tilbury and Chadwell St Mary

- Policy PP09: North Thames Marshes Ecology Masterplan
- Policy PP10: London Gateway Port
- Policy PP11: Stanford-le-Hope District Centre
- Policy PP12: Local Green Space in Stanford-le-Hope and Corringham
- Policy PP13: Rail improvements in Stanford-le-Hope
- Policy PP14: Corringham District Centre
- Policy PP15: New Transport Interchange in Corringham
- Policy PP16: Sustainable Connections with Canvey Island
- Policy PP17: Aveley Local Centre
- Policy PP18: South Ockendon District Centre
- Policy PP19: Local Green Space in South Ockendon
- Policy PP20: Local Green Space in Rural Thurrock
- Policy PP21: Infill Development within Village Boundaries
- DM Policy 01: Operational Carbon
- DM Policy 02: Embodied Carbon
- DM Policy 03: Water Efficient Development
- DM Policy 04: Integrating renewable development
- DM Policy 05: Reducing Waste and promoting a Circular Economy
- DM Policy 06: Contaminated Land
- DM Policy 07: Construction Environmental Management
- DM Policy 08: Protecting Existing Employment Areas
- DM Policy 09: Employment Uses Outside Designated Employment Areas
- DM Policy 10: Business, Employment and Skills
- DM Policy 12: Housing Mix
- DM Policy 12: Maximising the delivery of Affordable Housing
- DM Policy 13: Gypsy, Traveller and Travelling Showpeople Sites
- DM Policy 14: Ensuring that specialist housing needs are met
- DM Policy 15: Self & Custom Build Housing

- DM Policy 16: Build to Rent Housing
- DM Policy 17: Housing in Multiple Occupation
- DM Policy 18: Primary Shopping Areas
- DM Policy 19: Centre Sequential Test
- DM Policy 20: Local Impact Assessment
- DM Policy 21: Hot Food Takeaways
- DM Policy 22: Local Shops
- DM Policy 23: Thames Estuary Marshes Special Protection Area Zone of Influence
- DM Policy 24: Biodiversity and Geodiversity
- DM Policy 25: Trees and Hedgerows
- DM Policy 26: Landscape Character
- DM Policy 27: Open Spaces, Sports and Recreation
- DM Policy 28: Riverside Uses, including River-dependent, River-related and Adjacent Uses
- DM Policy 29: Managing Flood Risk and Riverside Design
- DM Policy 30: Minimising Pollution and Impacts on Amenity, Health and Safety
- DM Policy 31: Utilities
- DM Policy 32: Space for Culture
- DM Policy 33: Community, Health, Leisure and Cultural Facilities
- DM Policy 34: Education and Early Years Childcare
- DM Policy 35: Digital Communications Infrastructure
- DM Policy 36: Delivery of Infrastructure
- DM Policy 37: Active Travel, Transport and Cycling
- DM Policy 38: Parking and Electric Vehicle Charging
- DM Policy 39: Development in the Green Belt
- DM Policy 40: Cohesive and Distinctive Places
- DM Policy 41: Delivering Great Design

- DM Policy 42: Health Impact Assessments
- DM Policy 43: Design of Residential Development
- DM Policy 44: Householder Alterations and Extensions
- DM Policy 45: Commerce & Industrial Development
- DM Policy 46: Mixed-Use Development
- DM Policy 47: Layout, Streets and Public Realm
- DM Policy 48: Accessibility and Inclusive Design
- DM Policy 49: Design of Landscape and Green-Blue Infrastructure (GBI)
- DM Policy 50: Design of parking, servicing and utilities
- DM Policy 51: Sustainable Design
- DM Policy 52: Advertisements, Signage and Shop Fronts
- DM Policy 53: Tall Buildings
- DM Policy 54: Designated Heritage Assets
- DM Policy 55: Conservation Areas
- DM Policy 56: Archaeological Assets and Archaeological Priority Areas
- DM Policy 57: Non – Designated Heritage Assets

Likely significant effects predicted

5.3 The following policies from the Regulation 19 Local Plan (July 2026) are highlighted as having potential impact pathways to Habitats sites and likely significant effects that cannot be ruled out.

- Policy SP01: Development Requirements and Spatial Strategy
- Policy SP03: Economy and Skills
- Policy SP04: Thurrock's Centres and their Futures
- Policy SP05: Housing
- Policy SP08: Infrastructure
- Policy SP11: Minerals
- Policy SS01: Grays Shopping Centre, High Street, Grays

- Policy SS02: Purfleet-on-Thames Regeneration
- Policy SS03: Former Arena Essex site and fishing lake, Lakeside
- Policy SS04: Land West of East Tilbury
- Policy SS05: Land East of Chadwell St Mary
- Policy SS06: Land West of Brentwood Road, Chadwell St Mary
- Policy SS07: Tilbury3
- Policy SS08: Land to the Northeast of Corringham
- Policy SS09: London Gateway Logistics Park
- Policy SS09a: London Gateway Logistics Park - parcel a Land at Great Garlands Farm
- Policy SS10: Thames Enterprise Park and Thames Oilport
- Policy SS11: Land south of Aveley
- Policy SS12: Land to the west of Romford Road
- Policy SS13: Land south-east of South Ockendon
- Policy SS14: Land north-east of South Ockendon
- Policy SS15: Land north of South Ockendon
- Policy SS16: Distribution Centre, Arisdale Avenue, South Ockendon
- Policy SS17: Buckles Lane, South Ockendon
- Policy SS18: West Horndon New Town
- Policy NS01a, b, c: Blackshots Estate redevelopment - parcel a North Site
- Policy NS02: Land adjacent to Brookmans Avenue and North of Long Lane, Grays
- Policy NS03: Land North of Stifford Clays Road, Grays
- Policy NS04: Land East of the A1012, Grays
- Policy NS05: Land East of Malvern Road, Grays
- Policy NS06: Land North of Manor Road, Grays
- Policy NS07: Whitehall Works, Whitehall Lane, Grays
- Policy NS08: Telephone Exchange, Bradleigh Avenue, Grays

- Policy NS09: Land Adjacent Dell Road and Orsett Road, Grays
- Policy NS10: Gas Valve Compound Drake Road Chafford Hundred Grays
- Policy NS11: Rippleside Metalworks, Thames Road, Grays
- Policy NS12: Crown Road and Darnley Road Car Parks, Grays
- Policy NS13: Land at Hillside, Devonshire Close
- Policy NS14: Land North of Magnet Road
- Policy NS15: Thurrock Shopping Park Site, West Thurrock
- Policy NS16: Kerneos Site, South of London Road, West Thurrock
- Policy NS17: Land east of Ship Lane adjacent to A1306 and Junction 31 of M25, Purfleet-on-Thames
- Policy NS18: Land South of Burnley Road, West Thurrock
- Policy NS19: Land East of Stoneness Road, West Thurrock
- Policy NS20: Land at eastern end of Manor Way Industrial Estate
- Policy NS21: Tilbury Football Club, Chadfields, Tilbury
- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS25: Land at Linford Road and Turnpike Lane, Chadwell St Mary
- Policy NS26: Land at St Johns Road, Chadwell St Mary
- Policy NS27: Garage site east of Vigerons Way, Chadwell St Mary
- Policy NS28: 11 River View, Chadwell St Mary
- Policy NS29: Land North of B149 Wood View and River View, Chadwell St Mary
- Policy NS30: Chadfields
- Policy NS31: Lower Crescent, Linford
- Policy NS32: Land south of South Essex College, Thurrock Campus, Grays
- Policy NS33: Land to the North West of Thames Industrial Estate, East Tilbury
- Policy NS34: Land to the South West of Thames Industrial Estate, East Tilbury

- Policy NS35: Land to the east of Butts Lane, Stanford le Hope
- Policy NS36: Whitwell Court, Stanford-le-Hope
- Policy NS37: Land to the rear of Fairview Avenue
- Policy NS38: Land at Wharf Road, Stanford-le-Hope
- Policy NS39: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS40: Land at Lyndhurst Road, Corringham
- Policy NS41: Former Police Station, Gordon Road, Corringham
- Policy NS42: The Springhouse, Corringham
- Policy NS43: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS44: Land west of Church Road, Corringham
- Policy NS45: Manor View
- Policy NS46: The Paddock
- Policy NS47: Land west of Park Lane, Aveley
- Policy NS48: Former St Michaels Church Hall, Mill Lane, Aveley
- Policy NS49: Land at former library & public hall, Purfleet Road, Aveley
- Policy NS50: Land north of Purfleet Road, Aveley
- Policy NS51: Land & garages to rear of 20-24 and 34-44 Anton Road, South Ockendon
- Policy NS52: Land adjoining Tamarisk Road, South Ockendon
- Policy NS53: Land east of South Road & adj. Echo Farm & Mollands Lane, South Ockendon
- Policy NS54: Former Culver Centre & land to rear, Daiglen Drive, South Ockendon
- Policy NS55: Land east of South Road & north of Buckles Lane, South Ockendon
- Policy NS56: 1 to 431 odds, Broxburn Drive, South Ockendon
- Policy NS57: Jack O Lantern, Daiglen Drive, South Ockendon
- Policy NS58: Belhus Park Boxing Club, Darenth Lane, South Ockendon
- Policy NS59: The Willows

- Policy NS60: Holy Lands
- Policy NS61: Extension to Hangmans Wood Industrial Estate
- Policy NS62: Land north of Church Road, Bulphan
- Policy NS63: Land south of School Lane, Orsett
- Policy NS64: Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

Screening of Impacts

5.4 For some types of impacts, screening for likely significant effects was determined on a proximity basis, using GIS data to determine the distance of potential development locations to the Habitats sites that were the subject of the assessment. However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts will travel. Therefore, during the screening stage a number of assumptions were applied in relation to assessing the likely significant effects on Habitats sites that may result from the plan, as described below.

Physical Damage and Loss of Habitat (on-site)

5.5 Any development resulting from the Local Plan would take place within Thurrock Borough; therefore, only Habitats sites within the Borough boundary could be affected through physical damage or loss of habitat from within the site boundaries. Thames Estuary and Marshes SPA and Ramsar site lies within the Borough and therefore has the potential to be affected by physical damage and/or loss from development.

5.6 No site allocations coming forwards as part of the Local Plan were identified within the boundary of the Thames Estuary and Marshes SPA and Ramsar site and therefore no likely significant effect is predicted in relation to physical damage and loss. This impact pathway has been screened out from further assessment in this report.

No site allocations are proposed within the boundary of the Thames Estuary and Marshes SPA and Ramsar site and therefore no likely significant effect is predicted in relation to direct physical damage and loss as a result of the Local Plan.

Physical damage and loss (off-site) – Functionally Linked Habitat

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

- Thames Estuary and Marshes SPA and Ramsar site – birds and invertebrates.
- Benfleet and Southend Marshes SPA and Ramsar site – birds.
- Medway Estuary and Marshes SPA and Ramsar site – birds and invertebrates.
- Outer Thames Estuary SPA – birds.
- Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site – birds and invertebrates.
- Peters Pit SAC - GCN
- Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site – birds and invertebrates.
- Epping Forest SAC – stag beetle.
- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site – birds and invertebrates.
- The Swale SPA and Ramsar site – birds and invertebrates.

5.8 Further consideration is given to these Habitats sites below.

5.9 All other Habitats sites were not considered to support qualifying species that are susceptible to impacts from physical damage and loss of functionally linked land and have therefore been screened out from further assessment.

Birds

5.10 Natural England generally advises that 2km from Habitats site boundaries is an appropriate distance for the consideration of offsite functionally linked land although for certain species, including most notably golden plover and lapwing, a much greater distance of up to 15km may be appropriate. These buffers have been considered in relation to each of the Habitats sites that are identified above as being designated for supporting bird species. Increased distances may also be appropriate where significant landscape scale features provide important functional linkages within Habitats sites, for example, where river catchment flood plains and valleys extend considerable distances from a Habitats site. No such landscape scale features have been identified in relation to the Habitats sites scoped into this assessment and therefore the above buffers have been considered appropriate for each of the Habitats sites designated for supporting qualifying bird species.

5.11 The following Habitats sites are within the buffers of 2km or 15km and therefore have been considered in more detail below in relation to the sites identified for further testing:

- Thames Estuary and Marshes SPA and Ramsar site – 2km

5.12 Benfleet and Southend Marshes SPA and Ramsar site, Medway Estuary and Marshes SPA and Ramsar site, Outer Thames Estuary SPA, Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA and Ramsar site, Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site and The Swale SPA and Ramsar site are situated over 2km from the Borough. As these Habitats sites do not support species such as golden plover and lapwing, they were not considered to be affected by impacts from associated damage/loss of offsite habitat as a result of development within the Borough and therefore have been screened out from further assessment.

5.13 Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site supports golden plover and therefore offsite functionally linked land within 15km was considered. The Habitats site is situated 23km northeast of Thurrock Borough and therefore is not considered to be affected by impacts from associated damage/loss of

offsite habitat as a result of development within the Borough. Therefore, this SPA and Ramsar site has been screened out from further assessment.

5.14 In light of this, the Thames Estuary and Marshes SPA and Ramsar site, which lies within the Borough and supports wetland bird species, is considered to be the only Habitats site with potential to be affected by indirect physical damage and/or loss to offsite habitat.

Thames Estuary and Marshes SPA and Ramsar site

5.15 Thames Estuary and Marshes SPA and Ramsar site is designated for a range of qualifying bird species which rely on offsite functional habitat, particularly wetland habitats such as coastal lagoons, marshes and wetland meadows as well as lowland farmland and heathland. Based on Natural England's recognised distances, a 2km buffer was applied to identify site allocations proposed within the Local Plan with potential to affect the SPA and Ramsar site.

5.16 A review of the proposed development within the Local Plan identified the following 17 site allocations within 2km of the SPA and Ramsar site, which will need to be considered further at the Appropriate Assessment stage:

- Policy SS04: Land West of East Tilbury
- Policy SS07: Tilbury3
- Policy SS09, a and b: London Gateway Logistics Park
- Policy SS10: Thames Enterprise Park and Thames Oilport
- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS33: Land to the North West of Thames Industrial Estate, East Tilbury
- Policy NS34: Land to the South West of Thames Industrial Estate, East Tilbury
- Policy NS35: Land to the east of Butts Lane, Stanford le Hope
- Policy NS36: Whitwell Court, Stanford-le-Hope

- Policy NS37: Land to the rear of Fairview Avenue
- Policy NS38: Land at Wharf Road, Stanford-le-Hope
- Policy NS39: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS42: The Springhouse, Corringham
- Policy NS43: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS44: Land west of Church Road, Corringham

There is potential for significant effects to occur in relation to Thames Estuary and Marshes SPA and Ramsar site as a result of physical damage and loss of functionally linked land which therefore require further consideration at the **Appropriate Assessment** stage.

Invertebrates

5.17 Invertebrate interest features associated with certain Ramsar sites may occur within ecologically connected supporting habitat immediately outside the designated boundary (for example, along grazing marsh ditch networks, sea walls and adjacent transitional habitats). To screen for potential effects on such supporting habitat, a precautionary 500m buffer has been applied around Ramsar sites where invertebrates form part of the Ramsar interest (Criterion 2 / Red Data Book invertebrates / notable invertebrate assemblage) and where Thurrock Borough contains land that lies within this 500m buffer.

5.18 The applied buffer of 500m was identified to overlap the Borough for the following Habitats sites and therefore have been considered in more detail below in relation to the sites identified for further testing:

- Thames Estuary and Marshes Ramsar site

5.19 In light of this, the Thames Estuary and Marshes Ramsar site, which lies within the Borough and supports invertebrate species, is considered to be the only Habitats site with potential to be affected by indirect physical damage and/or loss to offsite habitat.

Thames Estuary and Marshes SPA and Ramsar site

5.20 The Thames Estuary and Marshes Ramsar site supports the endangered beetle *Bagous longitarsis*, along with a suite of other vulnerable and rare invertebrates cited in the Ramsar Information Sheet, reflecting the international importance of wetland invertebrate biodiversity at this site.

5.21 A review of the proposed development within the Local Plan identified one site allocation within 500m of the Ramsar site, which will need to be considered further at the Appropriate Assessment:

- Policy SS09, a and b: London Gateway Logistics Park

There is potential for significant effects to occur in relation to Thames Estuary and Marshes SPA and Ramsar site as a result of physical damage and loss of functionally linked land which therefore requires further consideration at the **Appropriate Assessment** stage.

Great Crested Newt

5.22 Great Crested Newts (GCN) may utilise terrestrial habitat beyond the boundaries of identified breeding ponds, including functionally linked land that provides suitable foraging, sheltering and dispersal opportunities. Such habitats can include rough grassland, scrub, woodland, hedgerows, field margins and other semi-natural features within the wider landscape. To screen for potential effects on GCN and their supporting terrestrial habitat, a precautionary 1km buffer has been applied around known or potential GCN breeding ponds where suitable habitat may be present, and where Thurrock Borough contains land that lies within this 1km buffer.

5.23 The applied buffer of 500m was identified to overlap the Borough for the following Habitats site and this has therefore been considered in more detail below:

- Peters Pit SAC

Peter's Pit SAC

5.24 Peter's Pit SAC, which is designated for GCN, is located 12.53km to the south of the borough. Due to the distance, there is no overlap of potential GCN supporting

habitat with the borough and as such no likely significant effect is predicted in relation to loss of functionally linked land for GCN for this SAC.

Due to the distance of the Peter's Pit SAC at c.12.53km from the borough boundary, no likely significant effect was predicted from physical damage and loss of functionally linked land, either alone or in-combination with other plans and projects.

Stag Beetle

5.25 Stag Beetle is a mobile species, with studies indicating that males can fly up to 2km during the summer breeding season in search of females [\[See reference 28\]](#). Whilst their primary habitat is woodland, they also utilise hedgerows, parks, gardens and other urban areas for foraging, dispersal and commuting, particularly where suitable deadwood resources are present for larval development. Given this mobility and the potential for functionally linked terrestrial habitat to extend beyond individual record locations, a precautionary 2km buffer has been applied in this assessment to screen for potential effects on stag beetle and their supporting habitat where Thurrock Borough contains land within this buffer.

5.26 The applied buffer of 2km was identified to overlap the Borough for the following Habitats site which has therefore been considered in more detail below:

- Epping Forest SAC

Epping Forest SAC

5.27 Epping Forest SAC, which is designated for its breeding Stag Beetle, *Lucanus cervus* population is located 16.25km northwest of the borough. Due to the distance, there is no overlap of potential supporting habitat with the borough and as such no likely significant effect is predicted in relation to loss of functionally linked land for stag beetle for this SAC. The maximum distance stag beetles can fly up to 2km to find females during the breeding season in summer.

Due to the distance of the Epping Forest SAC at c.16.25km from the borough boundary, no likely significant effect was predicted from physical damage and loss of functionally linked land, either alone or in-combination with other plans and projects.

Non-physical disturbance (noise, vibration and light)

5.28 Noise and vibration effects are most likely to disturb bird species and are thus a key consideration with respect to Habitats sites where birds are the qualifying features. Artificial lighting at night has the potential to affect species where it occurs in close proximity to key habitat areas, such as key roosting sites of SPA birds.

5.29 It has been assumed that the effects of noise, vibration and light are most likely to be significant within a distance of 500 m. There is also evidence of 300 m being used as a distance up to which certain bird species can be disturbed by the effects of noise [See reference 29]; however, it has been assumed (on a precautionary basis) that the effects of noise, vibration and light pollution are capable of causing an adverse effect if development takes place within 500 m of a Habitats site with qualifying features sensitive to these disturbances. Screened in Habitats sites that support qualifying species which are therefore vulnerable to non-physical disturbance are limited to the Thames Estuary and Marshes SPA and Ramsar site.

5.30 All other Habitats sites were screened out of the assessment because they are located more than 500m from the Borough boundary.

Thames Estuary and Marshes SPA and Ramsar site

5.31 The SPA and Ramsar site designations support a range of qualifying bird species that are susceptible to impacts from non-physical disturbance, such as disturbance from noise, vibration and increased lighting. A 500m buffer was applied to identify site allocations identified in the Local Plan with potential to affect the SPA and Ramsar site from impacts relating to non-physical disturbance.

5.32 A review of the proposed development within the Local Plan identified one site allocation within 500m of the SPA and Ramsar site, which will need to be considered further at the Appropriate Assessment:

- Policy SS09, a and b: London Gateway Logistics Park

There is potential for significant effects to occur in relation to Thames Estuary and Marshes SPA and Ramsar site as a result of non-physical disturbance and this therefore requires further consideration at the **Appropriate Assessment** stage.

Non-physical disturbance – Functionally Linked Land

5.33 Non-physical disturbance may also adversely affect qualifying species at functionally linked habitat. It was established in the Physical Damage and Habitat Loss – Functionally Linked Habitat section above that the Thames Estuary and Marshes SPA and Ramsar site is designated for a range of qualifying bird species which may rely on offsite functional habitat within Thurrock Borough. This Habitats sites has been considered further below.

5.34 All other Habitats sites were either not considered to use functionally linked habitat within the Thurrock Borough boundary and/or did not support qualifying features that rely on functionally linked habitat.

Birds

5.35 A precautionary combined screening distance of 2.5km has been applied to identify development that could disturb birds using functionally linked land associated with relevant Habitats sites designated for mobile bird features, i.e. Thames Estuary and Marshes SPA and Ramsar site. This comprises a 2km functionally linked land buffer together with an additional 500m to reflect the distance within which noise, vibration and artificial lighting effects are most likely to be relevant.

Thames Estuary and Marshes SPA and Ramsar site

5.36 A review of the proposed development within the Local Plan identified the following 19 site allocations within 2.5km of the SPA and Ramsar site that will need to be considered further at the Appropriate Assessment stage:

- Policy SS04: Land West of East Tilbury
- Policy SS07: Tilbury3
- Policy SS09, a and b: London Gateway Logistics Park
- Policy SS10: Thames Enterprise Park and Thames Oilport

- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS31: Lower Crescent
- Policy NS33: Land to the North West of Thames Industrial Estate, East Tilbury
- Policy NS34: Land to the South West of Thames Industrial Estate, East Tilbury
- Policy NS35: Land to the east of Butts Lane, Stanford le Hope
- Policy NS36: Whitwell Court, Stanford-le-Hope
- Policy NS37: Land to the rear of Fairview Avenue
- Policy NS38: Land at Wharf Road, Stanford-le-Hope
- Policy NS39: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS41: Former Police Station, Gordon Road, Corringham
- Policy NS42: The Springhouse, Corringham
- Policy NS43: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS44: Land west of Church Road, Corringham

There is potential for significant effects to occur in relation to Thames Estuary and Marshes SPA and Ramsar site as a result of non-physical disturbance of functionally linked land and this therefore requires further consideration at the **Appropriate Assessment** stage.

Non-toxic contamination

5.37 Non-toxic contamination can include the creation of dust which can smother habitats preventing natural processes and may also lead to effects associated with increased sediment and dust which can potentially affect the turbidity of aquatic habitats and can also contribute to nutrient enrichment which can lead to changes in the rate of vegetative succession and habitat composition.

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

5.39 The following sites are within 500m of the Borough and are therefore considered in more detail below:

- Thames Estuary and Marshes SPA and Ramsar site

5.40 All other Habitats sites were located over 500m from the boundary of Thurrock District and therefore, not considered susceptible to impacts from non-toxic contamination. Therefore, these Habitat sites have been screened out from further assessment.

Thames Estuary and Marshes SPA and Ramsar site

5.41 Given the qualifying features of this Habitats site, impacts could arise from non-toxic contamination to the site itself and habitats the bird species rely on. Development within 500m of the Habitats site was assumed to have potential to result in likely significant effects.

5.42 A review of the proposed development within the Local Plan identified one site allocation within 500m of the SPA and Ramsar site, which will need to be considered further at the Appropriate Assessment stage:

- Policy SS09, a and b: London Gateway Logistics Park

There is potential for significant effects to occur in relation to Thames Estuary and Marshes SPA and Ramsar site as a result of non-toxic contamination and this therefore requires further consideration at the **Appropriate Assessment** stage.

Increased air pollution

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

5.44 In terms of vehicle traffic, nitrogen oxides (NO_x, i.e. NO and NO₂) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water. In addition to nitrogen oxides, recent studies reviewed by Air Quality Consultants [\[See reference 30\]](#), have shown that ammonia emissions from road traffic can be at least as significant as NO_x in making significant contribution to nitrogen deposition to sensitive habitats. Therefore, assessments which exclude traffic related ammonia emissions are likely to significantly under-predict nitrogen deposition at the roadside.

5.45 Based on the Highways England Design Manual for Road and Bridges (DMRB) LA 105 Air quality (which sets out the requirements for assessing and reporting the effects of highway projects on air quality), it is assumed that air pollution from roads is unlikely to be significant beyond 200m from the road itself. Where increases in traffic volumes are forecast, this 200m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.

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

- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- There will be a change in speed band [\[See reference 31\]](#); or

- Road carriageway alignment will change by 5m or more.

5.47 Thus, where significant increases in traffic are possible on roads within 200m of Habitats sites, traffic forecast data may be needed to determine if increases in vehicle traffic are likely to be significant. In line with the Wealden judgment [\[See reference 32\]](#), the traffic growth considered by the HRA should be based on the effects of development provided for by the plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change.

5.48 The JNCC's 'Guidance on decision-making thresholds for air pollution' [\[See reference 33\]](#) states that, when assessing the air pollution impacts of a development plan, 10km should be used as a zone of influence within which the plan is likely to have significant effects on air quality, i.e. Habitats Sites beyond 10km from the plan area can be screened out in relation to air pollution.

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

5.50 Habitats sites that are within 200m of strategic roads and within 10km of Thurrock Borough are:

- Thames Estuary & Marshes SPA and Ramsar site – A228
- Medway Estuary & Marshes SPA and Ramsar site – A228

5.51 However, Medway Estuary and Marshes SPA and Ramsar site and Thames Estuary and Marshes SPA and Ramsar site are located south of the River Thames. In order to reach locations on the A228 within 200m of these Habitats sites, people within the Borough would need to travel via the Dartford Crossing, resulting in journey distances of more than 10km from the Borough boundary. As such, likely significant effects on these sites from air pollution arising from Thurrock Local Plan can be ruled out.

5.52 The proposed Lower Thames Crossing (LTC) once complete, is also assumed to form part of the primary road network and is likely to result in a significant increase in vehicle traffic within Thurrock. The proposed location is to the east of Tilbury and Gravesend, and it will provide an alternative route to the existing Dartford Crossing. This scheme will cross the River Thames within 200m of the Thames Estuary and Marshes SPA and Ramsar site and therefore have the potential to affect the Habitats site by increased air pollution. The LTC is estimated to be open in 2034, which is within the timeframes of the Local Plan. Therefore, there is potential for impacts to arise in relation to increased air pollution as a result of growth in the Local Plan in combination with the LTC. Furthermore, this will provide a more direct route for vehicle traffic between the Borough and the south side of the Thames Estuary and thus have potential to impact the A228, which has previously been considered unlikely to be affected by traffic from Essex due to the separation of the road network by the Thames Estuary. Therefore, in line with a precautionary approach, further consideration is required at the Appropriate Assessment stage in relation to the Thames Estuary and Marshes SPA and Ramsar site and the Medway Estuary and Marshes SPA and Ramsar site.

5.53 All other Habitats sites are located further than 200m from the strategic road network for Thurrock Borough and/or are located further than 10km from Thurrock Borough and therefore are screened out of the assessment.

There is potential for likely significant effects to occur at Thames Estuary and Marshes SPA and Ramsar site Medway Estuary and Marshes SPA and Ramsar site in relation to air pollution (traffic-related emissions) and, on this basis, the site is screened in for further consideration at the **Appropriate Assessment** stage.

Increased recreational pressure

5.54 Recreational activities and human presence can result in significant effects on Habitats sites. This can be as a result of erosion and trampling, disturbance to sensitive features (such as birds through both terrestrial and water based forms of recreation), or indirect impacts such as fire and vandalism. Habitats sites with qualifying bird species are likely to be particularly susceptible to recreational

disturbances from walking, dog walking, angling, illegal use of off-road vehicles and motorbikes, wildfowling, and water sports. An increase in recreational pressure from development therefore has the potential to disturb bird populations of SPA and Ramsar sites as a result of both terrestrial and water-based recreation. In addition, recreation can physically damage habitat as a result of trampling and also through erosion associated with boat wash and terrestrial activities such as use of vehicles.

5.55 The Local Plan will result in housing growth, and associated population increase in Thurrock. Where increases in population are likely to result in significant increases in recreation at a Habitats site, either alone or in-combination, the potential for likely significant effects will require assessment.

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

5.57 The Essex Coast Recreational Avoidance and Mitigation Strategy (RAMS) [See reference 34] was adopted in 2019 with the aim of delivering the mitigation necessary to avoid significant adverse effects from 'in-combination' impacts of residential development that is anticipated across Essex, thus protecting the Habitats sites on the Essex coast from adverse effect on site integrity. As part of this, visitor surveys were undertaken during the winter of 2017/18 to determine the ZOI for all Habitats sites along the Essex coast. The ZOI have been calculated for the following Habitats sites and have been applied in this assessment:

- Essex Estuaries SAC - The Essex Estuaries comprise the Colne Estuary, Blackwater Estuary, Dengie, Crouch and Roach Estuaries and Foulness Estuary and so follow the respective ZOIs throughout. Only those ZOI, which overlap the borough have been included in this assessment.
- Thames Estuary and Marshes SPA and Ramsar site – 8.1km
- Benfleet and Southend Marshes SPA and Ramsar site – 4.3km

- Crouch and Roach Estuaries SPA and Ramsar site – 4.5km
- Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site – 13km.
- Blackwater Estuary (Mid-Essex Coast Phase 4) SPA and Ramsar site – 22km

5.58 Of these six Habitats sites, only Thames Estuary and Marshes SPA and Ramsar site and Benfleet and Southend Marshes SPA and Ramsar site have ZOI's that extend into Thurrock, and as a result have potential to be affected by recreation pressure from proposed development within the Borough. In addition to this, only a small portion of Benfleet and Southend Marshes ZOI will extend into the Borough.

5.59 In relation to Essex Estuaries SAC, as this Habitats site is comprised of several Habitats sites, the ZOI was calculated for the following Habitats sites as part of the Essex Coast Recreational Avoidance and Mitigation Strategy (RAMS), including Colne Estuary SPA and Ramsar site (9.7km), Blackwater Estuary SPA and Ramsar site (22km), Dengie SPA and Ramsar site (20km), Crouch and Roach Estuaries SPA and Ramsar site (4.1km) and Foulness Estuary SPA and Ramsar site (13km). The respective ZOI identified for these sites has been applied, and all lay outside the Thurrock Borough.

5.60 During the Essex Coast Recreational Avoidance and Mitigation Strategy (RAMS) Steering Group it was agreed that all Habitats sites that lie on the opposite side of estuaries will be excluded, given that the distance to travel to the site would be greater than the ZOI established. This applies to the Medway Estuary and Marshes SPA and Ramsar site and The Swale SPA and Ramsar site, which lie along the south side of the Thames Estuary in Kent. It is estimated that the LTC will be open to the traffic in 2034, which falls within the plan period of Thurrock Local Plan and will therefore facilitate access for residents from the Borough to Medway Estuary and Marshes SPA and Ramsar site and The Swale SPA and Ramsar site. However, given the presence of similar coastal habitats in Essex and North Kent, it is considered unlikely that residents would travel further afield to Habitats sites in North Kent. In addition to this, the North Kent Strategic Access Management and Monitoring Scheme (SAMMS) identifies a ZOI of 6km [\[See reference 35\]](#). Thurrock lies outside this 6km ZOI for these sites and as such these Habitats site has been screened out of the assessment.

5.61 Similarly, the LTC will also facilitate access for residents from the Borough to North Downs Woodlands SAC and Peter's Pits SAC. Although these sites are unique in their own right, they do not have the same draw as coastal sites and with recreational activities more easily managed and directed to alternative greenspace in the area. Using a precautionary approach and based on the findings of the Thames Basin Heath Delivery Framework, a ZOI of 7km was applied. Thurrock lies outside this 7km ZOI for these sites and as such these Habitats site has been screened out of the assessment.

5.62 The Outer Thames Estuary SPA is designated for supporting the qualifying red throated diver *Gavia stellata*, common tern *Sterna hirundo* and little tern *Sternula albifrons*. There is potential for this species to be affected by disturbance from water-based recreational activities, such as sailing and fishing. Although, recreational impacts are likely to be limited as a result of proposed development within the plan area, given the potential for people to travel great distances to undertake these specialist activities and in line with a precautionary approach, it is concluded that impacts as a result of recreation should be considered in more detail at the Appropriate Assessment stage.

5.63 Similarly to the Essex Coast RAMS, a mitigation strategy has been produced to establish the ZOI for Epping Forest SAC. Following visitor surveys to inform this mitigation strategy, a ZOI of 6.2km was calculated for this site [\[See reference 36\]](#). Given that Thurrock lies beyond the ZOI for Epping Forest SAC, this Habitats site can therefore be screened out from the assessment.

5.64 Based on the ZOIs, Thames Estuary and Marshes SPA and Ramsar site, Benfleet and Southend Marshes SPA and Ramsar site and Outer Thames Estuary SPA are considered likely to be susceptible to the effects of increased recreational pressure from development in Thurrock.

Thames Estuary and Marshes SPA and Ramsar site

5.65 Thames Estuary and Marshes SPA and Ramsar site is designated for supporting breeding and overwintering birds, including pied avocet, ringed plover and black-tailed godwit, as well as supporting 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. The breeding and overwintering birds are likely to be particularly susceptible to human disturbance from a range of land- and water-based activities, including boating and water sports; walking; fishing, and wildfowling. The nationally scarce and endangered plants are also susceptible to impacts from recreational activities, such as walking and dog walking which can result in physical disturbance through trampling, erosion and nutrient enrichment, which can alter the soil chemistry and alter the prevalence of competitive species.

5.66 A review of the proposed development within the Local Plan identified the following 45 site allocations within 8.1km of the SPA and Ramsar site, which will need to be considered further at the **Appropriate Assessment**:

- Policy SS01: Grays Shopping Centre, High Street, Grays
- Policy SS04: Land West of East Tilbury
- Policy SS05: Land East of Chadwell St Mary
- Policy SS06: Land West of Brentwood Road, Chadwell St Mary
- Policy SS08: Land to the Northeast of Corringham
- Policy SS18: West Horndon New Town
- Policy NS01a, b and c: Blackshots Estate redevelopment - parcel a North Site
- Policy NS02: Land adjacent to Brookmans Avenue and North of Long Lane, Grays
- Policy NS03: Land North of Stifford Clays Road, Grays
- Policy NS04: Land East of the A1012, Grays
- Policy NS05: Land East of Malvern Road, Grays
- Policy NS06: Land North of Manor Road, Grays
- Policy NS07: Whitehall Works, Whitehall Lane, Grays
- Policy NS09: Land Adjacent Dell Road and Orsett Road, Grays
- Policy NS08: Telephone Exchange, Bradleigh Avenue, Grays
- Policy NS11: Rippleside Metalworks, Thames Road, Grays
- Policy NS12: Crown Road and Darnley Road Car Parks, Grays
- Policy NS21: Tilbury Football Club, Chadfields, Tilbury

- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS25: Land at Linford Road and Turnpike Lane, Chadwell St Mary
- Policy NS26: Land at St Johns Road, Chadwell St Mary
- Policy NS27: Garage site east of Vigerons Way, Chadwell St Mary
- Policy NS28: 11 River View, Chadwell St Mary
- Policy NS29: Land North of B149 Wood View and River View, Chadwell St Mary
- Policy NS30: Chadfields
- Policy NS31: Lower Crescent, Linford
- Policy NS32: Land south of South Essex College, Thurrock Campus, Grays
- Policy NS33: Land to the east of Butts Lane, Stanford le Hope
- Policy NS34: Whitwell Court, Stanford-le-Hope
- Policy NS35: Land to the rear of Fairview Avenue
- Policy NS36: Land at Wharf Road, Stanford-le-Hope
- Policy NS37: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS38: Land at Lyndhurst Road, Corringham
- Policy NS39: Former Police Station, Gordon Road, Corringham
- Policy NS40: The Springhouse, Corringham
- Policy NS41: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS42: Land west of Church Road, Corringham
- Policy NS43: Manor View
- Policy NS44: The Paddock
- Policy NS62: Land north of Church Road, Bulphan
- Policy NS63: Land south of School Lane, Orsett
- Policy NS64: Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

Benfleet and Southend Marshes SPA and Ramsar site

5.67 Benfleet and Southend Marshes SPA and Ramsar site is designated for supporting overwintering birds, including dark-bellied brent goose, grey plover and red knot. The breeding and overwintering birds are likely to be particularly susceptible to human disturbance from a range of land- and water-based activities, including boating and water sports; walking; fishing, and wildfowling.

A review of the proposed development within the Local Plan identified one site allocation within 4.3km of the SPA and Ramsar site, however as this is an employment allocation it is not expected to contribute to increased recreational pressure within the Borough and has therefore been screened out. There is potential for likely significant effect to occur in relation to Thames Estuary and Marshes SPA and Ramsar site and Outer Thames Estuary SPA in relation to recreational impacts and therefore this effect requires further consideration at the **Appropriate Assessment** stage.

Water quantity

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

5.69 The Borough of Thurrock falls within the 'Essex and Suffolk Water' area, which is covered by the Essex and Suffolk Water Resources Management Plan (WRMP), 2024 [\[See reference 37\]](#). The Essex Water Resource Zone (WRZ), as defined in the WRMP is the largest possible zone in which all resources, including external transfer, can be shared and hence the zone in which all customers experience the same risk of supply failure from a resource shortfall.

5.70 The intrinsic water resources within the zone include the Essex rivers Chelmer, Blackwater, Stour and Roman River which support pumped storage reservoirs at Hanningfield and Abberton, and treatment works at Langford, Langham, Hanningfield and Layer. The remaining water extracted from inside the zone is sourced from groundwater via Chalk well and adit sources at Lindford, Stifford, Dagenham and Roding, each with on-site treatment.

5.71 Water transferred into the Essex supply area from outside the area comes from two main sources; the Chigwell raw water bulk supply from the Lea Valley reservoirs provided by Thames Water Utilities, and the Ely Ouse to Essex Transfer Scheme (EOETS). The EOETS transfers water from Denver in Norfolk via pipelines and pumping stations to the headwaters of the River Stour and the River Pant/Blackwater.

5.72 During dry periods, only 33% of the water supplied to the Essex WRZ comes from within the zone, with the rest being transferred in. This is because the water taken from the local rivers and the bulk raw water supply from Thames Water is not enough to meet demand. The remaining water resources are sourced from the Chalk and Crag aquifers, or River Waveney, the River Bure, and groundwater fed lakes at Ormesby, Lound and Fritton.

5.73 Habitats sites within 15km of Thurrock Borough that are directly linked to waterbodies used to supply the borough are:

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

5.74 Additionally, to ensure a precautionary and pathway-led HRA screening for the water quantity impact type, the assessment is not limited solely to the Essex estuary complex coastal receptors. Given that Thurrock lies within Essex & Suffolk Water's Essex Water Resource Zone and that WRZ supply is derived from a combination of local surface water resources and associated strategic storage (including Abberton Reservoir) as well as linked river systems (including the Stour), the HRA screening also considers Habitats sites that could plausibly be influenced by changes in abstraction, storage operation and drought management measures within the WRZ:

- Abberton Reservoir Ramsar site and SPA
- Stour and Orwell Estuaries Ramsar site and SPA

5.75 The remaining Habitats sites scoped into the HRA are screened out for the purposes of the water quantity pathway because they are marine/offshore receptors (where changes in freshwater abstraction within the Essex WRZ are not a credible

mechanism for significant effects at plan level), are designated for marine sandbank habitats, and/or are not part of the Essex estuary system relevant to the water quantity pathway.

There is potential for likely significant effects to occur at the following Habitats sites in relation to water quantity: Essex Estuaries SAC, Crouch and Roach Estuaries Ramsar site and SPA, Foulness Ramsar site and SPA, Colne Estuary Ramsar site and SPA, Blackwater Estuary Ramsar site and SPA, Dengie Ramsar site and SPA, Thames Estuary and Marshes Ramsar site and SPA, Abberton Reservoir Ramsar site and SPA and Stour and Orwell Estuaries Ramsar Site and SPA, and therefore this effect will be considered further at the Appropriate Assessment stage.

Water quality

Water treatment and discharge

5.76 Habitats can also be affected by changes in water quality such as nutrient enrichment, changes in salinity, smothering from dust, and run-off, discharge or spillage from industry, agriculture, or construction. Changes in water abstraction, discharge and land use can also affect water quality, for example a change in land use from agriculture to residential reduces direct nutrient run-off to watercourses but increases the volume of nutrients discharges from wastewater treatment works.

5.77 Nutrient pollution is an environmental issue for many areas across England. Increased levels of nitrogen and phosphorus entering aquatic environments via surface water and groundwater can severely threaten these sensitive habitats and species within a Habitats site. The elevated levels of nutrients can cause eutrophication, leading to algal blooms which disrupt normal ecosystem function and cause major changes in the aquatic community. These algal blooms can result in reduced levels of oxygen within the water, which in turn can affect the populations of many aquatic organism including invertebrates and fish. In freshwater habitats and estuaries, poor water quality due to nutrient enrichment from elevated nitrogen and phosphorus levels is one of the primary reasons for habitats sites being in unfavourable condition.

5.78 Nutrient neutrality is a means of ensuring that a plan or project does not add to existing nutrient burdens so there is no net increase in nutrients as a result of the plan or project. Where nutrient neutrality is properly applied and the existing land use does not undermine the conservation objectives, Natural England considers that an

adverse effect on integrity alone and in combination can be ruled out during Appropriate Assessment. Any development within the catchment of a Habitats site with nutrient issues will be considered further during the Appropriate Assessment stage of this HRA. Where sites are already in unfavourable condition, extra wastewater from new developments exacerbate the issue and undermine ongoing efforts to recover these sites. However, when development is designed alongside suitable mitigation measures, that additional damage can often be avoided.

5.79 Wastewater-related effects (including nutrient enrichment) have been considered by checking whether proposed development sites fall within a Nutrient Neutrality catchment. Thurrock Borough is not located within a nutrient neutrality catchment area [\[See reference 38\]](#), and therefore nutrient neutrality requirements are not triggered and no likely significant effects are predicted in relation to nutrient enrichment at Habitats sites via this pathway. Accordingly, while nutrient neutrality requirements are not triggered, the plan does not dismiss nutrient enrichment risk outright: any sites that would drain (directly or indirectly) to waterbodies linked to Habitats sites, or that rely on wastewater infrastructure serving such catchments, will be subject to further consideration (including in-combination) and, where necessary, mitigation at later stages.

Direct pollution / run-off

5.80 In addition to wastewater pathway effects, there is potential for localised water quality effects arising from construction and operational run-off (for example sediment-laden runoff, accidental spills, hydrocarbons and other pollutants entering ditches and watercourses). The potential for direct pollution and run-off effects was screened using a pathway-led proximity approach, recognising that pollutants may reach a Habitats site either via connected watercourses or via direct overland flow/drainage where development is close to the designated boundary.

5.81 The screening was therefore undertaken using two complementary tests:

- Watercourse connectivity test: Sites identified for further testing in the Local Plan were screened in where they are located within 500m of a watercourse or drain that is hydrologically connected to (and ultimately discharges to) a Habitats site. This reflects that pollutants can be transported to designated wetlands and estuaries via the receiving water environment even where development is not immediately adjacent to the Habitats site boundary.

- Boundary proximity test: A 500m buffer was applied to Habitats sites that either intersect Thurrock District or lie within 500m of the District boundary, and sites identified for further testing were screened for overlap with this buffer. This reflects the greater potential for direct runoff, accidental spills, or sediment deposition to reach a Habitats site where development occurs in close proximity to the designated boundary. Detail of this is presented below.

5.82 The Habitats sites included in this proximity screening are:

- Thames Estuary and Marshes SPA and Ramsar site

5.83 A review of the proposed development within the Local Plan identified the following 48 site allocations within 500m of the above Thames Estuary and Marshes SPA and Ramsar site, and tributaries that connect with it, which will need to be considered further at the Appropriate Assessment stage:

- Policy SS01: Grays Shopping Centre, High Street, Grays
- Policy SS02: Purfleet-on-Thames Regeneration
- Policy SS03: Former Arena Essex site and fishing lake, Lakeside
- Policy SS07: Tilbury3
- Policy SS11: Land south of Aveley
- Policy SS12: Land to the west of Romford Road
- Policy SS13: Land south-east of South Ockendon
- Policy SS14: Land north-east of South Ockendon
- Policy SS15: Land north of South Ockendon
- Policy SS16: Distribution Centre, Arisdale Avenue, South Ockendon
- Policy SS17: Buckles Lane, South Ockendon
- Policy SS18: West Horndon New Town
- Policy NS01a, b and c: Blackshots Estate redevelopment
- Policy NS02: Land adjacent to Brookmans Avenue and North of Long Lane, Grays
- Policy NS03: Land North of Stifford Clays Road, Grays
- Policy NS04: Land East of the A1012, Grays
- Policy NS10: Gas Valve Compound Drake Road Chafford Hundred Grays

- Policy NS11: Rippleside Metalworks, Thames Road, Grays
- Policy NS12: Crown Road and Darnley Road Car Parks, Grays
- Policy NS14: Land North of Magnet Road
- Policy NS15: Thurrock Shopping Park Site, West Thurrock
- Policy NS16: Kerneos Site, South of London Road, West Thurrock
- Policy NS17: Land east of Ship Lane adjacent to A1306 and Junction 31 of M25, Purfleet-on-Thames
- Policy NS18: Land South of Burnley Road, West Thurrock
- Policy NS19: Land East of Stoneness Road, West Thurrock
- Policy NS20: Land at eastern end of Manor Way Industrial Estate
- Policy NS32: Land south of South Essex College, Thurrock Campus, Grays
- Policy NS33: Land to the east of Butts Lane, Stanford le Hope
- Policy NS34: Whitwell Court, Stanford-le-Hope
- Policy NS35: Land to the rear of Fairview Avenue
- Policy NS36: Land at Wharf Road, Stanford-le-Hope
- Policy NS46: Land west of Park Lane, Aveley
- Policy NS47: Former St Michaels Church Hall, Mill Lane, Aveley
- Policy NS48: Land at former library & public hall, Purfleet Road, Aveley
- Policy NS49: Land north of Purfleet Road, Aveley
- Policy NS51: Land & garages to rear of 20-24 and 34-44 Anton Road, South Ockendon
- Policy NS52: Land adjoining Tamarisk Road, South Ockendon
- Policy NS53: Land east of South Road & adj. Echo Farm & Mollands Lane, South Ockendon
- Policy NS54: Former Culver Centre & land to rear, Daiglen Drive, South Ockendon
- Policy NS55: Land east of South Road & north of Buckles Lane, South Ockendon
- Policy NS56: 1 to 431 odds, Broxburn Drive, South Ockendon
- Policy NS57: Jack O Lantern, Daiglen Drive, South Ockendon

- Policy NS58: Belhus Park Boxing Club, Darenth Lane, South Ockendon
- Policy NS59: The Willows
- Policy NS60: Holy Lands
- Policy NS61: Extension to Hangmans Wood Industrial Estate
- Policy NS62: Land north of Church Road, Bulphan
- Policy NS63: Land south of School Lane, Orsett
- Policy NS64: Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

Thurrock does not fall within a catchment with nutrient issues, however, there is potential for likely significant effects to occur at Thames Estuary and Marshes SPA and Ramsar site in relation to water quality due to runoff, and therefore this effect is considered further at the Appropriate Assessment stage.

Summary of Screening Assessment

5.84 Tables 5.1 below summarises the Screening conclusions reached in this HRA. Impact types for which a conclusion of no likely significant effect was reached are shown in grey. Those potential impacts where likely significant effects could not be ruled out are shown in orange and these are considered in more detail at the Appropriate Assessment stage in **Chapter 6**.

Table 5.1: Summary of Screening Assessment – Sites within 15km of Thurrock Borough (Likely significant effect = LSE)

Habitats site	Physical damage and loss	Non-physical disturbance	Non-toxic Contamination	Air Pollution	Recreation	Water quantity	Water Quality
Thames Estuary and Marshes SPA	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE
Thames Estuary and Marshes Ramar site	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE	Potential LSE
Benfleet and Southend Marshes SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Benfleet and Southend Marshes Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Medway Estuary and Marshes SPA	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	No LSE
Medway Estuary and Marshes Ramsar	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE	No LSE
North Downs Woodlands SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Outer Thames Estuary SPA	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE	No LSE
Crouch and Roach Estuaries (Mid-Essex)	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE

Habitats site	Physical damage and loss	Non-physical disturbance	Non-toxic Contamination	Air Pollution	Recreation	Water quantity	Water Quality
Coast Phase 3) SPA							
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE
Essex Estuaries SAC	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE
Peters Pit SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Epping Forest SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Foulness (Mid-Essex Coast Phase 5) SPA	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE
Foulness (Mid-Essex Coast Phase 5) Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE
Blackwater Estuary Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE
Blackwater Estuary SPA	No LSE	No LSE	No LSE	No LSE	No LSE	Potential LSE	No LSE
The Swale SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
The Swale Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE

Chapter 6

Appropriate Assessment

6.1 Following the Screening stage, the plan-making authority is required under Regulation 105 of the Habitats Regulations 2017 (as amended) to make an ‘Appropriate Assessment’ of the implications of the plan for Habitats sites, in view of their conservation objectives.

6.2 European Commission Guidance [\[See reference 39\]](#) states that the Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of Habitats sites with respect to their conservation objectives and to their structure and function.

6.3 This stage seeks to determine whether implementation of the plan that is subject to HRA will result in an adverse effect on the integrity of the whole Habitats site in question (many Habitats sites are made up of a number of fragments of habitat). It also considers as appropriate the potential for in-combination effects from other development. Consideration is given to mitigation measures that may reduce the likelihood and significance of effects on Habitats sites.

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

6.5 Likely significant effects arising from the plan, either alone or in-combination, were identified for the following sites and impact types:

- **Physical damage and loss – functionally linked land only:** Thames Estuary and Marshes SPA and Ramsar site
- **Non-physical disturbance:** Thames Estuary and Marshes SPA and Ramsar site

- **Non-physical disturbance – functionally linked land only:** Thames Estuary and Marshes SPA and Ramsar site
- **Non-toxic contamination:** Thames Estuary and Marshes SPA and Ramsar site
- **Increased air pollution:** Thames Estuary and Marshes SPA and Ramsar site and Medway Estuary and Marshes SPA and Ramsar site
- **Recreation:** Thames Estuary and Marshes SPA and Ramsar site and Outer Thames Estuary SPA.
- **Reduced water quantity:** Essex Estuaries SAC, Crouch and Roach Estuaries Ramsar site and SPA, Foulness Ramsar site and SPA, Colne Estuary Ramsar site and SPA, Blackwater Estuary Ramsar site and SPA, Dengie Ramsar site and SPA, Thames Estuary and Marshes Ramsar site and SPA, Abberton Reservoir Ramsar site and SPA and Stour and Orwell Estuaries Ramsar Site and SPA
- **Reduced water quality:** Thames Estuary and Marshes SPA and Ramsar site

6.6 Therefore, Appropriate Assessment needs to be undertaken for these Habitats sites to determine whether the plan will result in Adverse Effects on Integrity (AEoI).

6.7 The Appropriate Assessment focuses on those impacts that are judged likely to have a significant effect on the qualifying features of a Habitats site, or where insufficient certainty regarding this remained at the Screening stage. As described in **Chapter 3**, a conclusion needs to be reached as to whether or not a policy in the plan would adversely affect the integrity of a Habitats site. To reach a conclusion, consideration is given to whether the predicted impacts of the proposals (either alone or in combination) have the potential to:

- Delay the achievement of conservation objectives for the site.
- Interrupt progress towards the achievement of conservation objectives for the site.
- Disrupt factors that help to maintain the favourable conditions of the site.
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site.

6.8 The conservation objectives for the above Habitats sites are to ensure that the integrity of the site is maintained or restored as appropriate, and to 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.
- The supporting processes on which qualifying natural habitats rely.
- The structure and function of the habitats of qualifying species.
- The populations of qualifying species.
- The distribution of qualifying species within the site.

Physical damage and habitat loss – functionally linked land

Thames Estuary and Marshes SPA and Ramsar site

Birds

6.9 The Local Plan includes proposed site allocations in areas where qualifying SPA and Ramsar bird species may make use of offsite habitat for foraging, roosting and loafing. Proposed site allocations that could result in a Likely Significant Effect as a result of physical damage and loss were identified in the screening assessment and included the following proposed site:

6.10 The following site allocations were located within 2km of Thames Estuary and Marshes SPA and Ramsar site:

- Policy SS04: Land West of East Tilbury
- Policy SS07: Tilbury3
- Policy SS09, a and b: London Gateway Logistics Park
- Policy SS10: Thames Enterprise Park and Thames Oilport

- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS33: Land to the North West of Thames Industrial Estate, East Tilbury
- Policy NS34: Land to the South West of Thames Industrial Estate, East Tilbury
- Policy NS35: Land to the east of Butts Lane, Stanford le Hope
- Policy NS36: Whitwell Court, Stanford-le-Hope
- Policy NS37: Land to the rear of Fairview Avenue
- Policy NS38: Land at Wharf Road, Stanford-le-Hope
- Policy NS39: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS42: The Springhouse, Corringham
- Policy NS43: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS44: Land west of Church Road, Corringham

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

- Identification of the qualifying bird species which are susceptible to the loss of the habitat types affected and ruling out those species unlikely to utilise the habitat types located within the sites (e.g. species restricted to marine habitats).
- A review of aerial imagery and Magic Map Application to identify main habitat types and land use within each site and establish their potential value for qualifying birds.
- Recognition of factors likely to affect suitability of sites for bird species, including openness, size, shape, proximity of negative factors such as tall boundary features and urban environs, and potential existing source of disturbance.

- Consideration of the site's location within the landscape. For example, is there direct functional connectivity along flight lines between the site and the Habitats sites? Are there landscape scale features which would reduce the suitability of the site, e.g. urban areas located along flight lines?
- A review of the site's location within flood risk zones, because many of the SPA bird species favour sites which do or do not flood.

Bird Habitat Preferences

6.12 Bird habitat preferences were cross referenced against the habitat types present within each proposed site to determine the suitability of proposed sites for qualifying species. Known habitat preferences are summarised below, which were taken from the RSPB and British Trust for Ornithology websites. The below assesses whether each bird species is susceptible to the loss of habitats located within the proposed sites.

Thames Estuary and Marshes SPA and Ramsar site

Dunlin

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** Primarily coastal during the winter season, including mudflats in bays and river estuaries.
- **Species susceptible to loss of offsite habitat as a result of the plan:** Yes – may roost in fields close to salt marshes and estuaries.

Red knot

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** Primarily estuaries and mudflats during the winter season, Many Knots use UK estuaries as feeding grounds, both on migration and in winter, and therefore the population is vulnerable to any changes such as barrages, sea-level rises and human disturbance.
- **Species susceptible to loss of offsite habitat as a result of the plan:** No – unlikely to use non-intertidal habitat.

Ringed plover

- **Season:** Concentration
- **Species Habitat Preference (relative to season of designation):** Ringed plover mostly breed on beaches around the coast, but they have also now begun breeding inland in sand and gravel pits and former industrial sites. Many UK birds live here all year round, but birds from Europe winter in Britain, and birds from Greenland and Canada pass through on migration.
- **Species susceptible to loss of offsite habitat as a result of the plan:** Yes – may utilise arable and pasture.

Hen harrier

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** In winter, Hen Harriers leave the uplands and over-winter in lowland and coastal habitats around the UK. During the winter months Hen Harriers form roosts at traditional sites, often close to favoured feeding areas, coming into roost from late afternoon through to dusk and leaving at first light
- **Species susceptible to loss of offsite habitat as a result of the plan:** Yes – may utilise arable and pasture.

Black-tailed godwit

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** Black-tailed godwit winters on coastal estuaries and marshes, and at inland shallow water. In winter they are found around coastlines with soft muddy shorelines and with nearby wet grasslands.
- **Species susceptible to loss of offsite habitat as a result of the plan:** Yes – may utilise grassland close to wetlands.

Grey plover

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** The grey plover can be found along the coast, preferring sandy and muddy estuaries.

Large numbers can be found on estuaries such as The Wash, Humber, Thames and Dee.

- **Species susceptible to loss of offsite habitat as a result of the plan:** No – unlikely to use non-intertidal habitat.

Pied avocet

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** Avocets now breed more widely around England's east coast. In winter the population is augmented by birds from Europe. Large flocks can be found in suitable coastal habitat, predominantly in the south-east and south-west of England. Although still predominantly a coastal breeder, atlas data reveal an increasing number of inland breeding locations. However, coastal freshwater marshes are where avocets are seen at higher densities. Nesting sites are increasingly threatened with coastal flooding
- **Species susceptible to loss of offsite habitat as a result of the plan:** Yes – may utilise grassland close to wetlands.

Common redshank

- **Season:** Wintering
- **Species Habitat Preference (relative to season of designation):** In winter, Redshanks flock to mudflats around the UK's coasts where they predate on crustaceans and other invertebrates. As spring arrives and insects begin to emerge, they head to the saltmarshes and inland wet grasslands, with the aim of raising chicks.
- **Species susceptible to loss of offsite habitat as a result of the plan:** Yes – may utilise grassland close to wetlands.

6.13 The review of habitat types located within the site allocations, in light of individual bird species preferences, identified the following bird species as being potentially susceptible to the loss of offsite habitat associated with site allocations listed in the Thurrock Local Plan. This included

- Dunlin
- Ringed plover
- Hen harrier

- Black-tailed godwit
- Pied avocet
- Common redshank

6.14 Following a review of these species' habitat preferences and in line with recognised buffer zones within which these species are likely to rely on offsite habitats, a distance of 2km was applied for all bird species mentioned above.

Assessment of Proposed Site Allocations

Following the establishment of typical habitat preferences for each species, each proposed site listed in the plan within 2km of the Thames Estuary and Marshes SPA and Ramsar Site was assessed for its suitability in supporting the qualifying bird species listed above. The assessment was based on a number of parameters, as described below. Typically, proposed sites displayed varying combinations of the parameters outlined below and findings on suitability for SPA and Ramsar site qualifying birds were therefore subject to professional judgement. The findings of the assessment of proposed sites are set out below in relation to bird species that are qualifying features of the SPA and Ramsar site.

Habitat suitability rating criteria:

- High:
 - Large sites' area of suitable habitat (e.g. lowland farmland, heathland, wetland, woodland) capable of supporting significant numbers of SPA birds; absence of any notable negative factors such as public rights of way (PRoW) and edge features; land parcel functionally linked with wider habitat and directly linked to SPA via green corridor; site may be prone to flooding (although note absence of flooding favoured by common quail and stone-curlew); typically close to SPA.
- Moderate:
 - Sites support large areas of functionally linked suitable habitat capable of attracting numbers of SPA birds which by themselves are unlikely to be significant, but which may contribute to supporting significant numbers of birds in-combination with other sites. Likely to be further from SPA, and with presence of some limiting factors.

■ Low:

- Smaller or fragmented sites; habitats present may be suitable for supporting low numbers of SPA birds on occasion but limited by negative factors such as size, distance from SPA; absence of sight lines and reductions in 'openness' as a result of edge features such as trees, scrub, and buildings; edge features likely to be close to centre of site; suitability may be compromised by existing recreational use; may be isolated within urban areas.

■ Negligible:

- Habitats present are entirely unsuitable for SPA birds, for example existing developed land or small urban infill sites.

Suitability of proposed sites for qualifying bird species of Thames Estuary and Marshes SPA and Ramsar site

Policy NS22: Car Park, Coronation Avenue, East Tilbury

- **Distance from Habitat Site:** This site is located 1.3km from the SPA and Ramsar site at the closest point
- **Size:** 0.19ha
- **Habitats present:** The site comprised of an open area of amenity grassland with scattered urban trees, situated next to a road and intersection and surrounded by residential development.
- **Use of the site:** The site was used recreational space.
- **Habitat suitability:** Negligible – due to the small size of the site, urban location and high level of disturbance, the site was considered of low suitability for qualifying bird species.

Policy SS04: Land West of East Tilbury

- **Distance from Habitat Site:** This site is located 1.03km from the SPA and Ramsar site at the closest point
- **Size:** 57.36ha

- **Habitats present:** The site comprised a seven large arable field, surrounded by other arable fields and a residential and industrial areas to the northwest and southwest of the site respectively.
- **Use of the site:** The site was used for agricultural use.
- **Habitat suitability:** High – due to the close proximity to the SPA and Ramsar site, the relatively large area of arable land and the connectivity to the estuary, the site was considered of high suitability for qualifying bird species.

Policy NS24: Land at East Tilbury Road, Linford

- **Distance from Habitat Site:** This site is located 1.76km from the SPA and Ramsar site at the closest point
- **Size:** 4.85ha
- **Habitats present:** The site comprised a two arable field, bounded by woodland to the east, a road to the west and arable fields to the north and south. A dense residential area lies to the west of the site. To the south it was connected to an arable field, that forms site allocation Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford.
- **Use of the site:** The site was used for agricultural use.
- **Habitat suitability:** Low - Due enclosed borders which increase risk of predation and the disturbance within the site due to the residential areas, the site was considered of low suitability for qualifying bird species.

Policy NS33: Land to the east of Butts Lane, Stanford le Hope

- **Distance from Habitat Site:** This site is located 0.97km from the SPA and Ramsar site at the closest point
- **Size:** 7.51ha
- **Habitats present:** The site comprised an arable field, surrounded by other arable fields and a rail line to the west. A residential development is situated to the northwest is the wider landscape.
- **Use of the site:** The site was used for agricultural use.
- **Habitat suitability:** Moderate – due to the boundary features, any birds that may use this site would be susceptible to predation, however the open nature of the field is the suitability of this site can be considered moderate for qualifying bird species.

Policy NS37: Land east of Rainbow Lane, Stanford-le-Hope

- **Distance from Habitat Site:** This site is located 0.88km from the SPA and Ramsar site at the closest point
- **Size:** 11.71ha
- **Habitats present:** The site comprised an arable field, which is bounded by tree lines, other arable field and a major highway and roundabout to the north and east.
- **Use of the site:** The site was used for agricultural use.
- **Habitat suitability:** Moderate – Due to the distance from the SPA and Ramsar site, and the open nature and side of the field, this site is deemed to be suitable to qualifying bird species. However, the suitability of the site is reduced due to the boundary features which increase the risk of predation. For this reason, the site was considered of moderate suitability for qualifying bird species.

Policy NS41: Land between Thames Haven Road and Rookery Hill, Corringham

- **Distance from Habitat Site:** This site is located 1.56km from the SPA and Ramsar site at the closest point
- **Size:** 5.11ha
- **Habitats present:** The site was comprised a sports pitch and associated facilities, and two grassed fields. The wider area was urban residential developments and the site was bounded by tree lines with scattered scrub. A large highway passes the western border of the site
- **Use of the site:** The site was used for private use.
- **Habitat suitability:** Low – Sports field and grassed fields on this site present potential foraging opportunities for qualifying species of the SPA and Ramsar site, however, the suitability is deemed to be low due to the high level of disturbance from sports events and the scattered scrub within the fields.

Policy NS42: Land west of Church Road, Corringham

- **Distance from Habitat Site:** This site is located 1.82km from the SPA and Ramsar site at the closest point
- **Size:** 0.59ha

- **Habitats present:** The site comprised of woodland within a densely developed residential area. Within the wider environment, a road and pond is situated to the west of the site.
- **Use of the site:** The site was used recreational space.
- **Habitat suitability:** Low – due urban location of the site and the developed habitat within this site it was site was considered of low suitability for qualifying bird species.

Policy NS35: Land to the rear of Fairview Avenue

- **Distance from Habitat Site:** This site is located 1.33km from the SPA and Ramsar site at the closest point
- **Size:** 0.30ha
- **Habitats present:** The site comprised of woodland within a densely developed residential area. Within the wider environment, a railway is situated to the west of the site.
- **Use of the site:** The site was used recreational space.
- **Habitat suitability:** Negligible – due to wooded habitat and the surrounding urban environment, the site was considered of low suitability for qualifying bird species.

Policy NS34: Whitwell Court, Stanford-le-Hope

- **Distance from Habitat Site:** This site is located 1.22km from the SPA and Ramsar site at the closest point
- **Size:** 0.15ha
- **Habitats present:** The site comprised of woodland surrounding a residential dwelling. The site is situated with a wider, densely developed residential area and is connected to the wider section of woodland, also bounded by residential development.
- **Use of the site:** The site is a residential development.
- **Habitat suitability:** Negligible – due to wooded habitat and the surrounding urban environment, the site was considered of low suitability for qualifying bird species.

Policy NS40: The Springhouse, Corringham

- **Distance from Habitat Site:** This site is located 1.92km from the SPA and Ramsar site at the closest point
- **Size:** 3.43ha
- **Habitats present:** The site comprised and already developed site as the Springhouse Sports Club & Function Suites. This consists of several buildings and a grassland sports field.
- **Use of the site:** The site was used for recreational use.
- **Habitat suitability:** Low – Sports field present on this site present potential foraging opportunities for qualifying species of the SPA and Ramsar site, however, the suitability is deemed to be low due to the high level of disturbance from sports events.

Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford

- **Distance from Habitat Site:** This site is located 1.54km from the SPA and Ramsar site at the closest point
- **Size:** 9.52ha
- **Habitats present:** The site comprised a two arable field, with a residential property within the site. The site was bounded by tree lines to the north and a railway track to the south. A dense residential area lies to the southwest of the site. To the north it was connected to an arable field, that forms site allocation NS24 - Land East of Tilbury Road, Linford.
- **Use of the site:** The site was used for agricultural use.
- **Habitat suitability:** Low - Due enclosed borders and the disturbance within the site due to the railway, the site was considered of low suitability for qualifying bird species.

Policy NS36: Land at Wharf Road, Stanford-le-Hope

- **Distance from Habitat Site:** This site is located 0.66km from the SPA and Ramsar site at the closest point
- **Size:** 13.90ha

- **Habitats present:** The site comprised a two arable field, with a large power pole within the site. The site was bounded by tree lines, residential development and a railway track to the south.
- **Use of the site:** The site was used for agricultural use.
- **Habitat suitability:** High – This site comprises of two large arable fields which form part of a wider network of arable land, and is located close to the estuary. Therefore, this site support foraging habitat for qualifying species of the SPA and Ramsar site was considered of high suitability for qualifying bird species.

Policy NS31: Land to the North West of Thames Industrial Estate, East Tilbury

- **Distance from Habitat site:** This site is located 1.59km from the SPA and Ramsar site at the closest point
- **Size:** 2.57ha
- **Habitats Present:** The site comprises of a large field within a larger industrial area, with areas of scattered scrub that appear to be highly disturbed by vehicles. This site is surrounded by commercial buildings, car parking and arable fields.
- **Use of Site:** The grassland field appears to be privately owned but has little to no managed with high disturbance from vehicles visible from a review of aerial photography.
- **Habitat suitability:** Low - Due to the small size of the site and its location within a wider urban context, it was considered unlikely for qualifying species to use this site, however, due to its proximity to surrounding suitable habitat, it was considered to be of low suitability for qualifying bird species.

Policy NS32: Land south of South Essex College, Thurrock Campus, Grays

- **Distance from Habitat site:** This site is located 1.58km from the SPA and Ramsar site at the closest point
- **Size:** 0.32ha
- **Habitats Present:** The site is a small, grassland field within a larger industrial area. The site is surrounded by commercial buildings, car parking and arable fields.
- **Use of Site:** The grassland field appears to be privately owned but has little to no management with a build-up of waste visible from a review of aerial photography.

- **Habitat suitability:** Low - Due to the small size of the site and its location within a wider urban context, it was considered unlikely for qualifying species to use this site, however, due to its proximity to surrounding suitable habitat, it was considered to be of low suitability for qualifying bird species.

Policy SS10: Thames Enterprise Park and Thames Oilport

- **Distance from Habitat site:** This site is located 1.36km from the SPA and Ramsar site at the closest point
- **Size:** 312.27ha
- **Habitats Present:** The site consists of largely already developed land, as a Thames Enterprise Park and Thames Oilport. Small sections to the north of the Oilport consist of arable fields.
- **Use of Site:** The site is largely used as a commercial port. Arable fields are used for agricultural use.
- **Habitat suitability:** Moderate - The arable fields are small in size and are bounded to the south, which is the closest point to the SPA and Ramsar Site. The site is at the edge of the estuary and supports suitable habitat for qualifying species of the SPA and Ramsar site, albeit with high levels of disturbance, and as such was considered of moderate suitability for qualifying bird species.

Policy SS09, a and b: London Gateway Logistics Park

- **Distance from Habitat site:** This site is located 0.08km from the SPA and Ramsar site at the closest point
- **Size:** 271.99ha
- **Habitats Present:** The site consists of largely already developed land, as a commercial port of London Gateway. Small sections to the east and west of the port consist of arable fields.
- **Use of Site:** The site is largely used as a commercial port. Arable fields are used for agricultural use.
- **Habitat suitability:** Moderate - The site supports suitable habitat for qualifying species of the SPA and Ramsar site, and is located next to the estuary, albeit with high levels of disturbance, and as such was considered of moderate suitability for qualifying bird species.

Policy SS07: Tilbury3

- **Distance from Habitat site:** This site is located 1,271m from the SPA and Ramsar site at the closest point.
- **Size:** 55.24ha
- **Habitats Present:** The site comprised of existing commercial use as it is part of the Tilbury 3 power station. To the east of the site, closest to the SPA and Ramsar site, the site comprised of arable fields.
- **Use of Site:** The site was used for agricultural use
- **Habitat suitability:** Moderate/High - Although the site comprises of existing commercial tilbury power station infrastructure, it is located close to the Thames estuary and coastal habitat such as mudflats and salt marshes, and therefore it was considered to be of moderate to high suitability for qualifying bird species.

6.15 The desk-based review of site allocations identified 10 of the 17 site allocations were considered to have low or negligible potential to support significant numbers of SPA/Ramsar qualifying bird species, either alone or cumulatively with other allocations, and were therefore discounted from further consideration in terms of offsite functional land.

6.16 A total of 2 were identified with high potential, 1 was identified as having moderate to high and 4 were identified with moderate potential to support these qualifying bird species. The site identified above provides suitable offsite foraging habitat for qualifying bird species in the form of arable fields, which are common and widespread in the Borough. These site was not considered to support habitats or features notable value, rarity or which populations are likely to be dependent on in isolation the importance of this site for these species is likely to be low when compared with the extensive areas of habitat of greater suitability both within the Borough and the wider land areas surrounding these Habitat sites. As a result, the potential for the loss of offsite habitat to adversely affect these species relates primarily to the cumulative effect of reducing the extent of feeding areas. Given the dependency of these species on offsite arable fields and grasslands, inclusion and implementation of appropriate safeguards and mitigation will be required in Local Plan to provide certainty that there will be no adverse effect on the integrity of the SPA and Ramsar site.

Mitigation

6.17 To provide certainty that the loss of offsite functional habitat will not adversely affect the integrity of the Thames Estuary and Marshes SPA and Ramsar site, it is

recommended that the following safeguard measures are implemented at the project level:

- Wintering, migratory and breeding bird surveys are required for sites with high and moderate suitability to support these qualifying species to determine their individual and cumulative importance for these species and inform mitigation proposals.
- A commitment to mitigation is required within the Local Plan dependent on the findings of bird surveys. This will need to take into account the cumulative numbers of SPA birds affected by the allocations as they come forward for development. In the unlikely but possible event that cumulative numbers of SPA birds affected are likely to exceed thresholds of significance (i.e. >1% of the associated European Site), appropriate mitigation in the form of habitat creation and management in perpetuity, either on-site or offsite, or through the provision of strategic sites for these species elsewhere within Thurrock Borough, will be required. If required, mitigation will need to create and manage suitably located habitat which maximises feeding productivity for these SPA species, and such mitigatory habitat would need to be provided and be fully functional prior to development which would affect significant numbers of SPA birds. Due to the common and widespread nature of the habitats present within the site allocations it is considered with certainty that mitigation can be successfully achieved through the creation of alternative habitat of equal or greater value should a significant number of qualifying birds be found to utilise the site. This approach has been approved at recent Examination in Public for other coastal Local Authorities, including the North Essex Authorities.

Policy Mitigation

6.18 The following policies will provide mitigation in the Local Plan:

- Protection policies, including Policy SP07 – Environment provides mitigation for the potential impacts of non-physical disturbance on the Thames Estuary and Marshes SPA and Ramsar site, as they ensure that natural resources are effectively protected and managed. Policy SP07 outlines the protection of designated areas (including the Thames Estuary Ramsar site; Sites of Importance for Nature Conservation (SSSI's), and Local Wildlife Sites and sites) from adverse development impact and, through appropriate assessment and identification of mitigation measures. It is recommended that this policy is amended to include protection of other designated sites within 15km of the borough, including SPA, SAC and Ramsar sites.

- DM Policy 24 - Biodiversity and Geodiversity outlines the Council's strategy for Biodiversity Net Gain (BNG). Specifically, this policy sets out the BNG guidelines for off-site habitat enhancements, ensuring offsite enhancement are undertaken locally, and within the borough and ensures that BNG measures on strategic sites that are informed by the LNRS will result in a 10% increase in BNG credit value. This will ensure that any habitat lost is adequately replaced and compensated for within the Borough.

Conclusion

In light of the above, providing the mitigation detailed above and the policy protection measures are implemented and delivered successfully, no adverse effects on integrity can be concluded in relation to physical damage and loss of functionally linked land from the Local Plan in relation to Thames Estuary and Marshes SPA and Ramsar site.

Thames Estuary and Marshes Ramsar site

Invertebrates

6.19 The Thames Estuary and Marshes Ramsar site support a diverse and nationally important assemblage of wetland invertebrates, reflecting the ecological value of its grazing marshes, ditches and transitional habitats. Notably, the endangered weevil *Bagous longitarsis* occurs within the site, alongside a range of other vulnerable and rare species. These include the groundbug *Henestaris halophilus*, the weevil *Bagous cylindrus*, the ground beetle *Polystichus connexus*, the crane flies *Erioptera bivittata* and *Limnophila pictipennis*, the horsefly *Hybomitra expollicata*, the hoverfly *Lejops vittata*, the dancefly *Poecilobothrus ducalis*, the snail-killing fly *Pteromicra leucopeza*, the solitary wasp *Philanthus triangulum* and the damselfly *Lestes dryas*, collectively demonstrating the site's importance for scarce and specialist invertebrate fauna.

6.20 The Local Plan includes proposed site allocations in areas where qualifying Ramsar invertebrate species may make use of offsite habitat for foraging, and breeding. Proposed site allocations that could result in a Likely Significant Effect as a result of physical damage and loss were identified in the screening assessment and included the following proposed site:

6.21 The following site allocations were located within 500m of Thames Estuary and Marshes Ramsar site:

- Policy SS09, a and b: London Gateway Logistics Park

Suitability of proposed sites for invertebrate species of Thames Estuary and Marshes Ramsar site

Policy SS09, a and b: London Gateway Logistics Park

- **Distance from Habitat site:** This site is located 0.08km from the Ramsar site at the closest point
- **Size:** 271.99ha
- **Habitats Present:** The site consists of largely already developed land, as a commercial port of London Gateway. Small sections to the east and west of the port consist of arable fields.
- **Use of Site:** The site is largely used as a commercial port. Arable fields are used for agricultural use.
- **Habitat suitability:** Low - The site supports terrestrial habitats which do not provide optimal habitat for wetland invertebrates of the Ramsar site. However, due to the proximity to the Ramsar site to the estuary and the high levels of disturbance due to the land use type, this site was considered of low suitability for qualifying invertebrate species.

6.22 The desk-based review of the site allocations identified that based on a precautionary approach, the site allocation has low potential to be important in supporting qualifying invertebrate species, either alone or cumulatively with other sites, and were therefore requires further consideration in terms of offsite functional land.

Mitigation

6.23 To provide certainty that adverse effects on designated invertebrate features will be avoided, a detailed habitat appraisal and targeted invertebrate survey will be required to confirm the importance of the site for qualifying invertebrates within the Site. Should designated species be identified, appropriate avoidance and mitigation measures will be embedded within the scheme design and secured through planning conditions to ensure no adverse effect on site integrity.

Policy Mitigation

6.24 The following policies will provide mitigation in the Local Plan:

- Protection policies, including Policy SP07 – Environment provides mitigation for the potential impacts of non-physical disturbance on the Thames Estuary and Marshes SPA and Ramsar site, as they ensure that natural resources are effectively protected and managed. Policy SP07 outlines the protection of designated areas (including the Thames Estuary RAMSAR site; Sites of Importance for Nature Conservation (SSSI's), and Local Wildlife Sites and sites) from adverse development impact and, through appropriate assessment and identification of mitigation measures. It is recommended that this policy is amended to include protection of other designated sites within 15km of the borough, including SPA, SAC and Ramsar sites.
- DM Policy 24 - Biodiversity and Geodiversity outlines the Council's strategy for Biodiversity Net Gain (BNG). Specifically, this policy sets out the BNG guidelines for off-site habitat enhancements, ensuring offsite enhancement are undertaken locally, and within the borough and ensures that BNG measures on strategic sites that are informed by the LNRS will result in a 10% increase in BNG credit value. This will ensure that any habitat lost is adequately replaced and compensated for within the Borough.

Conclusion

In light of the above, providing the policy protection measures are implemented and delivered successfully, no adverse effects on integrity will occur in relation to physical damage and loss of functionally linked land from the Local Plan in relation to Thames Estuary and Marshes Ramsar site.

Non-physical disturbance (noise, vibration and light) – onsite and functionally linked land

Thames Estuary and Marshes SPA and Ramsar site

6.25 At the Screening stage it was not possible to rule out likely significant effects on Thames Estuary and Marshes SPA and Ramsar site as a result of non-physical disturbance, both onsite and offsite, in relation to the following site allocations:

6.26 Located within 500m of the SPA and Ramsar site:

- Policy SS09, a and b: London Gateway Logistics Park

6.27 Located within 500m of the 2km buffer distance applied in this assessment to determine site allocations, which may have impacts to functionally linked land used by the qualifying bird species of the SPA and Ramsar site:

- Policy SS04: Land West of East Tilbury
- Policy SS07: Tilbury3
- Policy SS09, a and b: London Gateway Logistics Park
- Policy SS10: Thames Enterprise Park and Thames Oilport
- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS31: Lower Crescent
- Policy NS33: Land to the North West of Thames Industrial Estate, East Tilbury
- Policy NS34: Land to the South West of Thames Industrial Estate, East Tilbury
- Policy NS35: Land to the east of Butts Lane, Stanford le Hope
- Policy NS36: Whitwell Court, Stanford-le-Hope
- Policy NS37: Land to the rear of Fairview Avenue
- Policy NS38: Land at Wharf Road, Stanford-le-Hope
- Policy NS39: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS41: Former Police Station, Gordon Road, Corringham
- Policy NS42: The Springhouse, Corringham
- Policy NS43: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS44: Land west of Church Road, Corringham

6.28 In light of this, there is potential for impacts from non-physical disturbance to occur as a result of development coming forwards in the Local Plan and as such mitigation measures will be required during the construction phases of development proposed.

Mitigation

6.29 To provide certainty that non-physical disturbance will not adversely affect the integrity of the Thames Estuary and Marshes SPA and Ramsar Site, it is recommended that the following best practice construction measures are implemented at the project level:

- Use rubber linings in chutes, dumpers and hoppers to reduce impact noise.
- Maximise the screening effect of buildings and temporary stockpiles through programming / phasing of works.
- Ensure that each item of plant and equipment complies with the noise limits quoted in the relevant European Commission Directive 2000/14/EC, United Kingdom Statutory Instrument (SI) 2001/1701.
- Fit all plant and equipment with appropriate mufflers or silencers of the type recommended by the manufacturer.
- Vibratory compaction equipment shall be used in a mode which minimises the incident vibration.
- Activities to mainly occur in daylight to minimise the need for artificial lighting.
- Low level task-specific construction lights were.
- Handheld or head-torches used where possible.
- Implement a Construction lighting management plan.

Policy Mitigation

6.30 The following policies will provide mitigation in the Local Plan:

- Protection policies, including Policy SP07 – Environment provides mitigation for the potential impacts of non-physical disturbance on the Thames Estuary and Marshes SPA and Ramsar site, as they ensure that natural resources are effectively protected and managed. Policy SP07 outlines the protection of designated areas (including the Thames Estuary RAMSAR site; Sites of Importance for Nature Conservation (SSSI's), and Local Wildlife Sites and sites) from adverse development impact and, through appropriate assessment and identification of mitigation measures. It is recommended that this policy is amended to include protection of other designated sites within 15km of the borough, including SPA, SAC and Ramsar sites.

- DM Policy 07 – Construction Environmental Management provides mitigation for the potential impact from non-physical disturbances as it seeks to manage and limit environmental disturbances during construction and demolition as well as during excavations and construction of subterranean developments. To deliver this the Council requires the submission of Construction Management Statements. This will ensure the noise, vibration and light pollution that occurs during construction and demolition project is kept to a minimum, and below acceptable levels set out within the Construction Management Statements.
- DM Policy 30 – Minimising Pollution and Impacts on Amenity, Health and Safety provides mitigation for the potential impact from non-physical disturbances as it ensures that development will not result in an adverse impact on the amenity of neighbouring or future occupiers. While this policy is aimed at social disturbance implications of development, it focuses on reducing noise, vibration and light pollution, which will provided mitigation for impacts on habitats sites as well.

Conclusion

Provided that development takes place while abiding to best practice construction measures, and the above policy mitigation is incorporated into the plan and implemented successfully, adverse effects on the integrity of the Thames Estuary and Marshes SPA and Ramsar site, as a result of impacts from non-physical disturbance will be avoided either alone or in-combination.

Non-toxic contamination

Thames Estuary and Marshes SPA and Ramsar site

6.31 At the Screening stage it was not possible to rule out likely significant effects on Thames Estuary and Marshes SPA and Ramsar site as a result of non-physical disturbance from the following policies:

- Policy SS09, a and b: London Gateway Logistics Park

6.32 In light of this, there is potential for impacts from non-physical disturbance to occur as a result of development coming forwards in the Local Plan and as such mitigation measures will be required.

Mitigation

6.33 To provide certainty that non-toxic contamination will not adversely affect the integrity of the Thames Estuary and Marshes SPA and Ramsar Site, it is recommended that the following best practice construction measures are implemented at the project level:

- Secure storage and safe disposal of any materials and substances to prevent accidental contamination.
- Prevention or reduction of dust through timing of works to avoid dry times when dust arisings are most likely or damping down.
- Control of surface water runoff, including from damping down, to prevent any contaminated water from leaving the Site and potential soaking into surrounding ground.

Policy Mitigation

6.34 The following policies will provide mitigation in the Local Plan:

- Policy SP07 – Environment provides mitigation for the potential impacts of the Local Plan on the natural and built environment, as it ensures that natural resources are effectively protected and managed. Policy SP07 outlines the protection of designated areas (including the Thames Estuary RAMSAR site; Sites of Importance for Nature Conservation (SSSI's), and Local Wildlife Sites and sites).
- DM Policy 07 – Construction Environmental Management provides mitigation for the potential impact from non-toxic contamination as it seek to manage and limit environmental disturbances during construction and demolition as well as during excavations and construction of subterranean developments. To deliver this the Council requires the submission of Construction Management Statements.
- It is recommended that a requirement for project-level HRA is added to Policy SP07 to ensure that the required further assessment is carried out at the project-level.

Conclusion

Provided that development takes place while abiding to best practice construction mitigation measures, and the above policy mitigation is incorporated into the plan and implemented successfully, adverse effects on the integrity of

the Thames Estuary and Marshes SPA and Ramsar site, as a result of impacts from non-toxic pollution will be avoided either alone or in-combination.

Air pollution

Thames Estuary and Marshes SPA and Ramsar site / Medway Estuary and Marshes SPA and Ramsar site

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

6.36 Increased air pollution is most likely to affect the Habitats sites when key pollutants, including NO_x, i.e. NO and NO₂, exceeds site-relevant critical loads. This is most likely to affect Habitats sites where plant, soil and water habitats are the qualifying features. Thames Estuary and Marshes SPA and Ramsar site and Medway Estuary and Marshes SPA and Ramsar site are designated for a range of qualifying bird species which rely on the habitat of the site, and therefore may also be affected, either directly or indirectly, by deterioration in habitat as a result of air pollution. These sites have been identified in the Screening Assessment as having potential to be affected by air pollution as a result of growth coming forwards in the Local Plan in-combination with the implementation of the LTC, which is due to be in operation from 2034, and which is within the plan period.

6.37 The LTC will be located to the east of Tilbury and Gravesend, and it will provide an alternative route to the existing Dartford Crossing. This scheme will cross the River Thames within 200m of the Thames Estuary and Marshes SPA and Ramsar site and therefore have the potential to affect the Habitats site by increased air pollution. Furthermore, this will allow for vehicle traffic to occur south of the Thames Estuary and thus have potential to impact the A228, which is located within 200m of the Thames Estuary and Marshes SPA and Ramsar site and the Medway Estuary and Marshes SPA and Ramsar site. These Habitat sites have previously been considered unlikely to be affected by traffic from Essex due to the separation of the road network by the Thames Estuary.

6.38 This HRA will refer to the UK Air Pollution Information System (APIS) to determine [See reference 40] whether the qualifying features of the Thames

Estuary and Marshes SPA and Ramsar site and Medway Estuary and Marshes SPA and Ramsar site are susceptible to impacts from air pollution and provides detail on the critical loads relevant for each key pollutant type and broad habitat types.

Table 6.1: Summary qualifying features and their sensitivities to air pollution and the relevant critical loads for each broad habitat type.

Qualifying bird species	Broad Habitat Type	Is this feature sensitive due to nutrient nitrogen impacts on the habitat?	Critical Load for Nitrogen (kg/N/ha/yr)	Critical Load for Ammonia (ug m-3)	Critical Load for Nitrogen oxide (ug m-3)	Is this feature sensitive due to nutrient acidity impacts on the broad habitat?	Critical Load for Acidity
Thames Estuary SPA and Ramsar site							
Hen Harrier	Dwarf shrub heath	No	5-15	1	30	No	0.892-5.062
	Littoral Sediment	No	10-20	1 or 3	30	N/A	N/A
	Fen, marsh and swamp	No	15-25	3	30	N/A	N/A
Red knot	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Common ringed plover	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Grey plover	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Common redshank	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Black-tailed Godwit	Littoral sediment	Yes	10-20	1 or 3	30	N/A	N/A
Pied avocet	Littoral sediment	Yes	10-20	1 or 3	30	N/A	N/A
Medway Estuary and Ramsar site							

Qualifying bird species	Broad Habitat Type	Is this feature sensitive due to nutrient nitrogen impacts on the habitat?	Critical Load for Nitrogen (kg/N/ha/yr)	Critical Load for Ammonia (ug m-3)	Critical Load for Nitrogen oxide (ug m-3)	Is this feature sensitive due to nutrient acidity impacts on the broad habitat?	Critical Load for Acidity
Dark-bellied brent goose	Littoral sediment	Yes	10-20	1 or 3	30	N/A	N/A
	Improved grassland	No	N/A	N/A	N/A	N/A	N/A
	Arable and horticulture	No	N/A	N/A	N/A	N/A	N/A
Common shelduck	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Northern pintail	Littoral sediment	No	10-20	1 or 3	30	No	N/A
	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
Pied avocet	Littoral sediment	Yes	10-20	1 or 3	30	N/A	N/A
Common ringed plover	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Grey plover	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Red knot	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Dunlin	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Common redshank	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Red-throated loon	Inshore sublittoral sediment	No	N/A	N/A	N/A	N/A	N/A

Qualifying bird species	Broad Habitat Type	Is this feature sensitive due to nutrient nitrogen impacts on the habitat?	Critical Load for Nitrogen (kg/N/ha/yr)	Critical Load for Ammonia (ug m-3)	Critical Load for Nitrogen oxide (ug m-3)	Is this feature sensitive due to nutrient acidity impacts on the broad habitat?	Critical Load for Acidity
Great crested grebe	Littoral sediment	Yes	10-20	1 or 3	30	No	N/A
	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
Great cormorant	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
Bewick's Swan	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
	Improved grassland	No	N/A	N/A	N/A	N/A	N/A
	Arable and horticulture	No	N/A	N/A	N/A	N/A	N/A
Eurasian wigeon	Littoral sediment	Yes	10-20	1 or 3	30	No	N/A
	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
Eurasian teal	Littoral sediment	No	10-20	1 or 3	30	No	N/A
	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
Mallard	Littoral sediment	No	10-20	1 or 3	30	No	N/A

Qualifying bird species	Broad Habitat Type	Is this feature sensitive due to nutrient nitrogen impacts on the habitat?	Critical Load for Nitrogen (kg/N/ha/yr)	Critical Load for Ammonia (ug m-3)	Critical Load for Nitrogen oxide (ug m-3)	Is this feature sensitive due to nutrient acidity impacts on the broad habitat?	Critical Load for Acidity
	Standing open water and canals	Site specific	N/A	1 or 3	30	N/A	N/A
Northern shoveler	Standing open water and canals	Site specific	N/A	1 or 3	30	No	N/A
Comon pochard	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
	Standing open water and canals	Site specific	N/A	1 or 3	30	N/A	N/A
Eurasian oystercatcher	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Black-tailed Godwit	Littoral sediment	Yes	10-20	1 or 3	30	N/A	N/A
Eurasian curlew	Neutral Grassland	Yes	10-20	3	30	No	1.071-5.071
	Littoral sediment	Yes	10-20	1 or 3	30	N/A	N/A
Common greenshank	Littoral sediment	No	10-20	1 or 3	30	N/A	N/A
Ruddy turnstone	Littoral Rock	No	10-20	N/A	N/A	N/A	N/A
Hen Harrier	Dwarf shrub heath	No	5-15	1	30	No	0.892-5.072
	Littoral Sediment	No	10-20	1 or 3	30	N/A	N/A

Qualifying bird species	Broad Habitat Type	Is this feature sensitive due to nutrient nitrogen impacts on the habitat?	Critical Load for Nitrogen (kg/N/ha/yr)	Critical Load for Ammonia (ug m-3)	Critical Load for Nitrogen oxide (ug m-3)	Is this feature sensitive due to nutrient acidity impacts on the broad habitat?	Critical Load for Acidity
	Fen, marsh and swamp	No	15-25	3	30	N/A	N/A
Merlin	Dwarf shrub heath	No	5-15	1	30	No	0.892-5.072
	Littoral Sediment	No	10-20	1 or 3	30	N/A	N/A
	Arable and horticulture	No	N/A	N/A	N/A	N/A	N/A
Little tern	Supralittoral sediment	Yes	5-20	1 or 3	30	No	1.071-5.071
	Supralittoral sediment (calcareous)	Yes	5-15	1 or 3	30	No	1.071-5.071
	Supralittoral sediment (acidic)	Yes	5-15	1 or 3	30	No	1.071-5.071
Common tern	Supralittoral sediment	Yes	5-15	1 or 3	30	No	1.071-5.071
	Supralittoral sediment	Yes	5-20	1 or 3	30	No	1.071-5.071
	Supralittoral sediment (calcareous)	Yes	5-15	1 or 3	30	No	1.071-5.071
	Standing open water and canals	Site specific	N/A	1 or 3	30	N/A	N/A

6.39 In light of the information presented by UK APIS, only black-tailed godwit and pied avocet were considered sensitive to impacts from nutrient nitrogen in relation to

the Thames Estuary and Marshes SPA and Ramsar site and dark-bellied brent goose, pied avocet, great crested grebe, Eurasian wigeon, black-tailed godwit, Eurasian curlew, common greenshank, little tern and common tern in relation to the Medway Estuary and Marshes SPA and Ramsar site. Additionally, several birds' including northern pintail, great crested grebe, great cormorant, Bewick's swan, Eurasian teal, Eurasian wigeon, mallard, northern shoveler, common pochard and common tern were considered to be sensitive to site specific impacts from nutrient nitrogen in relation to the Medway Estuary and Marshes SPA and Ramsar site. Therefore, further consideration is required into impacts in relation to air pollution.

6.40 A Habitats Regulations report [\[See reference 41\]](#), assessed the potential for adverse effects on integrity on the Thames Estuary and Marshes SPA and Ramsar site to arise due to the construction and operation of the LTC. Adverse effects were assessed alone and in-combination of other key infrastructure projects in the surrounding area. The results are outlined below.

6.41 The HRA presented a summary of the traffic changes predicted during construction, within 200m of the Thames Estuary and Marshes Ramsar site, and the predicted changes in air quality as a result of construction traffic for the 'Do Minimum' (DM) and 'Do Something' (DS) scenario. It was concluded that the predicted total N deposition in the DS scenario in all of the construction years where the affected road network (ARN) criteria were met, is less than the lower critical load, 20 kg N ha⁻¹yr⁻¹, for the Thames Estuary and Marshes Ramsar site. The change in nitrogen deposition is over a short duration, five years, as this site is not affected by the operational ARN therefore any changes are highly unlikely to result in any detectable changes in the habitat, particularly as the DS nitrogen deposition is less than the lower critical load. Therefore, the changes in nitrogen deposition would result in no change in the habitats of the Thames Estuary and Marshes site and no LSEs are predicted to occur as a result of the Project alone.

6.42 The adverse effects from LTC during construction on Thames Estuary and Marshes Ramsar site were also assessed in combination with other plans, including Tilbury 2 (Place Policy PP05 - Port of Tilbury, Tilbury 2 and Tilbury 3). It was concluded within the LTC HRA that the combined deposition added to the background from in combination effects is lower than the Lower Critical Load (LCL), and therefore no LSEs were predicted for the Thames Estuary and Marshes SPA and Ramsar site for the Project in-combination with other plans or projects

6.43 The HRA concluded that the operational ARN of the LTC is in tunnel where it is within 200m of the Ramsar, and so the site could not be affected. Functionally linked land associated with these sites would be within 200m of the ARN, but neither the birds themselves or the functionality of the habitats as foraging and roosting

resources for the birds would be sensitive to nitrogen deposition. Therefore, this site was not identified for further assessment as there is no pathway to effect.

6.44 It was therefore concluded within the LTC HRA that there would be no potential for adverse effects on the integrity of the Thames Estuary and Marshes SPA and Ramsar site due to the operation or construction of the LTC, alone or in combination with the other plans or project.

Policy Mitigation

6.45 The Local Plan includes the provision of the following policies, which will provide mitigation, that will contribute to ensuring the no adverse effect will arise as a result of growth coming forwards in the plan:

- Policy SP06 - Sustainable Development and Climate Change provides mitigation for the potential impacts of the Local Plan on the natural and built environment, as promises to maximise the use and generation of clean power and minimises carbon emissions, maximises re-use and recycling, while reducing pollution and waste.
- Policy SP09 – Transport and Movement provides mitigation for the potential impacts on habitat sites from air pollution as it seeks to provide improved accessibility to jobs, services and facilities via an enhanced and better integrated transport network. This includes promoting sustainable means of transport and will likely result in decreased car usage and subsequently reduction in air pollutants.
- DM Policy 02 – Embodied Carbon provides mitigation for the potential impacts on habitat sites from air pollution as it ensures all development proposals demonstrate the measures taken to minimise embodied carbon and how circular economy principles have been embedded into the design and ensure potential air pollution risks are properly considered and adequate mitigation is included in the design of new development.
- DM Policy 30 – Minimising Pollution and Impacts on Amenity, Health and Safety provides mitigation for the potential impact from potential impacts on habitat sites from air pollution as it ensures air quality assessment will be undertaken that identify potential impact of developments and ensures that appropriate mitigation measures or contributions towards air quality monitoring are undertaken.
- DM Policy 37 – Policy Active Travel, Transport and Cycling and DM Policy 38 – Parking and Electric Vehicle Charging also provide mitigation for the potential impacts of the Local Plan on the natural and built environment, as these policies

ensures sustainable transport alternatives to high emission cars are provided in the forms of active transport and EV charging infrastructure.

Conclusion

The LTC HRA was written in 2022 and approved in 2025, before the Thurrock Local Plan was written (2026). For this reason, the LTC HRA has not considered the effects of air pollution in combination with the population growth with Thurrock outlined within the Local Plan. Furthermore, the LTC will provide a more direct route for vehicle traffic between the Borough and the south side of the Thames Estuary and thus have potential to impact the A228, which has previously been considered unlikely to be affected by traffic from Essex due to the separation of the road network by the Thames Estuary. This increased access may lead to potential impacts from air pollution on the Thames Estuary and Marshes SPA and Ramsar site and the Medway Estuary and Marshes SPA and Ramsar site which was not considered in the LTC HRA.

Therefore, in line with a precautionary approach, traffic forecast data is required to determine if increases in vehicle traffic are likely to be significant. In line with the Wealden judgement, the traffic growth considered by this HRA should be based on the effects of development provided for by the Local Plan in combination with other drivers of growth such as development proposed in neighbouring districts and demographic change. Therefore, conclusions are unable to be drawn until with additional traffic data is provided as detailed below.

- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- There will be a change in speed band (speed banding of traffic modelled speeds for use with air quality assessments); or
- Road alignment will change by 5m or more.

Recreation

6.46 The Screening Assessment concluded that population growth associated with the Local Plan has the potential to result in likely significant effects on the following Habitats Sites:

- Benfleet and Southend Marshes Ramsar site and SPA
- Thames Estuary and Marshes Ramsar site and SPA
- Outer Thames Estuary SPA

6.47 Further detail on these sites has been presented below. It should be noted that the Outer Thames Estuary SPA is considered separately from the remainder of the Habitats Sites as it is not included within the Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy (RAMS).

Thames Estuary and Marshes SPA and Ramsar site / Benfleet and Southend Marshes Ramsar site

6.48 As detailed in the Screening Assessment, the Essex RAMS has identified site-specific ZOIs for Habitats Sites in Essex. Thames Estuary and Marshes SPA and Ramsar site ZOI of 8.1km overlaps with the eastern section of the borough, and as such will require mitigation in line with the strategy. A summary of proposed sites within a potential impact pathway due to increased recreation pressure, within the overlapping ZOI for Thames Estuary and Marshes SPA and Ramsar site and Benfleet and Southend Marshes Ramsar site is presented below.

- Policy SS01: Grays Shopping Centre, High Street, Grays
- Policy SS04: Land West of East Tilbury
- Policy SS05: Land East of Chadwell St Mary
- Policy SS06: Land West of Brentwood Road, Chadwell St Mary
- Policy SS08: Land to the Northeast of Corringham
- Policy SS18: West Horndon New Town
- Policy NS01a, b and c: Blackshots Estate redevelopment - parcel a North Site
- Policy NS02: Land adjacent to Brookmans Avenue and North of Long Lane, Grays
- Policy NS03: Land North of Stifford Clays Road, Grays
- Policy NS04: Land East of the A1012, Grays
- Policy NS05: Land East of Malvern Road, Grays
- Policy NS06: Land North of Manor Road, Grays

- Policy NS07: Whitehall Works, Whitehall Lane, Grays
- Policy NS09: Land Adjacent Dell Road and Orsett Road, Grays
- Policy NS08: Telephone Exchange, Bradleigh Avenue, Grays
- Policy NS11: Rippleside Metalworks, Thames Road, Grays
- Policy NS12: Crown Road and Darnley Road Car Parks, Grays
- Policy NS21: Tilbury Football Club, Chadfields, Tilbury
- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford
- Policy NS25: Land at Linford Road and Turnpike Lane, Chadwell St Mary
- Policy NS26: Land at St Johns Road, Chadwell St Mary
- Policy NS27: Garage site east of Vigerons Way, Chadwell St Mary
- Policy NS28: 11 River View, Chadwell St Mary
- Policy NS29: Land North of B149 Wood View and River View, Chadwell St Mary
- Policy NS30: Chadfields
- Policy NS31: Lower Crescent, Linford
- Policy NS32: Land south of South Essex College, Thurrock Campus, Grays
- Policy NS33: Land to the east of Butts Lane, Stanford le Hope
- Policy NS34: Whitwell Court, Stanford-le-Hope
- Policy NS35: Land to the rear of Fairview Avenue
- Policy NS36: Land at Wharf Road, Stanford-le-Hope
- Policy NS37: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS38: Land at Lyndhurst Road, Corringham
- Policy NS39: Former Police Station, Gordon Road, Corringham
- Policy NS40: The Springhouse, Corringham
- Policy NS41: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS42: Land west of Church Road, Corringham

- Policy NS43: Manor View
- Policy NS44: The Paddock
- Policy NS62: Land north of Church Road, Bulphan
- Policy NS63: Land south of School Lane, Orsett
- Policy NS64: Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

6.49 In light of the above information, mitigation measures will be required to ensure sufficient level of certainty that no adverse effects on integrity arise in relation to the Thames Estuary and Marshes SPA and Ramsar site as a result of proposed development in the Local Plan. Further detail of this is presented below

Outer Thames Estuary SPA

6.50 The SPA is located along the east coastline of Essex and is separated from Thurrock by Castle Point and Southend-on-Sea Local Planning Authorities. Key threats from recreation to this SPA primarily relate to water-based activities, including sailing and fishing, which have potential to result in physical disturbance of the qualifying red-throated diver.

6.51 Given the specialist nature of these activities, which is likely to attract visitors from greater distances, it is expected that increased development within Thurrock itself is likely to be relatively minor. In addition, the extent of the SPA spans across an area of open sea covering nearly 380,000 ha and extending 1200km from the coastline.

6.52 The qualifying species of the SPA primarily use the SPA for foraging at sea and will cover vast distances to do so whereas recreational boats would be expected to remain relatively close to the coast. Given the mobility of these species and the visibility afforded to them while feeding and loafing at sea they are unlikely to be disturbed by watercraft, which would result in an adverse effect on integrity. Furthermore, the increase in usage of watercraft is unlikely to result in any discernible increase in the numbers, distribution or frequency of watercraft navigating these waters.

6.53 In light of the information above, it can therefore be concluded that adverse effect on the integrity of the SPA will not occur as a result of proposed development in Thurrock.

Mitigation

6.54 It is recommended that the following mitigation measures are implemented to ensure that there is a sufficient level of certainty that proposed development in the Local Plan will not result in an adverse effect in the integrity of these Habitats sites. These measures have been designed to ensure that the cumulative effect of increased recreational pressure is addressed for each proposed site, which has potential to contribute to the increased recreational pressure on each Habitats site through the provision of specific mitigation measures.

Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy

6.55 As detailed above, an Essex Coast RAMS and SPD has been adopted, which has identified a detailed programme of strategic mitigation measures which are to be funded by developer contributions from residential development schemes. Thurrock Council has been listed as one of the partners of this strategy and is responsible for the delivery of the Essex Coast RAMS.

6.56 This strategy proposes the following measure to avoid and mitigate for impacts arising from increased recreational pressure in the district. This includes:

- Education and communication, including provision of information and awareness raising.
- Habitat based measures, including:
 - Directing visitors away from sensitive areas and/or provide a screen to minimise their impact
 - Establishing zones, prohibited areas and restricted access at specific times for walkers and their dogs to minimise disturbance.
 - Promote appropriate routes for cyclists to avoid disturbance at key locations.
 - Audit of car parks and capacity to identify hotspots and opportunities for “spreading the load”.
 - Enforcement of measures through rangers.
 - Habitat creation, such as saltmarsh recharge, regulated tidal exchange and artificial islands.

- Project delivery through partnership working, monitoring and review process. This includes the monitoring and review of birds and visitor surveys to ensure that mitigation measures remain effective.

6.57 The delivery of this strategy is supported by the following policies within the Thurrock local Plan:

6.58 DM Policy 23 - Thames Estuary Marshes Special Protection Area Zone of Influence provides mitigation against the potential impact of the Local Plan, as it ensures that all residential developments with a net increase in dwellings, located within the Zone of Influence (ZOI)(see policies map), 8.1km of the Thames Estuary Marshes Special Protection Areas (SPA) and Ramsar sites will be subject to screening and appropriate assessment under the Habitats Regulations and will be required to implement mitigation measures to ensure that there are no likely significant effects on the protected features of those sites.

6.59 As part of this policy, those bringing forward residential developments within the ZOI, can make a financial contribution to this strategy to mitigate for their impact. Applicants who choose not to make Essex Coast RAMS contributions will be required to undertake their own visitor surveys to inform the Council's HRA and implement the necessary measures in perpetuity to avoid adverse effect on the integrity of the Thames Estuary Marshes SPA and Ramsar site. Failure to provide mitigation would mean that proposals are not compliant with the Habitats Regulations and would need to be refused for that reason.

Provisions for open space and Green Infrastructure

6.60 It is recognised that given the unique nature and attraction of the coastal Habitats Sites identified in this assessment, the provision of open spaces is less effective as a mitigation measure for these sites. However, it is considered to provide an additional mechanism to contribute to reducing recreational pressure of these Habitats sites. To maximise the effectiveness of its role in contributing to mitigating for impacts associated with recreational pressure, it is recommended that the design and management of open space and green infrastructure will need to be focused towards attracting those groups of visitors, such as walkers and dog walkers, who regularly visit these Habitats sites.

6.61 The delivery of this is supported by the following policies within the Thurrock Local Plan:

- DM Policy 27 – Open Spaces, Sports and Recreation provides mitigation against impacts from increased recreation on habitat sites as it provides alternative space for residents to recreate. This policy intends to designate of

open space for sports and recreation, which will reduce the need for recreation within the habitat sites.

Watercraft – Code of Conduct

6.62 In addition to the above, Essex Police support a Watercraft Code of Conduct [See reference 42], which provides details on appropriate code of conduct on the water and how to reduce impact to wildlife in Essex waters. A code of conduct does not guarantee the avoidance of adverse effects on integrity on its own, it provides an important role in encouraging people to undertake recreational activities responsibly, particularly if promoted by RAMS rangers and linked to penalties and enforcement

Conclusion

In light of the above, providing the Essex Coast RAMS and policy protection measures are implemented and delivered successfully, no adverse effects on integrity can be concluded in relation to recreational pressure as a result of increased development resulting from the Local Plan in relation to Benfleet and Southend Marshes Ramsar site and SPA, Thames Estuary and Marshes SPA and Ramsar sites and Outer Thames Estuary SPA.

Water Quantity

6.63 The Screening Assessment concluded that population growth associated with the Local Plan has the potential to result in likely significant effects on the following Habitats Sites:

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

6.64 Thurrock is supplied by Essex and Suffolk Water and is located wholly within the Essex Water Resource Zone (WRZ). The Essex WRZ is bound by the Thames Estuary in the south, the Essex coastline in the east and stretches as far north as Silver End and as far west as the London Boroughs of Redbridge, Barking and Havering.

6.65 The Essex WRZ supplies water from local rivers, including Chelmer, Blackwater, Stour and Roman River, which support pumped storage reservoirs at Hanningfield and Abberton. The remaining water sourced from inside the Essex WRZ is derived from groundwater via Chalk well and adit sources in the south and southwest of the zone near Stifford and Rodin.

6.66 Water transferred into the Essex supply area from outside the area comes from two main sources; the Chigwell raw water bulk supply from the Lea Valley reservoirs provided by Thames Water Utilities, and the Ely Ouse to Essex Transfer Scheme (EOETS). The EOETS transfers water from Denver in Norfolk via pipelines and pumping stations to the headwaters of the River Stour and the River Pant/Blackwater.

6.67 In dry periods, the Agency may operate its river supports schemes, which include the Great Ouse Groundwater Scheme (GOGS) and the Stour Augmentation Groundwater Scheme (SAGS).

6.68 As established in the Screening Assessment, the Habitats Sites are hydrologically connected to rivers and groundwater, which are abstracted from to supply the Essex WRZ and therefore are susceptible to changes in water quantity as a result of proposed development within the Local Plan.

Catchment Abstraction Licencing Strategy (CALS)

6.69 The Environment Agency is responsible for managing water resources in England. The Environment Agency controls how much water is abstracted with a permitting system, regulating existing licences and granting new ones. It uses the CALS process and abstraction licensing strategies to do this. The CALS process aims to aid the meeting of the environmental objectives of the Water Framework Directive by:

- Providing a water resource assessment of rivers, lakes, reservoirs, estuaries and groundwater referred to as water bodies under the Water Framework Directive (WFD).
- Identifying water bodies that fail flow conditions expected to support good ecological status.

- Preventing deterioration of water body status due to new abstractions.
- Providing results which inform River Basin Management Plans (RBMPs).

6.70 The Habitat Sites identified within this assessment are located within the Essex Catchment. The CALS process has developed a classification system in order to inform the abstraction process. This classification provides an indication of:

- The relative balance between the environmental requirements for water and how much is licensed for abstraction.
- Whether water is available for further abstraction.
- Areas where abstraction may need to be reduced.

6.71 In terms of water resource availability, this has been calculated at four different flows with Q30 being higher flows and Q90 being lower flows. The findings are presented below for each flow rate and each sub-catchment area:

■ **Stour System**

- Q30 (higher flows) - This identified no water availability (recent actual flows < EFI) in any of the catchments in the Stour system with exception to small number of catchments where water was noted to be available.
- Q50 (moderate flows) – This identified no water availability (recent actual flows < EFI) in any of the catchments in the Stour system area with exception to one catchment, which was noted as having water not available (fully licence flows < EFI).
- Q70 (below moderate flows) – This identified no water availability (recent actual flows < EFI) in any of the catchments in the Stour system with exception to one catchment, which was noted as having water not available (fully licence flows < EFI).
- Q95 (low flows) - This identified no water availability (recent actual flows < EFI) in any of the catchments in the Stour system.

■ **Colne and Tendring System**

- Q30 (higher flows) - This identified no water availability (recent actual flows < EFI) in the easternmost catchments in the Colne and Tendring System. The majority of the catchment was comprised of catchments with water available and no water available (fully licence flows < EFI).
- Q50 (moderate flows) – This identified no water availability (recent actual flows < EFI) in the catchments in the east in the Colne and Tendring System. In the east, the majority of the catchments were identified with water

available with a small number noted to have no water available (fully licence flows < EFI).

- Q70 (below moderate flows) – This identified no water availability (recent actual flows < EFI) in the catchments in the east in the Colne and Tendring System and a mixture of no water available (fully licence flows < EFI) and water available in catchments in the west.
- Q95 (low flows) – This identified no water availability (recent actual flows < EFI) in the catchments in the east in the Colne and Tendring System and no water available (fully licence flows < EFI) in catchments in the west.

■ Blackwater System

- Q30 (higher flows) – This identified no water availability (recent actual flows < EFI) for the majority of catchments in the Blackwater System with exception to a small number of catchments in the east which had water available.
- Q50 (moderate flows) – This identified no water availability (recent actual flows < EFI) for the majority of catchments in the Blackwater System with exception one catchment in the east, which had water available and a small number of catchments in the east with no water available (fully licence flows < EFI).
- Q70 (below moderate flows) – This identified no water availability (recent actual flows < EFI) for the majority of catchments in the Blackwater System with exception one catchment in the east, which had water available and a small number of catchments in the east with no water available (fully licence flows < EFI).
- Q95 (low flows) – This identified no water availability (recent actual flows < EFI) in all catchments in the Blackwater System with exception to one catchment in the east, which had no water available (fully licence flows < EFI).

■ Dengie System

- Q30 (higher flows) – This identified the majority of the Dengie System to have water available with a smaller area to the north with no water available (fully licence flows < EFI).
- Q50 (moderate flows) – This identified the majority of the Dengie System to have water available with smaller areas to the north and west with no water available (fully licence flows < EFI).

- Q70 (below moderate flows) – This identified the majority of the Dengie System to have a mixture of no water available (fully licence flows < EFI) and water available.
- Q95 (low flows) – This identified the majority of the Dengie System to have no water available (fully licence flows < EFI) with smaller areas to the west with no water availability (recent actual flows < EFI).

6.72 A review of water resource reliability found that in an average year resource there was consumptive abstraction available of less than 30% of the time with areas to the west of the catchment identified a mixture of at least 30- 70% of the time.

Mitigation

6.73 Essex and Suffolk Water has prepared a Water Resource Management Plan (WRMP) 2024 [See reference 43], which will ensure that a sufficient supply of water can be secured, and that the environment will be protected over at least a 25-year planning period. WRMPs are updated every five years and reviewed by regulators, such as the Environment Agency. This takes into account growth within the supply area, including growth within Thurrock as part of the Local Plan.

6.74 The WRMP provides detail on abstraction within the Essex WRZ. The Best Value Plan in the WRMP, includes the provision of leakage reduction, compulsory metering, smart metering and water efficiency programme. This is considered the most likely option to be taken forward as part of the WRMP.

6.75 An HRA of the WRMP 2024 was undertaken, which included consideration of the potential impacts of the options put forward as part of the Best Value Plan in the WRMP. The HRA concluded will have no adverse effects on any Habitats sites, alone or in combination. It is noted that this assessment was based on preliminary indicative design assumptions and that further iterations of the HRA will be required once more detailed design is available.

Policy Mitigation

6.76 To provide certainty that impacts from water quality will not adversely affect the integrity of the Habitat Sites in combination with other plans and projects, the following policy mitigation measures will be implemented:

- DM Policy 03 - Water Efficient Development provides mitigation against impacts from reduced water quantity on habitat sites as it supports development that uses water efficient design and ensures a sustainable use of water. This will help to mitigate the quantity of water required within the borough.

- DM Policy 29 - Managing Flood Risk and Riverside Design seek to manage flooding risk in the borough. Effective flood risk management mitigates reduced water quantity within a borough by slowing, storing and infiltrating surface runoff, thereby enhancing groundwater recharge, sustaining base flows and improving long-term water security alongside reducing flood hazard.

Conclusion

In light of the above, providing that the mitigation measures are followed and policy protection measures are implemented and delivered successfully, the Local Plan will not result in adverse effects on the integrity of the Habitats Sites as a result of changes in water quantity, either alone or in-combination.

Water Quality

Thames Estuary and Marshes SPA and Ramsar site

6.77 The Screening Assessment concluded that population growth associated with the Local Plan has the potential to result in likely significant effects on the following Habitats Sites:

- Thames Estuary and Marshes SPA and Ramsar site

6.78 An increase in demand for wastewater treatment as a result of development in Thurrock in combination with neighbouring boroughs and districts in the region has the potential to adversely affect the integrity of Habitats sites that are susceptible to impacts from water and are hydrologically connected to waterbodies which the WwTW discharge into.

6.79 New development proposed has the potential to result in the following:

- Increased volumes of treated wastewater discharges, resulting in nutrient enrichment of water and potential lowering of dissolved oxygen as well as increased water velocities and levels downstream of Water Recycling Centre (WRC) outfalls.
- Overloading of the combined sewer network during storm events with the potential for flooding and contamination of hydrologically connected Habitats sites to watercourses and tributaries associated with the Crouch and Roach River and Pitsea, Vange and Holhaven Creek.

- Increase in the area of urban surfaces and roads could increase the potential for contaminated surface runoff and the contamination of hydrologically connected Habitats sites to the Crouch and Roach River and Pitsea, Vange and Holhaven Creek.

Mitigation

6.80 To provide certainty that impacts from water quality will not adversely affect the integrity of the Thames Estuary and Marshes SPA and Ramsar site in combination with other plans and projects, the following mitigation measures will be implemented:

- Southern Water detail the following mitigation measures within the WRMP:
 - An ongoing programme to inspect (by CCTV), replace or refurbish ageing sewers at high risk of collapse or where bursts are likely.
 - Use high-powered water jets to clear blockages and ensure our sewers are running freely.
 - Monitor storm overflows carefully and report this information to the Environment Agency.
 - There are 264 combined sewer overflows in the Medway catchment. programme to inspect (by CCTV), replace or refurbish ageing sewers at high risk of collapse or where bursts are likely
 - Implemented improvements in monitoring of assets and data collection to inform a Pollution Reduction Programme which has resulted in pollution events being prevented.
 - Strengthened the incident response team and arrangements to improve response and reporting of a potential pollution incident.
- Southern Water are undertaking efficiency initiatives in the Eastern area, in order to manage against increases to demand, including:
 - Upgrades to Motney Hill wastewater Treatment Works (WwTW) to increase the amount of water it can store.
 - Medway WTW Indirect Potable Water Recycling
 - South East Water bulk supply near Canterbury
 - Utilise full existing transfer capacity (from Faversham)
 - West Sandwich and Sandwich WSW licence variation
 - Upgrades to Motney Hill wastewater Treatment Works (WwTW) to increase the amount of water it can store.

- Southern Water are also implementing catchment management and nitrate infrastructure plans to mitigate against the impact of higher nitrate levels in raw source water from 2027 onwards.

6.81 A Drainage and Wastewater Management Plan (DWMP) for Gravesend Wastewater System Plan was published by Southern Water in 2023 [\[See reference 44\]](#). The DWMP states that flooding, pollution and water quality are the main concerns in this wastewater catchment. The document details potential mitigation and prevention strategies to reduce the risk of flooding, pollution and changes to water quality between 2023 and 2050, which include:

- Upgrades to WwTW and CSO (Combined Sewer Overflows): provide additional storage volume, upsize sewers, new pumping stations, permit review and manhole sealing.
- Pipe Rehabilitation Programme - improve resilience to infiltration: sewer sealing in coastal areas under tidal influence and proactive sewer rehabilitation to reduce risk - Link to Sewer Maintenance Programme.
- Customer Education Programme.
- Maintenance Programme - An efficient maintenance programme for pumping stations to eliminate the risk of a pollution incident due to an operational failure.
- Surface Water separation - Opportunities to disconnect surface water runoff from the combined system and direct it to watercourses throughout this area of the catchment.
- SuDS - Mitigating surface water flooding in River front through implementation of SuDS (pond / geocellular tank).
- Catchment permits - Enhance river upstream of catchment to provide attenuation of flows, limiting unconsented spills from CSOs, and providing opportunity for natural nutrient removal.
- Reduction in tidal infiltration - Identify areas where tidal infiltration is more significant (Infiltration validation by CCTV/electroscan surveys/flow monitors in hotspots).

6.82 To provide certainty that surface water run-off will not adversely affect the integrity of Habitats sites, it is recommended that the following best practice construction measures are implemented at the project level of site allocations located within 500m of a waterway which is hydrologically connected to a Habitats site: Secure storage and safe disposal of any materials and substances to prevent accidental contamination.

- Prevention or reduction of dust through timing of works to avoid dry times when dust arisings are most likely or damping down.
- Control of surface water runoff, including from damping down, to prevent any contaminated water from leaving the Site and potential soaking into surrounding ground.

Policy Mitigation

6.83 To provide certainty that impacts from water quality will not adversely affect the integrity of the Habitat Sites in combination with other plans and projects, the following policy mitigation measures will be implemented:

- DM Policy 28 - Riverside Uses, including River-dependent, River-related and Adjacent Uses provides mitigation for the potential impacts of the Local Plan on the natural and built environment, as it sets criteria for development which ensure that the River Thames and its tributaries are not adversely impacted by any developments and are enhanced where possible.
- DM Policy 29 - Managing Flood Risk and Riverside Design proposes the use of Water efficiency systems and Sustainable Drainage Systems (SuDS) that ensures that all development will be required to demonstrate that there is existing infrastructure and capacity for proposed developments coming forwards and where necessary identify specific requirements that may be needed to deliver the proposed development.

6.84 This is also supported by Strategic Policies 6, as it ensures that natural resources are effectively protected and managed.

Conclusion

In light of the above, providing that the mitigation measures and improvements set out by Southern Water are followed and policy protection measures are implemented and delivered successfully, the Local Plan will not result in adverse effects on the integrity of the Habitats Sites as a result of changes in water quality, either alone or in-combination.

Table 6.2: Appropriate Assessment Summary– Sites within 15km of Thurrock Borough. (AEol = Adverse Effect on Integrity)

Habitats site	Physical damage and loss	Non-physical disturbance	Non-toxic Contamination	Air Pollution	Recreation	Water Quantity	Water Quality
Thames Estuary and Marshes SPA	No AEol	No AEol	No AEol	AEol uncertain (further info required)	No AEol	No AEol	No AEol
Thames Estuary and Marshes Ramsar site	No AEol	No AEol	No AEol	AEol uncertain (further info required)	No AEol	No AEol	No AEol
Benfleet and Southend Marshes SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Benfleet and Southend Marshes Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Medway Estuary and Marshes SPA	No LSE	No LSE	No LSE	AEol uncertain (further info required)	No LSE	No LSE	No LSE
Medway Estuary and Marshes Ramsar	No LSE	No LSE	No LSE	AEol uncertain (further info required)	No LSE	No LSE	No LSE

Habitats site	Physical damage and loss	Non-physical disturbance	Non-toxic Contamination	Air Pollution	Recreation	Water Quantity	Water Quality
North Downs Woodlands SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Outer Thames Estuary SPA	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE	No LSE
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE
Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site	No LSE	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE
Essex Estuaries SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Peters Pit SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Epping Forest SAC	No LSE	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE
Foulness (Mid-Essex Coast Phase 5) SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE
Foulness (Mid-Essex Coast)	No LSE	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE
Foulness (Mid-Essex Coast)	No LSE	No LSE	No LSE	No LSE	No LSE	No AEol	No LSE

Habitats site	Physical damage and loss	Non-physical disturbance	Non-toxic Contamination	Air Pollution	Recreation	Water Quantity	Water Quality
Phase 5) Ramsar site							
Blackwater Estuary SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE
Blackwater Estuary SPA	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE	No LSE

Chapter 7

Conclusion and next steps

7.1 At the screening stage, significant effects on Habitats sites, either alone or in combination with other policies and proposals, were identified for the following Local Plan policies:

- Policy SS01: Grays Shopping Centre, High Street, Grays
- Policy SS04: Land West of East Tilbury
- Policy SS05: Land East of Chadwell St Mary
- Policy SS06: Land West of Brentwood Road, Chadwell St Mary
- Policy SS08: Land to the Northeast of Corringham
- Policy SS18: West Horndon New Town
- Policy NS01a, b and c: Blackshots Estate redevelopment - parcel a North Site
- Policy NS02: Land adjacent to Brookmans Avenue and North of Long Lane, Grays
- Policy NS03: Land North of Stifford Clays Road, Grays
- Policy NS04: Land East of the A1012, Grays
- Policy NS05: Land East of Malvern Road, Grays
- Policy NS06: Land North of Manor Road, Grays
- Policy NS07: Whitehall Works, Whitehall Lane, Grays
- Policy NS08: Telephone Exchange, Bradleigh Avenue, Grays
- Policy NS09: Land Adjacent Dell Road and Orsett Road, Grays
- Policy NS11: Rippleside Metalworks, Thames Road, Grays
- Policy NS12: Crown Road and Darnley Road Car Parks, Grays
- Policy NS21: Tilbury Football Club, Chadfields, Tilbury
- Policy NS22: Car Park, Coronation Avenue, East Tilbury
- Policy NS23: Land adjacent and rear of George and Dragon Public House, Linford
- Policy NS24: Land at East Tilbury Road, Linford

- Policy NS25: Land at Linford Road and Turnpike Lane, Chadwell St Mary
- Policy NS26: Land at St Johns Road, Chadwell St Mary
- Policy NS27: Garage site east of Vigerons Way, Chadwell St Mary
- Policy NS28: 11 River View, Chadwell St Mary
- Policy NS29: Land North of B149 Wood View and River View, Chadwell St Mary
- Policy NS30: Chadfields
- Policy NS31: Lower Crescent, Linford
- Policy NS32: Land south of South Essex College, Thurrock Campus, Grays
- Policy NS33: Land to the east of Butts Lane, Stanford le Hope
- Policy NS34: Whitwell Court, Stanford-le-Hope
- Policy NS35: Land to the rear of Fairview Avenue
- Policy NS36: Land at Wharf Road, Stanford-le-Hope
- Policy NS37: Land east of Rainbow Lane, Stanford-le-Hope
- Policy NS38: Land at Lyndhurst Road, Corringham
- Policy NS39: Former Police Station, Gordon Road, Corringham
- Policy NS40: The Springhouse, Corringham
- Policy NS41: Land between Thames Haven Road and Rookery Hill, Corringham
- Policy NS42: Land west of Church Road, Corringham
- Policy NS43: Manor View
- Policy NS44: The Paddock
- Policy NS63: Land south of School Lane, Orsett
- Policy NS62: Land north of Church Road, Bulphan
- Policy NS64: Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

7.2 The findings of the HRA Screening Assessment identified the following likely significant effects:

- **Physical damage and loss – functionally linked land only:** Thames Estuary and Marshes SPA and Ramsar site

- **Non-physical disturbance:** Thames Estuary and Marshes SPA and Ramsar site
- **Non-physical disturbance – functionally linked land only:** Thames Estuary and Marshes SPA and Ramsar site
- **Non-toxic contamination:** Thames Estuary and Marshes SPA and Ramsar site
- **Increased air pollution:** Thames Estuary and Marshes SPA and Ramsar and Medway Estuary and Marshes SPA and Ramsar site.
- **Recreation:** Thames Estuary and Marshes SPA and Ramsar site and Outer Thames Estuary SPA
- **Reduced water quality:** Essex Estuaries SAC, Crouch and Roach Estuaries Ramsar site and SPA, Foulness Ramsar site and SPA, Colne Estuary Ramsar site and SPA, Blackwater Estuary Ramsar site and SPA, Dengie Ramsar site and SPA, Thames Estuary and Marshes Ramsar site and SPA, Abberton Reservoir Ramsar site and SPA and Stour and Orwell Estuaries Ramsar Site and SPA
- **Reduced water quantity:** Thames Estuary and Marshes SPA and Ramsar site, Benfleet and Southend Marshes SPA and Ramsar site, Essex Estuaries SAC, Foulness (Mid-Essex Coast Phase 5) SPA and Ramsar site, Medway Estuary and Marshes SPA and Ramsar site and The Swale SPA and Ramsar site

7.3 The Appropriate Assessment Stage identified whether the above likely significant effects will, in light of mitigation and avoidance measures, result in adverse effects on integrity of the Habitats sites either alone or in-combination with other plans or projects. The findings of the Appropriate Assessment are detailed below.

7.4 It can be concluded that adverse effects on Thames Estuary and Marshes SPA and Ramsar Site and Medway Estuary and Marshes SPA and Ramsar site from air pollution could not be ruled out at this stage, due to potential in combination effects due to the LTC. It was concluded that no adverse effect on integrity will occur for other impact types or Habitats sites, subject to the provision of safeguarding and mitigation measures as detailed in **Chapter 6**.

7.5 A summary of the findings by impact is outlined below.

- **Physical damage and loss – functionally linked land only** – the Appropriate Assessment concluded potential adverse effect on integrity as a result of offsite

physical damage and loss in relation to Thames Estuary and Marshes SPA and Ramsar site. A number of site allocations were identified as having moderate or high suitability to support qualifying bird species and therefore, mitigation measures are required. A site allocation with low suitability to support designated invertebrate species was also identified, and as such, further surveys, a habitat appraisal and potential avoidance and mitigation measures will be required.

- **Non-physical disturbance – onsite and functionally linked land** – the Appropriate Assessment concluded potential adverse effect on integrity as a result of non-physical disturbance onsite, and of functionally linked land in relation to Thames Estuary and Marshes SPA and Ramsar site. Mitigation measures will be required to prevent noise, vibration and light disturbance on functionally linked land within 2.5km of the Thames Estuary and Marshes SPA and Ramsar site.
- **Non-toxic contamination** - the Appropriate Assessment concluded no adverse effect on integrity as a result of non-toxic contamination in relation to Thames Estuary and Marshes SPA and Ramsar Site as long as best practice construction methods are carried out at the project level.
- **Air pollution** – the Appropriate Assessment concluded that adverse effects as a result of air pollution in relation to Thames Estuary and Marshes SPA and Ramsar Site and Medway Estuary and Marshes SPA and Ramsar site due to in combination effects with the Lower Thames Crossing (LTC) could not be ruled out. Therefore, in order to determine the requirements for mitigation in relation to increase air pollution, traffic data will be required to determine whether proposed growth will result in an exceedance of Annual Average Daily Traffic (AADT) thresholds. This will be required to ensure that a conclusion can be made as to whether there is potential for an adverse effect on the integrity of these Habitats sites.
- **Recreation** – the Appropriate Assessment concluded no adverse effect on integrity as a result of recreational pressure in relation to Thames Estuary and Marshes SPA and Ramsar Site, and Outer Thames Estuary SPA. Mitigation is provided through the Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy as well as through open space provision in the local plan, including Policy DM28 – Open Space, sports and Leisure.
- **Water Quantity** – the Appropriate Assessment concluded no adverse effect on integrity as a result of water quantity in relation to Essex Estuaries SAC, Crouch and Roach Estuaries Ramsar site and SPA, Foulness Ramsar site and SPA, Colne Estuary Ramsar site and SPA, Blackwater Estuary Ramsar site and SPA, Dengie Ramsar site and SPA, Thames Estuary and Marshes

Ramsar site and SPA, Abberton Reservoir Ramsar site and SPA and Stour and Orwell Estuaries Ramsar Site and SPA. Mitigation will be provided through the WRMP 2024 and through safeguarding and policy protection in the Local Plan.

- **Water Quality** – the Appropriate Assessment concluded no adverse effect on integrity as a result of water quality in relation to Thames Estuary and Marshes SPA and Ramsar site. Mitigation will be provided through the Drainage and Wastewater Management Plan and through safeguarding and policy protection in the Local Plan.

7.6 In the absence of AADT traffic modelling data and in line with a precautionary approach, a conclusion of no adverse effect on integrity cannot be reached in relation to the effect of air pollution on Thames Estuary and Marshes SPA and Ramsar site and Medway Estuary and Marshes SPA and Ramsar site.

Next steps

7.7 HRA is an iterative process and as such is expected to be updated in light of newly available evidence and comments from key consultees. As part of consultation on the Draft Thurrock Local Plan (Parts 1 and 2), this report should be subject to consultation with Natural England, as well as the Environment Agency, to confirm that the conclusions of the assessment are considered appropriate at this stage of plan-making.

7.8 At the next stage of plan-making, the HRA report will be submitted to the Secretary of State for Examination along with the Local Plan.

7.9 Given the conclusion of uncertain adverse effect on integrity in relation to air pollution in relation to Thames Estuary and Marshes SPA and Ramsar site and Medway Estuary and Marshes SPA and Ramsar site, additional evidence will be required to inform further HRA before the plan can be adopted.

Key Evidence Required for Appropriate Assessment

7.10 Alongside the next iteration of the Local Plan, the following key evidence will be required to inform the HRA:

- Road traffic AADT calculations are required to determine whether thresholds are exceeded in-combination with other plans and projects as a result of the Local Plan. If AADT thresholds are exceeded air quality modelling will be required to understand whether the Plan will result in adverse effect on integrity

and whether avoidance and mitigation measures can be applied which would prevent an adverse effect on integrity.

LUC

July 2026

Appendix A

Figures

A.1 Figure A.1: Site Allocations of Regulation 19 Local Plan

A.2 Figure A.2: Habitats sites within 15km of Thurrock

A.3 Figure A.3: Strategic Roads within 15km of Thurrock

Figure 1: Site allocations

- Thurrock boundary
- Thurrock 5km buffer
- Neighbouring local authority
- Site allocation
- Education
- Employment
- Housing
- Port
- Gypsy, Traveller and Travelling Showpeople

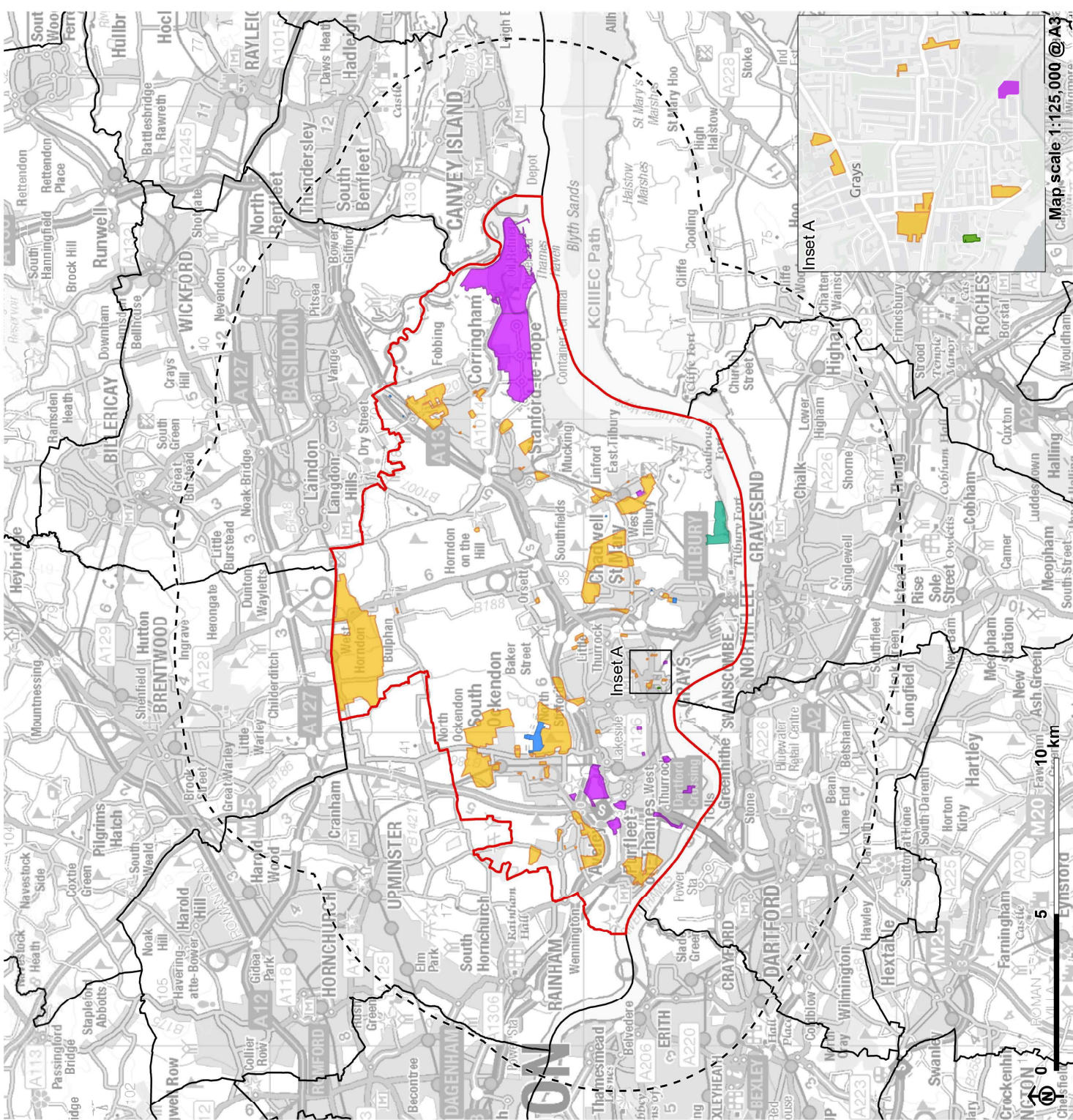
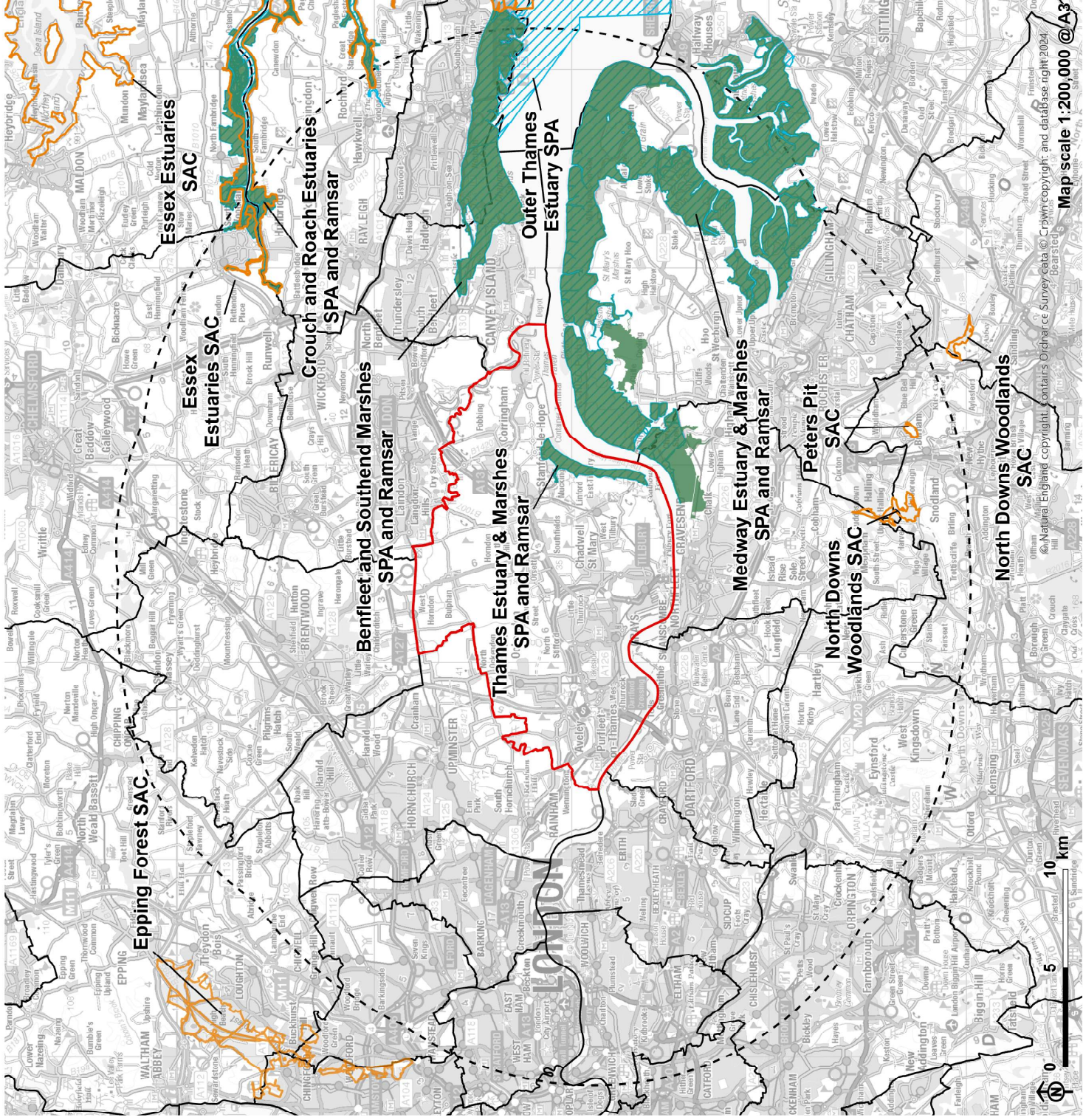
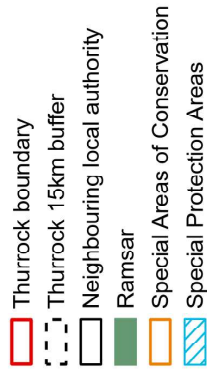
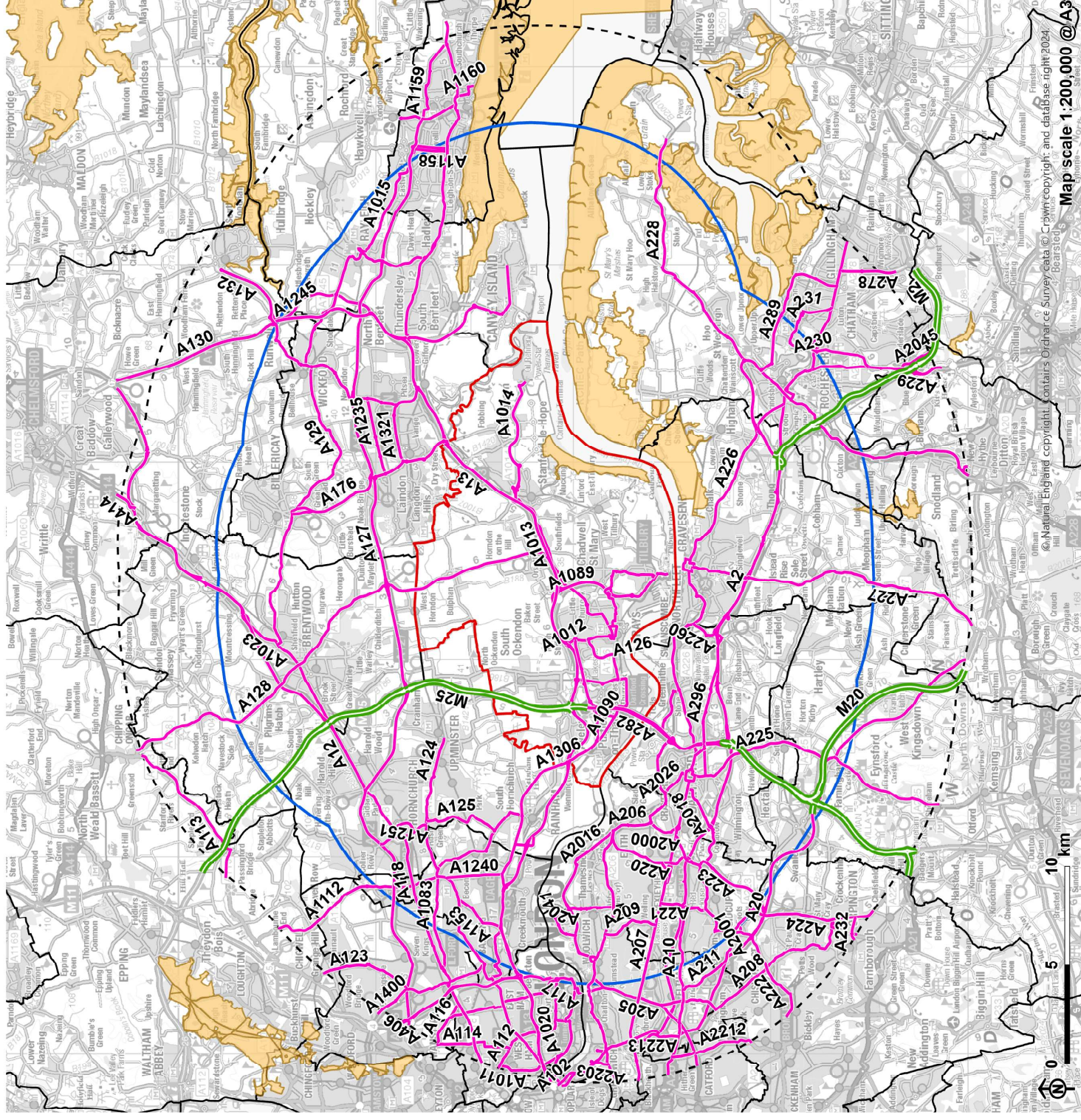


Figure 2: Habitat sites within 15 km of Thurrock District



Map scale 1:200,000 @ A3

 Thurrock boundary
 Thurrock 10km buffer
 Thurrock 15km buffer
 Neighbouring local authority
 Habitat site
 A Road
 Motorway



Appendix B

Attributes of Habitats sites

B.1 This appendix contains information on the Habitats sites scoped into the HRA. Site areas and designated features are drawn from SAC and SPA Standard Data Forms and Ramsar Site Information Sheets [\[See reference 45\]](#) The overviews of sites and their locations are drawn from Natural England's Site Improvement Plans [\[See reference 46\]](#) Site conservation objectives are drawn from Natural England's website and are only available for SACs and SPAs [\[See reference 47\]](#)

Thames Estuary and Marshes SPA (4802.47ha, 0km)

Overview of site and its location

B.2 The Greater Thames Complex consists of the Thames Estuary and Marshes SPA, the Medway Estuary SPA, the Swale SPA and Benfleet and Southend Marshes SPA. The Medway Estuary feeds into and lies on the south side of the Outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and the Isle of Sheppey. The Swale is an estuarine area that separates the Isle of Sheppey from the Kent mainland and joins the Medway to the west. Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. These four sites contain a wide diversity of coastal habitats such as grazing marsh, saltmarsh and mud/sandflat and eelgrass beds that support important numbers of waterbirds throughout the year. Wintering birds that use these estuaries include grebes, geese, ducks and waders whilst in summer breeding birds can be found, such as waders and terns. The area is also important for spring and autumn migration periods.

Qualifying features

B.3 Supports the following internationally important waterbird assemblage:

- Pied avocet *Recurvirostra avosetta*
- Hen harrier *Circus cyaneus*
- Ringed plover *Charadrius hiaticula*
- Grey plover *Pluvialis squatarola*
- Black-tailed godwit *Limosa limosa islandica*
- Red knot *Calidris canutus*
- Dunlin *Calidris alpina alpina*
- Common redshank *Tringa totanus*

Conservation objectives

B.4 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

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

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.

Changes in species distributions

There is a decline in population size for some of the bird species on some of the SPAs (Cook et al. 2013*). A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further

actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines.

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 fisheries in Habitats Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent & Essex IFCA. 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.

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.

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

B.5 In general, the qualifying bird species of the SPA rely on:

- The sites ecosystem as a whole (see list of habitats below).
- Maintenance of populations of species that they feed on (see list of diets below).
- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

B.6 Hen harrier *Circus cyaneus*

- Habitat preference – Moor, marsh, steppe and fields.
- Diet – Mainly small birds and mammals.

B.7 Avocet *Recurvirostra avosetta*

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

B.8 Ringed plover *Charadrius hiaticula*

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

B.9 Grey plover *Pluvialis squatarola*

- Habitat preference – Tundra, and on migration pasture and estuaries.
- Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

B.10 Red knot *Calidris canutus islandica*

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

B.11 Dunlin *Calidris alpina*

- Habitat preference – Tundra, moor, heath, and on migration estuaries and coastal habitat.
- Diet – Insects, snails and worms.

B.12 Black-tailed godwit *Limosa limosa islandica*

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

B.13 Common redshank *Tringa totanus*

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

Thames Estuary and Marshes Ramsar site (5588.59ha)

Site location

B.14 As for Thames Estuary and Marshes SPA above.

Qualifying features

B.15 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.

B.16 Assemblages of international importance 45,118 waterfowl including the following species:

- Ringed plover *Charadrius hiaticula*
- Black-tailed godwit *Limosa limosa islandica*
- Grey plover *Pluvialis squatarola*
- Red knot *Calidris canutus islandica*
- Dunlin *Calidris alpina alpina*
- Common redshank *Tringa totanus tetanus*

Conservation objectives

B.17 None available

Key vulnerabilities

B.18 As for Thames Estuary and Marshes SPA above.

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

B.19 Plants

- Plant communities are reliant on the coastal habitats within the Ramsar site. These habitats are dependent on a range of coastal factors and processes, including salinity, sedimentation, sea level, turbidity and elevation.

B.20 Birds

- Similar to Thames Estuary and Marshes SPA above.

Benfleet and Southend Marshes SPA (2251.31ha)

Site description

B.21 Benfleet and Southend Marshes are located on the north shore of the Outer Thames Estuary in South-East England. The site comprises an extensive series of saltmarshes, cockle shell banks, mud-flats, and grassland that supports a diverse flora and fauna.

B.22 The Greater Thames Complex consists of the Thames Estuary and Marshes SPA, the Medway Estuary SPA, the Swale SPA and Benfleet and Southend Marshes SPA. The Medway Estuary feeds into and lies on the south side of the Outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and the Isle of Sheppey. The Swale in an estuarine area that separates the Isle of Sheppey from the Kent mainland and joins the Medway to the west. Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. These four sites contain a wide diversity of coastal habitats such as grazing marsh, saltmarsh and mud/sandflat and eelgrass beds that support important numbers of waterbirds throughout the year. Wintering birds that use these estuaries include grebes, geese, ducks and waders whilst in summer breeding birds can be found, such as waders and terns. The area is also important for spring and autumn migration periods.

Qualifying features

B.23 Site regularly supports 34,789 waterfowl over winter, including the following waterbird assemblage:

- Red knot *Calidris canutus*
- Dunlin *Calidris alpina alpina*
- Grey plover *Pluvialis squatarola*
- Ringed plover *Charadrius hiaticula*

- Dark-bellied brent goose *Branta bernicla bernicla*

Conservation objectives

B.24 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site

Key vulnerabilities

Coastal squeeze

B.25 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

B.26 Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating,

may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management.

Invasive species

B.27 Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur.

Changes in species distributions

B.28 There is a decline in population size for some of the bird species on some of the SPAs . These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines.

Fisheries: Commercial marine and estuarine

B.29 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.

Invasive Species

B.30 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

Invasive Species

B.31 *Spartina anglica* may be increasing at the expense of other saltmarsh habitats with adverse implications for SPA bird roost areas in Benfleet & Southend Marshes.

Vehicles: illicit

B.32 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.

Fisheries: Commercial marine and estuarine

B.33 Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European Marine Sites require

assessment and (where appropriate) management. This assessment will be undertaken by Kent & Essex IFCA. 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

Air Pollution: risk of atmospheric nitrogen deposition

B.34 Nitrogen deposition exceeds site-relevant critical loads.

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

B.35 In general, the qualifying bird species of the SPA rely on:

- The sites ecosystem as a whole (see list of habitats below).
- Maintenance of populations of species that they feed on (see list of diets below).
- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

B.36 Dark-bellied brent goose *Branta bernicla bernicla*

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

B.37 Ringed plover *Charadrius hiaticula*

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

B.38 Grey plover *Pluvialis squatarola*

- Habitat preference – Tundra, and on migration pasture and estuaries/
- Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

B.39 Red knot *Calidris canutus islandica*

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

B.40 Dunlin *Calidris alpina*

- Habitat preference – Tundra, moor, heath, and on migration estuaries and coastal habitat.
- Diet – Insects, snails and worms.

Benfleet and Southend Marshes Ramsar site (2251.31ha)

Site description

B.41 As for Benfleet and Southend Marshes SPA above.

Qualifying features

B.42 Comprise an extensive series of saltmarshes, mudflats, and grassland which support a diverse flora and fauna, including internationally important numbers of wintering waterfowl:

- Dark-bellied brent goose *Branta bernicla bernicla*

- Ringed plover *Charadrius hiaticula*
- Grey plover *Pluvialis squatarola*
- Red knot *Calidris canutus islandica*
- Dunlin *Calidris alpina alpina*

Conservation objectives

B.43 None available.

Key vulnerabilities

B.44 As for Benfleet and Southend Marshes SPA above.

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

B.45 As for Benfleet and Southend Marshes SPA above.

Medway Estuary and Marshes SPA (4684.36ha)

Site description

B.46 The Greater Thames Complex consists of the Thames Estuary and Marshes SPA, the Medway Estuary SPA, the Swale SPA and Benfleet & Southend Marshes SPA. The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and the Isle of Sheppey. The

Swale is an estuarine area that separates the Isle of Sheppey from the Kent mainland and joins the Medway to the west. Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. These four sites contain a wide diversity of coastal habitats, such as grazing marsh, saltmarsh and mud/sandflat and eelgrass beds that support important numbers of waterbirds throughout the year. Wintering birds that use these estuaries include grebes, geese, ducks and waders whilst in summer breeding birds can be found, such as waders and terns . The area is also important for spring and autumn migration periods.

Qualifying features

B.47 Supports the following Waterbird assemblage / breeding bird assemblage:

- Dark-bellied brent goose *Branta bernicla bernicla* (wintering).
- Common shelduck *Tadorna tadorna* (wintering).
- Northern pintail *Anas acuta* (wintering).
- Pied avocet *Recurvirostra avosetta* (wintering).
- Pied avocet *Recurvirostra avosetta* (reproducing).
- Ringed plover *Charadrius hiaticula* (wintering).
- Grey plover *Pluvialis squatarola* (wintering).
- Red knot *Calidris canutus*, (wintering).
- Dunlin *Calidris alpina alpina* (wintering).
- Common redshank *Tringa totanus* (wintering).
- Red-throated loon *Gavia stellata* (wintering).
- Great crested grebe *Podiceps cristatus* (wintering).
- Great cormorant *Phalacrocorax carbo* (wintering).
- Bewick's Swan *Cygnus columbianus bewickii* (wintering).
- Eurasian wigeon *Anas Penelope* (wintering).
- Eurasian teal *Anas crecca* (wintering).
- Mallard *Anas platyrhynchos* (wintering).

- Northern shoveler *Anas clypeata* (wintering).
- Common pochard *Aythya farina* (wintering).
- Eurasian oystercatcher *Haematopus ostralegus* (wintering).
- Black-tailed godwit *Limosa limosa islandica* (wintering).
- Eurasian curlew *Numenius Arquata* (wintering).
- Common greenshank *Tringa nebularia* (wintering).
- Ruddy turnstone *Arenaria interpres* (wintering).
- Hen harrier *Circus cyaneus* (wintering)
- Merlin *falco columbarius* (wintering)
- Little tern *sterna albifrons* (reproducing).
- Common tern *sterna hirundo* (reproducing).

Conservation objectives

B.48 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Key vulnerabilities

Coastal squeeze

B.49 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

B.50 Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities, including: boating and watersports; walking; bait-digging; fishing, and wildfowling. Some activities such as powerboating, may produce physical disturbance to habitats. Public access, (especially dog walking and recreational boating) was identified as a medium risk during the 2009 EMS risk review project and this activity is still occurring. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive. There is inadequate information to provide appropriate management.

Invasive species

B.51 Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother

substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur.

Changes in species distributions

B.52 There is a decline in population size for some of the bird species on some of the SPAs. These are likely to be influenced by a number of factors which may vary across the four SPAs. Some of these influences are site-based as described in other parts of this Plan and some relate to wider, broad-scale changes such as wintering species distributions and effects from breeding grounds outside the UK. A greater understanding of the relative importance of site-based and wider influences is required in order to identify the potential for further actions that might halt declines, restore populations or identify scenarios where it is thought unlikely that site-based measures will reverse population declines.

Fisheries: Commercial marine and estuarine

B.53 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.

Invasive Species

B.54 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

Invasive Species

B.55 *Spartina anglica* may be increasing at the expense of other saltmarsh habitats with adverse implications for SPA bird roost areas in Benfleet & Southend Marshes.

Vehicles: illicit

B.56 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.

Fisheries: Commercial marine and estuarine

B.57 Commercial fishing activities categorised as ‘amber or green’ under Defra’s revised approach to commercial fisheries in European Marine Sites require assessment and (where appropriate) management. This assessment will be undertaken by Kent & Essex IFCA. 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

Air Pollution: risk of atmospheric nitrogen deposition

B.58 Nitrogen deposition exceeds site-relevant critical loads.

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

In general, the qualifying bird species of the SPA rely on:

- The sites ecosystem as a whole (see list of habitats below).
- Maintenance of populations of species that they feed on (see list of diets below).
- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

Dark-bellied brent goose *Branta bernicla bernicla*

- Habitat preference: Tundra, on migration marshes & estuaries.
- Diet: Eelgrass (*Zostera*), also vegetation by grazing on land or shallow water.

Common shelduck *Tadorna tadorna*

- Habitat: Marine and Intertidal, Farmland, Wetland, Grassland
- Diet: Invertebrates, small shellfish, aquatic snails.

Northern pintail *Anas acuta*

- Habitat preference: Lakes, rivers, marsh & tundra.
- Diet: Omnivorous, feeds on mud bottom at depths of 10-30cm.

Pied avocet *Recurvirostra avosett*

- Habitat preference: Marine and Intertidal, Wetland, Grassland
- Diet: Aquatic insects and their larvae, crustaceans and worms.

Ringed plover *Charadrius hiaticula*

- Habitat preference: Sandy areas with low vegetation, on migration estuaries.
- Diet: Summer, invertebrates, Winter primarily marine worms, crustaceans and molluscs.

Grey plover *Pluvialis squatarola*

- Habitat preference: Tundra, on migration pasture & estuaries.
- Diet: Summer, invertebrates, Winter primarily marine worms, crustaceans and molluscs.

Red knot *Calidris canutus*

- Habitat preference: Marine and Intertidal, Wetland
- Diet: Shellfish and worms

Dunlin *Calidris alpina alpina*

- Habitat preference: undra, moor, heath, on migration estuaries & coasts.
- Diet: Invertebrates, located by sight and touch.

Common redshank *Tringa tetanus*

- Habitat preference: Rivers, wet grassland, moors & estuaries.
- Diet: Invertebrates, esp earthworms, crane fly larvae (inland) crustaceans, molluscs, marine worms (estuaries).

Red-throated loon *Gavia stellata*

- Habitat: Marine and Intertidal, Wetland
- Diet: Fish

Great crested grebe *Podiceps cristatus*

- Habitat: Urban and Suburban, Marine and Intertidal, Wetland
- Diet: Mainly fish

Great cormorant *Phalacrocorax carbo*

- Habitat: Urban and Suburban, Marine and Intertidal, Wetland
- Diet: fish

Bewicks swan *Cygnus columbianus bewickii*

- Habitat: Marine and Intertidal, Farmland, Wetland
- Diet: In the UK, Bewick's Swans feed in fields on leftover potatoes and grain. On their breeding grounds they eat aquatic plants and grass.

Eurasian wigeon *Anas Penelope*

- Habitat: Marine and Intertidal, Wetland, Grassland

- Diet: Aquatic plants, grasses, roots.

Eurasian teal *Anas crecca*

- Habitat preference: Lakes, marshes, ponds & shallow streams.
- Diet: Omnivorous, mostly seeds in winter, feeds mostly at night in shallow water.

Mallard *Anas platyrhynchos*

- Habitat: Urban and Suburban, Marine and Intertidal, Farmland, Wetland, Grassland
- Diet: Seeds, acorns and berries, plants, insects and shellfish.

Northern shoveler *Anas clypeata*

- Habitat preference: Shallow lakes, marsh, reedbed & wet meadow.
- Diet: Omnivorous, esp. small insects, crustaceans, molluscs, seeds; filters particles with sideways sweeping of bill.

Common pochard *Aythya farina*

- Habitat: Urban and Suburban, Marine and Intertidal, Wetland
- Diet: Plants and seeds, snails, small fish and insects.

Eurasian oystercatcher *Haematopus ostralegus*

- Habitat: Upland, Marine and Intertidal, Farmland, Wetland, Grassland
- Diet: Mussels and cockles on the coast, mainly worms inland.

Black-tailed godwit *Limosa limosa islandica*

- Habitat preference: Marshy grassland & steppe, on migration mudflats.
- Diet: Invertebrates, also some plant material, located by touch and sight

Eurasian curlew *Numenius arquata*

- Habitat preference: Marsh, grassland, on migration mudflats.
- Diet: Omnivorous, though principally invertebrates located by touch.

Common greenshank *Tringa nebularia*

- Habitat: Marine and Intertidal, Wetland
- Diet: Worms, snails and fish

Ruddy turnstone *Arenaria interpres*

- Habitat: Marine and Intertidal, Wetland
- Diet: Insects, crustaceans and molluscs.

Hen harrier *Circus cyaneus*

- Habitat preference: Moor, marsh, steppe and fields.
- Diet: Mostly, small birds, nestlings and small rodents.

Merlin *Falco columbarius*

- Habitat preference: Moor, heath, desert, open coniferous forest.
- Diet: Mostly small birds, caught in open country, usually by pursuit low over ground.

Little Tern: *Sterna albifrons*

- Habitat preference: nest exclusively on the coast in well-camouflaged shallow scrapes on sand and shingle beaches, spits or inshore islets.
- Diet: fish, crustacean and invertebrates.

Common Tern *Sterna hirundo*

- Habitat preference: shallow water, along coasts, at freshwater inland lakes and in estuaries.
- Diet: mainly eat fish, but also consume shrimps and other crustaceans, small squid, marine worms, and leeches.

Medway Estuary and Marshes Ramsar site (4696.74ha)

Site description

B.59 The Greater Thames Complex consists of the Thames Estuary and Marshes SPA, the Medway Estuary SPA, the Swale SPA and Benfleet & Southend Marshes SPA. The Medway Estuary feeds into and lies on the south side of the outer Thames Estuary in Kent, south-east England. It forms a single tidal system with the Swale and joins the Thames Estuary between the Isle of Grain and the Isle of Sheppey. The Swale is an estuarine area that separates the Isle of Sheppey from the Kent mainland and joins the Medway to the west. Benfleet and Southend Marshes is an estuarine area on the Essex side of the Thames Estuary. These four sites contain a wide diversity of coastal habitats, such as grazing marsh, saltmarsh and mud/sandflat and eelgrass beds that support important numbers of waterbirds throughout the year. Wintering birds that use these estuaries include grebes, geese, ducks and waders whilst in summer breeding birds can be found, such as waders and terns . The area is also important for spring and autumn migration periods.

Qualifying features

B.60 Site holds several nationally scarce plants, including:

- sea barley *Hordeum marinum*;
- curved hard-grass *Parapholis incurva*;
- annual beard-grass *Polypogon monspeliensis*;
- Borrer's saltmarsh-grass *Puccinellia fasciculata*;
- slender hare`s-ear *Bupleurum tenuissimum*;
- sea clover *Trifolium squamosum*;
- saltmarsh goose-foot *Chenopodium chenopodioides*;

- golden samphire *Inula crithmoides*;
- perennial glasswort *Sarcocornia perennis*; and
- one-flowered glasswort *Salicornia pusilla*.

B.61 A total of at least twelve British Red Data Book species of wetland invertebrates have been recorded on the site. These include:

- Ground beetle *Polistichus connexus*;
- A fly *Cephalops perspicuous*;
- A dancefly *Poecilobothrus ducalis*;
- A fly *Anagnota collini*;
- A weevil *Baris scolopacea*;
- A water beetle *Berosus spinosus*;
- A beetle *Malachius vulneratus*;
- A rove beetle *Philonthus punctus*;
- The ground lackey moth *Malacosoma castrensis*;
- A horsefly *Atylotus latistriatus*;
- A fly *Campsicnemus magius*;
- A soldier beetle *Cantharis fusca*; and
- A crane fly *Limonia danica*.

B.62 A significant number of non-wetland British Red Data Book species also occur.

B.63 The Site also supports the following internationally important waterbird assemblage:

- Grey plover *Pluvialis Squatarola*
- Common redshank *Tringa totanus tetanus*
- Dark-bellied brent goose *Branta bernicla bernicla*;

- Common shelduck *Tadorna tadorna*;
- Northern pintail *Anas acuta*;
- Ringed plover *Charadrius hiaticula*;
- Red knot *Calidris canutus islandica*; and
- Dunlin *Calidris alpina alpina*.

B.64 Species/populations identified subsequent to designation for possible future consideration under criterion 6:

- Black-tailed godwit *Limosa limosa islandica*

Conservation objectives

B.65 None available.

Key vulnerabilities

B.66 As for Medway Estuary and Marshes SPA above.

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

B.67 Information below on plants was sourced from the Online Plant Atlas 2020.

Perennial glasswort *Sarcocornia perennis*

- A woody perennial subshrub of saltmarshes, especially in bare or sparsely vegetated areas on firm, muddy sand and gravel. *S. perennis* occurs on eroding lower parts of saltmarshes, at higher elevations on saltmarsh drift-lines and on

shell and shingle banks; sometimes also on bare ground behind sea-walls. Lowland.

Annual Beard-grass *Polypogon monspeliensis*

- A native annual grass of barish places by the sea, in damp, cattle-trodden grazing marshes, at the edges of dried-up brackish pools and ditches, and in the uppermost parts of saltmarshes. It is also found around docks and inland as an introduction from birdseed and grass-seed, and formerly from wool shoddy when used as an agricultural fertilizer. Seeds may also be dispersed by birds and vehicles. Lowland.

Saltmarsh Goosefoot *Chenopodium chenopodioides*

- An annual herb of dry, brackish mud of ditches, salt-pans and hoof-marks in the upper part of saltmarshes and in coastal grazing marshes. Lowland.

Sea Barley *Hordeum marinum*

- An annual grass of barish places by the sea, on the trampled margins of dried-up pools and ditches in grazing marshes, on tracks and sea-walls, and in the uppermost parts of saltmarshes; also, very locally, beside salt-treated roads inland. Lowland.

Curved Hard-grass *Parapholis incurve*

- An annual of bare places by the sea, including gravelly mud banks, shingle ridges, rock ledges and cliff-tops, and the uppermost parts of saltmarshes; also in artificial habitats such as sea-walls and wooden mooring stays. There are rare occurrences around docks and inland as a wool and ballast alien and more recently along salt-treated road verges. Lowland.

Borrer's Saltmarsh-grass *Puccinellia fasciculata*

- A tufted short-lived perennial grass of bare places by the sea, in grazing marshes around cattle-poached pools and depressions, on earthen sea-walls, vehicle tracks and the mud dredged from ditches. It also occurs rarely beside salt-treated roads inland. Lowland.

Slender hare's ear *Bupleurum tenuissimum*

- A slender, often diminutive, annual herb that is primarily a colonist of thinly vegetated or disturbed coastal sites, including coastal banks, sea-walls, drained estuarine marshes and the margins of brackish ditches. Inland populations grew on commons and roadsides, as well as open grassland on base-rich clays; it still grows on commons near Malvern (Worcestershire) and on a Cambridgeshire road verge. Lowland.

Sea clover *Trifolium squamosum*

- An annual herb of the dry, uppermost parts of saltmarshes, brackish meadows and by tidal rivers and creeks. It is rarely found inland in open grassland on calcareous soils, and as a casual of waste places and by railways. Lowland.

Golden-samphire *Inula crithmoides*

- A perennial herb of sea-cliffs where it grows on ledges, in crevices and in open turf on calcareous or base-rich rocks, where it is often rooted in soil enriched with calcareous shell sand. In south-eastern England it also occurs in saltmarshes, growing in low-marsh sites on coarse sand and above this on moderately organic soils, frequently where drift-litter accumulates. Lowland.

One-flowered glasswort *Salicornia pusilla*

- A late-germinating and flowering annual herb restricted to the uppermost parts of saltmarshes, growing on low hummocks of firm mud or sand in salt-pans and on the drift-line; also behind sea-walls in areas subject to saltwater seepage and kept open by vehicles or livestock. Lowland.

B.68 Birds

- Similar to Medway Estuary and Marshes SPA above.

North Downs Woodland SAC (287.58ha)

Site description

B.69 The site consists of mature Beech forests and Yew woods on steep slopes. The stands lie within a mosaic of scrub and other woodland types and are the most

easterly of the Beech woodland sites selected. Parts of the woods were affected by the storm of 1987. Small areas of unimproved chalk grassland are also present.

Qualifying features

B.70 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*).

B.71 *Asperulo-Fagetum* beech forests

B.72 *Taxus baccata* woods of the British Isles

Conservation objectives

B.73 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 qualifying natural habitats;
- The structure and function (including typical species) of the qualifying natural habitats; and
- The supporting processes on which the qualifying natural habitats rely.

Key vulnerabilities

Public access / disturbance

B.74 Off-road vehicles as well as all-terrain bikes are having an impact on parts of the woodland. Vehicle damage is associated with vehicles coming off the Public Rights of Way (PRoW) into the woodland. All-terrain bikes favour Yew woodland where there is no understorey and the creation of tracks by bikes is eroding soil around the roots of the Yews.

Forestry and woodland management

B.75 Beech regeneration is insufficient to retain canopy cover in the long term. In addition, Beech saplings are susceptible to squirrel damage.

Invasive species

B.76 Invasive Sycamore has the potential to regenerate in woodland gaps reducing overall extent of SAC feature. This is more of an issue in Beech stands than in Yew woodland where Yew tends to eventually succeed in dominating the canopy.

Air pollution: impact of atmospheric nitrogen deposition

B.77 Nitrogen deposition exceeds site relevant critical loads

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

B.78 H6210 Semi-natural dry grasslands and scrubland facies: on calcaeruous substrates (*Festuco-Brometalia*); Dry grasslands and scrublands on chalk or limestone – Most of these calcareous grasslands are maintained by grazing.

Outer Thames Estuary SPA (379268.14ha)

Site description

B.79 This SPA crosses the 12 nautical mile boundary and therefore lies partly in territorial and partly in offshore waters; hence it is a site for which both Natural England and JNCC have responsibility to provide statutory advice. The SPA lies along the east coast of England in the southern North Sea and extends northward

from the Thames Estuary to the sea area off Great Yarmouth on the East Norfolk Coast.

Qualifying features

B.80 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them include:

- Red throated loon *Gavia stellata* (wintering).
- Little tern *Sterna albifrons* (reproducing).
- Common tern *Sterna hirundo* (reproducing

Conservation objectives

B.81 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; and
- The supporting processes on which the habitats of the qualifying features rely.

Key vulnerabilities

Fisheries: Commercial marine and estuarine

The gear types being assessed are towed demersal gear and dredges, and suction dredges for cockles as well as static/passive fishing gear methods such as gillnets and drift netting represent potentially the most serious direct risk from fishing activity to the birds themselves. Disturbance and displacement effects may arise from boat movements associated with fishing activities. Removal of fish and larger molluscs

can have a significant impact on the structure and functioning of benthic communities. Entanglement in static fishing nets is an important cause of death for red-throated divers in the UK waters. Netting is widespread across the sandbanks but is seasonal and occurs primarily when the red-throated diver population is not at its peak. The scale of by-catch within the site has been assessed by the Kent & Essex IRCA, and was not found to be problematic and so can be deemed low-risk.

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

Red throated loon *Gavia stellata*

- Habitat: Marine and Intertidal, Wetland
- Diet: Fish

Little Tern *Sterna albifrons*

- Habitat preference: nest exclusively on the coast in well-camouflaged shallow scrapes on sand and shingle beaches, spits or inshore islets.
- Diet: fish, crustacean and invertebrates.

Common Tern *Sterna hirundo*

- Habitat preference: shallow water, along coasts, at freshwater inland lakes and in estuaries.
- Diet: mainly eat fish, but also consume shrimps and other crustaceans, small squid, marine worms, and leeches.

Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA (1735.58ha)

Site description

B.82 The Essex Estuaries SIP covers the Essex Estuaries SAC and five mid-Essex coast SPAs (Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie and Foulness). The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of European importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species.

B.83 The Crouch and Roach Estuaries are located on the coast of south Essex in eastern England. 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 along both banks and the river channel. Unlike more extensive estuaries elsewhere in Essex, this leaves a relatively narrow strip of tidal mud which, nonetheless, is used by significant numbers of birds.

Qualifying features

B.84 Site regularly supports over winter:

- Dark-bellied brent goose *Branta bernicla bernicla*

Conservation objectives

B.85 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Key vulnerabilities

Coastal squeeze

B.86 Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the SIP area are important for waterbirds and are also threatened by sea level rise because most are near or below mean 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 water sports, walking, bait-digging, fishing and wildfowling - as well as low-lying aircraft. Some

activities, such as powerboating, may produce physical disturbance to habitats. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive.

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 (perhaps summarised as sensitivity maps and matrices for the SIP area). Difficult issues include:

- Assessing the cumulative effects of numerous, small and often ‘non-standard’ developments
- Development outside the SPA/SAC boundaries can have negative impacts, particularly on the estuaries’ birds
- Assessing the indirect, ‘knock-on’ effects of proposals
- Pressure to relax planning conditions on existing developments.

Changes in species distribution

Declines in the numbers of some of the waterbird species using the Essex Estuaries SIP area may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change. For example, milder winters may be allowing birds to overwinter closer to their northern breeding grounds, or changes on the breeding grounds may be reducing breeding success.

Invasive species

An increase in Pacific oyster *Crassostrea gigas* settlement and colonisation within the Habitats Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. The importance of Pacific oysters for the local shellfish industry is recognised, however we would not like to see an overall increase in the extent of foreshore across the EMS populated by Pacific oysters. Other non-native invasive species such as the American whelk tingle *Urosalpinx cinerea* and slipper limpet *Crepidula fornicata* are known to occupy subtidal muddy habitats, potentially impacting native communities through competition for resources and predation.

The invasive common cord-grass *Spartina anglica* occurs widely within this site, as well as native small cord-grass *Spartina maritima* in certain locations, and the site is designated for H1320 *Spartina* swards. There is a need to improve understanding of the dynamics of *S.anglica* on the site in order to determine if changes in the species' distribution adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.

Fisheries: Recreational marine and estuarine

Recreational bait digging may impact waterbirds by reducing prey availability and creating disturbance in intertidal feeding areas. It could also damage the intertidal mudflats and sandflats and associated sub-features and communities, such as eelgrass beds. The extent of the activity and potential impacts on site features are not currently well understood.

Fisheries: Commercial marine and estuarine

Commercial fishing activities categorised as Amber or Green under Defra's revised approach to commercial fisheries in EMSs are being assessed by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA) to determine whether management is required. For activities categorised as Amber and Green these assessments should take account of any relevant in combination effects with other fishing activities. Shellfish dredging over subtidal habitats has been identified as an

Amber activity and is considered a high priority for assessment and development of possible management for the site.

Marine fisheries carried out under private rights, or under management defined in Several or Hybrid Orders, fall outside Defra's revised approach to commercial fisheries management in EMSs. A variety of fishing gears are used in these fisheries (e.g. Hydraulic and non hydraulic dredging and shore based activities (e.g. shellfish collection)) which may be applying pressure to site features, including abrasion of the seabed, visual disturbance, and habitat structure changes. Potential impacts need to be better understood and assessed with potential management introduced if required.

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.

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

B.87 In general, the qualifying bird species of the SPA rely on:

- The sites ecosystem as a whole (see list of habitats below).
- Maintenance of populations of species that they feed on (see list of diets below).
- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

B.88 Dark-bellied brent goose *Branta bernicla bernicla* (Non-breeding)

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

B.89 Hen harrier *Circus cyaneus* (Non-breeding)

- Habitat preference – Moor, marsh, steppe and fields.
- Diet – Mainly small birds and mammals.

B.90 Waterbird assemblage

- Many of the assemblage species, including the majority of the waders, feed mainly or exclusively on exposed intertidal sediments and saltmarsh at low tide and congregate to roost at high tide on higher areas of saltmarsh or sometimes on adjacent grazing marshes.
- Other habitats of importance for assemblage species include, along the Crouch, mildly brackish lagoons at Saltcoats and Lower Raypits, fleets within grazing marshes at Marsh Farm and Blue House Farm and, north of the Roach, a fresh water reservoir adjacent to Stannetts Creek.

Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) Ramsar site (1735.58ha)

Site description

B.91 As for Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA above.

Qualifying features

B.92 Supports an appreciable 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*;
- Laxflowered sea-lavender *Limonium humile*;
- Curved hard-grass *Parapholis incurve*;
- Borrer's saltmarsh grass *Puccinellia fasciculate*;
- Stiff saltmarsh grass *Puccinellia rupestris*;
- Spiral tasselweed *Ruppia cirrhosa*;
- One-flowered glasswort *Salicornia pusilla*;
- Small cord-grass *Spartina maritime*;
- Shrubby seablite *Suaeda vera*;
- Sea clover *Trifolium squamosum*.

B.93 Several important invertebrate species also present including:

- Scarce emerald damselfly *Lestes dryas*;
- The shorefly *Parydroptera disco-myzina*;
- The rare soldier fly *Stratiomys singularior*;
- The large horsefly *Hybomitra expollicata*;
- Beetles *Graptodytes bilineatus* and *Malachius vulneratus*;
- The ground lackey moth *Malacosoma castrensis* and *Eucosoma catoprana*.

B.94 Also supports the following internationally important waterbird assemblage:

- Dark-bellied brent goose *Branta bernicla bernicla*

Conservation objectives

B.95 None available.

Key vulnerabilities

B.96 As for Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA above.

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

B.97 Plants

- Plant communities are reliant on the coastal habitats within the Ramsar site. These habitats are dependent on a range of coastal factors and processes, including salinity, sedimentation, sea level, turbidity and elevation.

B.98 Invertebrates

- These species are reliant on the coastal habitat and characteristic flora and fauna that are present within the Habitats site. Key sources of food range from flowering plants, organic matter and other invertebrate species.

B.99 Birds

- Similar to Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA above.

Essex Estuaries SAC (46140.82ha)

Site description

B.100 The Essex Estuaries SIP covers the Essex Estuaries SAC and five mid-Essex coast SPAs (Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie and Foulness). The area is a typical, undeveloped, coastal plan estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four

different saltmarsh features of Habitats importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species.

B.101 Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie and Foulness will be discussed separately in the following sections of **Appendix B**.

Qualifying features

B.102 Annex 1 habitats that are a primary reason for selection of this site:

- Estuaries
- Mudflats and sandflats not covered by seawater at low tide.
- Sandbanks which are slightly covered by sea water all the time
- Atlantic salt meadows *Glauco-Puccinellietalia maritimae*
- Salicornia and other annuals colonising mud and sand
- Spartina swards *Spartinion maritimae*
- Mediterranean and thermo-Atlantic halophilous scrubs *Sarcocornetea fruticosi*

Conservation objectives

B.103 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:

- The extent and distribution of qualifying natural habitats;
- The structure and function (including typical species) of qualifying natural habitats; and
- The supporting processes on which qualifying natural habitats rely.

Key vulnerabilities

Coastal squeeze

Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses.

Fisheries: Commercial marine and estuarine

Shellfish dredging over subtidal habitats has been identified as an Amber activity and is considered a high priority for assessment and development of possible management for the site. Bottom towed fishing gear has been categorised as a 'Red' for the interest features listed, specifically the seagrass beds *Zostera* spp, a sub-feature of the SAC.

Planning Permission: general

Several of the issues affecting the Essex Estuaries and the management of disturbance effects on the sites are related to each other, and addressing them is likely to require an improved overview of the relative sensitivities of different habitats, species and locations to different types of development.

Invasive species

Non-native invasive species such as the American whelk tingle *Urosalpinx cinerea* and Slipper limpet *Crepidula fornicata* are known to occupy subtidal muddy habitats, potentially impacting native communities through competition for resources and predation. Invasive common cord grass may adversely affect plant species for which the Essex Estuaries SAC is designated.

Fisheries: Recreational marine and estuarine

Recreational bait digging may damage the intertidal mudflats and sandflats and associated sub-features and communities, such as eelgrass beds. The extent of the activity and potential impacts on site features are not currently well understood.

Air Pollution: risk of atmospheric nitrogen deposition

Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.

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

B.104 Habitat

- The qualifying habitats of the SAC are reliant a range of coastal factors, including salinity, sedimentation, tide, sea level, turbidity and elevation, which influence the interdependent intertidal, subtidal and terrestrial habitats. These factors influence the complex interdependent intertidal, subtidal and terrestrial habitats present along the coast.

B.105 Additional factors are provided below for each habitat (where relevant).

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

Peters Pit SAC (28.3ha)

Site description

B.106 Peter's Pit is an old chalk quarry situated in the North Downs in north Kent, with large ponds situated amongst grassland, scrub and woodland. The ponds have widely fluctuating water levels and large great crested newt *Triturus cristatus* populations have been recorded breeding here.

Qualifying features

- Great crested newt *Triturus cristatus*

Conservation objectives

B.107 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 on which the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

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

B.108 Great crested newt *Triturus cristatus*

- Habitat: Large ponds situated amongst grassland, scrub and woodland. The ponds have widely fluctuating water levels and large great crested newt populations have been recorded breeding here.
- Diet: Primarily of invertebrates including insects, worms, water snails, larvae and sometimes tadpoles.

Habitat sites more 15km from Thurrock:

Foulness (Mid-Essex Coast Phase 5) SPA (10968.9ha)

Site description

B.109 Foulness is located on the coast of Essex, on the east coast of England north of the mouth of the Thames estuary. The site is part of an open coast estuarine system comprising grazing marsh, saltmarsh, intertidal mud-flats, cockle-shell banks and sand-flats. It includes one of the three largest continuous sand-silt flats in the UK. The diversity of high quality coastal habitats present support important populations of breeding, migratory and wintering waterbirds, notably very important concentrations of Dark-bellied Brent Goose *Branta bernicla bernicla*. Foulness is an integral component of the phased Mid-Essex Coast SPA.

Qualifying features

- Ringed plover *Charadrius hiaticula*
- Grey plover *Pluvialis squatarola*
- Red knot *Calidris canutus*
- Sandwich tern *Sterna sandvicensis*
- Little tern *Sterna albifrons*
- Common tern *Sterna hirundo*
- Bar-tailed godwit *Limosa lapponica*

- Common redshank *Tringa totanus*
- Hen harrier *Circus cyaneus*
- Eurasian oystercatcher *Haematopus ostralegus*
- Pied avocet *Recurvirostra avosetta*
- Dark-bellied brent goose *Branta bernicla bernicla*

Conservation objectives

B.110 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Key vulnerabilities

B.111 Similar to Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA above.

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

B.112 In general, the qualifying bird species of the SPA rely on:

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

- Maintenance of populations of species that they feed on (see list of diets below).
- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

B.113 Ringed plover *Charadrius hiaticula*

- Habitat preference - Sandy areas with low vegetations, and on migration estuaries.
- Diet - In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

B.114 Grey plover *Pluvialis squatarola*

- Habitat preference - Tundra, and on migration pasture and estuaries.
- Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

B.115 Red knot *Calidris canutus*

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

B.116 Sandwich tern *Sterna sandvicensis*

- Habitat preference – Coastal areas, nesting in colonies on sand and shingle beaches.
- Diet – Fish such a sandeels, sprats and whiting.

B.117 Little tern *Sterna albifrons*

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

B.118 Common tern *Sterna hirundo*

- Habitat preference – Shallow water, along coasts, at freshwater inland lakes and in estuaries.
- Diet – Mainly fish, but also consume shrimps and other crustaceans, small squid, marine worms and leeches.

B.119 Bar-tailed godwit *Limosa lapponica*

- Habitat preference – large estuaries and coastline.
- Diet – Mainly shellfish, marine snails and worms and shrimps.

B.120 Common redshank *Tringa totanus*

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

B.121 Hen harrier *Circus cyaneus*

- Habitat preference – Moor, marsh, steppe and fields.
- Diet – Mainly small birds and mammals.

B.122 Eurasian oystercatcher *Haematopus ostralegus*

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

B.123 Pied avocet *Recurvirostra avosetta*

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

B.124 Dark-bellied brent goose *Branta bernicla bernicla*

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

Foulness (Mid-Essex Coast Phase 5) Ramsar site (10932.95ha)

Qualifying features

B.125 This site qualifies by virtue of the extent and diversity of saltmarsh habitat present. This and four other sites in the Mid-Essex Coast Ramsar site complex, include a total of 3,237ha, that represent 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.

B.126 The site supports a number of nationally-rare and nationally-scarce plant species, and British Red Data Book invertebrates.

B.127 The site contains extensive saltmarsh habitat, with areas supporting full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.

B.128 Assemblages of international importance 82,148 waterfowl with species including:

- Dark-bellied brent goose *Branta bernicla bernicla*;
- Eurasian oystercatcher *Haematopus ostralegus ostralegus*;
- Grey plover *Pluvialis squatarola*;
- Red knot, *Calidris canutus islandica*;
- Bar-tailed godwit, *Limosa lapponica lapponica*

Conservation objectives

B.129 None available.

Key vulnerabilities

B.130 Similar to Crouch and Roach Estuaries (Mid-Essex Coast Phase 3) SPA above.

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

B.131 Plants

- Plant communities are reliant on the saltmarsh habitats within the Ramsar site. These habitats are dependent on a range of coastal factors and processes, including salinity, sedimentation, sea level, turbidity and elevation.

B.132 Birds

- Similar to Foulness (Mid-Essex Coast Phase 5) SPA above.

Epping Forest SAC (1604.95ha)

Site descriptions

B.133 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.

Qualifying features

- Northern Atlantic wet heaths with *Erica tetralix*
- European dry heaths
- Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (*Quercion roburipetraeae* or *Ilici-Fagenion*)
- Stag beetle *Lucanus cervus*

Conservation objectives

B.134 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 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.

Key vulnerabilities

Air Pollution: impact of atmospheric nitrogen deposition

B.135 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 pollution impacts.

Under-Grazing

B.136 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.

Public Access/Disturbance

B.137 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.

Changes in species distributions

B.138 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 availability.

Inappropriate water levels

B.139 Wet heath is dependent on suitable ground water levels. There is a threat of prolonged drying out through climate change.

Water Pollution

B.140 Surface run-off of poor quality water from roads with elevated levels of pollutants, nutrients and salinity may ebb affecting wet heath, probably mostly around the edges.

Invasive species

B.141 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.

B.142 Grey squirrel is not currently known to be significantly affecting tree health or regeneration, but there is a need to retain vigilance and perhaps consider increased awareness of the likely effects and signs of impact.

Disease

B.143 Tree diseases such as *Phytophthora* present a real threat to Beech.

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

B.144 Northern Atlantic wet heaths with *Erica tetralix*

- Reliant on acidity and nutrient-poor substrates such as shallow peats or sandy soils with impeded drainage.

B.145 European dry heaths

- Rely on freely-draining, acidic to circumneutral soils with low nutrient content. Mostly managed by extensive grazing or in upland habitats as grouse moors.

B.146 Stag beetle *Lucanus cervu*

- Habitat preference – Woodland edges, hedgerows, traditional orchards, parks and gardens
- Diet – Decaying wood under the ground

The Swale SPA (6514.71ha)

Site description

B.147 The Swale is located on the south side of the outer part of the Thames Estuary in south-eastern England. The Swale is an estuarine area that separates the Isle of Sheppey from the Kent mainland. To the west it adjoins the Medway Estuary. It is a complex of brackish and freshwater, floodplain grazing marsh with ditches, and intertidal saltmarshes and mud-flats.

Qualifying features

- Grey plover *Pluvialis squatarola*
- Dark-bellied brent goose *Branta bernicla bernicla*
- Ringed plover *Charadrius hiaticula*
- Common redshank *Tringa totanus*
- Dunlin *Calidris alpina*
- Eurasian teal *Anas crecca*
- Gadwall *Anas strepera*
- Eurasian oystercatcher *Haematopus ostralegus*
- Common curlew *Numenius arquata*

Conservation objectives

B.148 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and
- The distribution of the qualifying features within the site.

Key vulnerabilities

B.149 Similar to Thames Estuary and Marshes SPA above.

Invasive species

B.150 Non-native invasive species such as sea squirt and pacific oyster are spreading along the Kent coast and could begin to impact on the Swale. Sea squirt has been found in the Medway, and Pacific oysters are regarded as increasing in the Essex-Southend area. These species threaten habitats due to their ability to smother substrate and other sessile organisms. There is no good understanding of the overall distribution of these species in this site. Assessment is needed in key areas of ports and marinas, where introductions tend to first occur.

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

B.151 In general, the qualifying bird species of the SPA rely on:

- The sites ecosystem as a whole (see list of habitats below).
- Maintenance of populations of species that they feed on (see list of diets below).
- Off-site habitat, which provide foraging habitat for these species.
- Open landscape with unobstructed line of sight within nesting, foraging or roosting habitat.

B.152 Grey plover *Pluvialis squatarola*

- Habitat preference – Tundra, and on migration pasture estuaries
- Diet – In summer, invertebrates and in winter primarily marine worms, crustaceans and molluscs.

B.153 Dark-bellied brent goose *Branta bernicla bernicla*

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

B.154 Ringed plover *Charadrius hiaticula*

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

B.155 Common redshank *Tringa totanus*

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

B.156 Dunlin *Calidris alpina*

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

B.157 Eurasian teal *Anas crecca*

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

B.158 Gadwall *Anas strepera*

- Habitat preference – Marshes, lakes, and on migration also rivers and estuaries.
- Diet – Leaves, shoots, mostly while swimming with head under water.

B.159 Eurasian oystercatcher *Haematopus ostralegus*

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

B.160 Common curlew *Numenius arquata*

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

The Swale Ramsar site (6514.71ha)

Qualifying features

B.161 The site supports nationally scarce plants and at least seven British Red data book invertebrates.

B.162 Assemblages of international importance 77501 waterfowl with species including:

- Common redshank *Tringa totanus tetanus*
- Dark-bellied brent goose *Branta bernicla bernicla*

- Grey plover *Pluvialis squatarola*

B.163 Species/populations identified subsequent to designation for possible future consideration under criterion 6.

- Ringed plover *Charadrius hiaticula*
- Eurasian wigeon *Anas Penelope*
- Northern pintail *Anas acuta*
- Northern shoveler *Anas clypeata*
- Black-tailed godwit *Limosa limosa islandica*

Conservation objectives

B.164 None available.

Key vulnerabilities

B.165 Similar to Thames Estuary and Marshes SPA and The Swale SPA above.

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

B.166 Plants

- Plant communities are reliant on the coastal habitats within the Ramsar site. These habitats are dependent on a range of coastal factors and processes, including salinity, sedimentation, sea level, turbidity and elevation.

B.167 Birds

- Similar to The Swale SPA above

B.168 Eurasian wigeon *Anas Penelope*

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

B.169 Northern pintail *Anas acuta*

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

B.170 Northern shoveler *Anas clypeata*

- Habitat preference – Shallow lakes, marsh, reedbed and wet meadow.
- Diet – Omnivorous, esp. small insects, crustaceans, molluscs, seeds; filters particles with sideways sweeping of bill

B.171 Black-tailed godwit *Limosa limosa islandica*

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

Blackwater Estuary (Mid-Essex Coast Phase 4) SPA (4403.38)

B.172 The Essex Estuaries SIP covers the Essex Estuaries SAC and five mid-Essex coast SPAs (Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie and Foulness). The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of European importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species.

Qualifying features:

B.173 Qualifying Features (Waterbird assemblage):

- Dark-bellied brent goose *Branta bernicla bernicla* (wintering).
- Common pochard *Aythya ferina* (reproducing).
- Hen harrier *Circus cyaneus* (wintering).
- Grey plover *Pluvialis squatarola* (wintering).
- Dunlin *Calidris alpina alpina* (wintering).
- Black-tailed godwit *Limosa limosa islandica* (wintering).
- Little tern *Sterna albifrons* (reproducing).
- Ringed plover *Charadrius hiaticula* (wintering and reproducing).

Natural England conservation objectives:

B.174 With regard to the SPA and the individual species and/or assemblage of species for which the site has been classified, and subject to natural change;

B.175 Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

Key vulnerabilities and environmental conditions to support site integrity:

Coastal squeeze

B.176 Coastal defences along much of the Essex coastline prevent intertidal habitats from shifting landward in response to rising sea levels. As a result, these habitats are being gradually degraded and reduced in extent, with knock-on effects on the waterbirds and other species they support. 'Managed realignment' schemes and additional intervention measures to create new areas of intertidal habitat and reduce erosion rates are being implemented but more will be needed to offset future losses. Grazing marshes in the SIP area are important for waterbirds and are also threatened by sea level rise because most are near or below mean high tide level, currently protected behind seawalls.

Public Access/Disturbance

B.177 Breeding and overwintering waterbirds are susceptible to human disturbance from a range of land- and water-based activities - including boating and watersports, walking, bait-digging, fishing and wildfowling - as well as low-flying aircraft. Some activities, such as powerboating, may produce physical disturbance to habitats. Moderate levels of disturbance in less sensitive locations may have no significant effect on the numbers of birds using the SIP area but the types, levels and locations of potentially disturbing activities are constantly changing. Managing the changes to minimise the risk of disturbance impacts will require a better understanding of which species and habitats are most susceptible, which types of activity are most disturbing, and which locations and times of year are most sensitive.

Fisheries: Commercial marine and estuaries

B.178 Commercial fishing activities categorised as Amber or Green under Defra's revised approach to commercial fisheries in EMSs are being assessed by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA) to determine whether management is required. For activities categorised as Amber and Green these assessments should take account of any relevant in combination effects with other fishing activities. Shellfish dredging over subtidal habitats has been identified as an Amber activity and is considered a high priority for assessment and development of possible management for the site.

Planning permission: General

B.179 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 (perhaps summarised as sensitivity maps and matrices for the SIP area). Difficult issues include:

- (a) Assessing the cumulative effects of numerous, small and often 'non-standard' developments
- (b) Development outside the SPA/SAC boundaries can have negative impacts, particularly on the estuaries' birds
- (c) Assessing the indirect, 'knock-on' effects of proposals
- (d) Pressure to relax planning conditions on existing developments.

Changes in species distributions

B.180 Declines in the numbers of some of the waterbird species using the Essex Estuaries SIP area may be due to changes in their distributions or population levels at a national or continental scale, possibly linked to climate change. For example, milder winters may be allowing birds to overwinter closer to their northern breeding

grounds, or changes on the breeding grounds may be reducing breeding success. When assessing SPA condition, distinguishing these types of large-scale effect from effects produced by changes within the site itself is important.

Invasive species

B.181 An increase in Pacific oyster *Crassostrea gigas* settlement and colonisation within the European Marine Site (EMS) may result in areas of foreshore being covered in such numbers as to make them difficult to access and utilise as feeding grounds for overwintering birds. The importance of Pacific oysters for the local shellfish industry is recognised, however we would not like to see an overall increase in the extent of foreshore across the EMS populated by Pacific oysters. Other non-native invasive species such as the American whelk tingle *Urosalpinx cinerea* and Slipper limpet *Crepidula fornicata* are known to occupy subtidal muddy habitats, potentially impacting native communities through competition for resources and predation.

Fisheries: Recreational marine and estuarine

B.182 Recreational bait digging may impact waterbirds by reducing prey availability and creating disturbance in intertidal feeding areas. It could also damage the intertidal mudflats and sandflats and associated sub-features and communities, such as eelgrass beds. The extent of the activity and potential impacts on site features are not currently well understood.

Fisheries: Commercial marine and estuarine

B.183 Bottom towed fishing gear (i.e. any fishing instrument designed to take sea fisheries resources from the seabed) has been categorised as a 'Red' for the interest features listed, specifically the seagrass beds *Zostera* spp, a sub-feature of the SAC, as part of Defra's revised approach to commercial fisheries management in European Marine Sites (EMS). Appropriate management measures will be

implemented and enforced by Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA) who have put in place the 'Bottom Towed Fishing Gear Byelaw' within the SAC to prohibit the above fishing gear being used over the majority of known seagrass beds.

Fisheries: Commercial marine and estuarine

B.184 Marine fisheries carried out under private rights, or under management defined in Several or Hybrid Orders, fall outside Defra's revised approach to commercial fisheries management in EMSs. A variety of fishing gears are used in these fisheries (e.g. Hydraulic and non-hydraulic dredging and shore based activities (e.g. shellfish collection)) which may be applying pressure to site features, including abrasion of the seabed, visual disturbance, and habitat structure changes. Potential impacts need to be better understood and assessed with potential management introduced if required.

Invasive Species

B.185 The invasive Common cord-grass *Spartina anglica* occurs widely within this site, as well as native Small cord-grass *Spartina maritima* in certain locations, and the site is designated for H1320 *Spartina* swards. There is a need to improve understanding of the dynamics of *S.anglica* on the site in order to determine if changes in the species' distribution adversely affect other species and habitats, including feeding and roosting areas of SPA bird species.

Air Pollution: risk of atmospheric nitrogen deposition

B.186 Atmospheric nitrogen deposition exceeds the relevant critical loads for coastal dune habitats used by breeding terns and hence there is a risk of harmful effects. However, on the Essex estuaries declines in the numbers of breeding terns appear to be due mainly to erosion of a man-made cockle-shingle bank (at Foulness) and to

disturbance (elsewhere), rather than to over-vegetation of breeding areas caused by nitrogen deposition.

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

Dark-bellied brent goose *Branta bernicla bernicla*

- Habitat preference: Tundra, on migration marshes & estuaries.
- Diet: Eelgrass (*Zostera*), also vegetation by grazing on land or shallow water.

Common pochard *Aythya farina*

- Habitat: Urban and Suburban, Marine and Intertidal, Wetland
- Diet: Plants and seeds, snails, small fish and insects.

Hen harrier *Circus cyaneus*

- Habitat preference: Moor, marsh, steppe and fields.
- Diet: Mostly, small birds, nestlings and small rodents.

Grey plover *Pluvialis squatarola*

- Habitat preference: Tundra, on migration pasture & estuaries.
- Diet: Summer, invertebrates, Winter primarily marine worms, crustaceans and molluscs.

Dunlin *Calidris alpina alpina*

- Habitat preference: Tundra, moor, heath, on migration estuaries & coasts.
- Diet: Invertebrates, located by sight and touch.

Black-tailed godwit *Limosa limosa islandica*

- Habitat preference: Marshy grassland & steppe, on migration mudflats.
- Diet: Invertebrates, also some plant material, located by touch and sight

Little Tern *Sterna albifrons*

- Habitat preference: nest exclusively on the coast in well-camouflaged shallow scrapes on sand and shingle beaches, spits or inshore islets.
- Diet: fish, crustacean and invertebrates.

Ringed plover *Charadrius hiaticula*

- Habitat preference: Sandy areas with low vegetation, on migration estuaries.
- Diet: Summer, invertebrates, Winter primarily marine worms, crustaceans and molluscs.

Blackwater Estuary (Mid-Essex Coast Phase 4) Ramsar site

B.187 The Essex Estuaries SIP covers the Essex Estuaries SAC and five mid-Essex coast SPAs (Blackwater Estuary, Colne Estuary, Crouch and Roach Estuaries, Dengie and Foulness). The area is a typical, undeveloped, coastal plain estuarine system with associated open coast mudflats and sandbanks. Sub-tidal areas have a rich invertebrate fauna and there are extensive intertidal mudflats and sandflats. Four different saltmarsh features of European importance are represented as well as large areas of grazing marsh. The site is one of the most important areas for overwintering waterbirds in the UK and is of international importance for several breeding bird species

Qualifying features:

B.188 Represents 70% of the saltmarsh habitat in Essex and 7% of the total area of saltmarsh in Britain.

B.189 Invertebrate fauna includes at least 16 British Red Data Book species: water beetle *Paracymus aeneus*; damselfly *Lestes dryas*; flies *Aedes flavescens*, *Erioptera bivittata*, *Hybomitra expollicata*; spiders *Heliophanus auratus* and *Trichopterna cito*; beetles *Baris scolopacea*, *Philonthus punctus*, *Graptodytes bilineatus* and *Malachius vulneratus*; flies *Campsicemus magius*, *Myopites eximia*; moths *Idaea ochrata* and *Malacosoma castrensis*; spider *Euophrys*.

B.190 Supports a full and representative sequences of saltmarsh plant communities covering the range of variation in Britain.

B.191 Supports the following internationally important wildfowl assemblage:

- Dark-bellied brent goose *Branta bernicla bernicla*.
- Grey plover *Pluvialis squatarola*.
- Dunlin *Calidris alpina alpina*.
- Black-tailed godwit *Limosa limosa islandica*.

Species identified subsequent to designation for possible future consideration under criterion 6

- Common shelduck *Tadorna tadorna*.
- European golden plover *Pluvialis apricaria apricaria*.
- Common redshank *Tringa totanus tetanus*.

Natural England conservation objectives:

B.192 None available.

Key vulnerabilities and environmental conditions to support site integrity:

B.193 As for Blackwater Estuary (Mid-Essex Coast Phase 4) SPA above.

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

Common shelduck *Tadorna tadorna*

- Habitat: Marine and Intertidal, Farmland, Wetland, Grassland
- Diet: Invertebrates, small shellfish, aquatic snails.

European golden plover, *Pluvialis apricaria apricaria*;

- Habitat: Upland, Marine and Intertidal, Farmland, Heathland, Wetland, Grassland
- Diet: Worms, beetles and insects.

Common redshank *Tringa tetanus*

- Habitat preference: Rivers, wet grassland, moors & estuaries.
- Diet: Invertebrates, esp earthworms, crane fly larvae (inland) crustaceans, molluscs, marine worms (estuaries).

Please see Blackwater Estuary (Mid-Essex Coast Phase 4) SPA above for remaining species

Appendix C

Screening Assessment

C.1 The sections below detail which types of impacts on Habitats sites could potentially result from each of the policies and site allocations in the Thurrock Reg 19 Plan Document Draft. Where uncertain or likely significant effects are identified, these are required to be considered further via Appropriate Assessment.

Strategic Policies

SP01: Development Requirements and Spatial Strategy

- This policy sets out how growth will be distributed throughout the Borough in the most sustainable locations, defining how Thurrock will grow and change spatially over the next 30 years. It sets out the spatial policy for new housing, pitches for gypsy's, traveller's and travelling show people and employment space. This will allow sufficient land to be identified for housing to meet the needs of current and future residents and allow space for businesses to grow and thrive

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes for the provision of 28,880 new homes, 206 pitches for gypsy's, traveller's and travelling show people and 179.9 hectares of employment land and as such will directly result in development.

Potential likely significant effects

- Physical damage and loss
- Physical damage and loss – Functionally Linked Land (offsite)
- Non-physical disturbance
- Non-physical disturbance – Functionally Linked Land (offsite)
- Non-toxic contamination
- Air pollution

- Recreational input
- Water quantity and quality

Is this policy likely to have significant effects?

- Yes, this policy defines the overall spatial strategy of new housing development including Gypsy and Traveller sites) and provision of employment land within the next 30 years. The policy will contribute to effects, including physical damage and loss both onsite and to functionally linked land (offsite), non-physical disturbance both onsite and to functionally linked land (offsite), air pollution, recreation and water quantity and quality.

SP02: Healthy, inclusive places and high-quality new development

- This policy seeks to provide a healthy and inclusive Thurrock, with well-designed and accessible buildings and public realm that provides the opportunity for, and encourages, active and healthy lifestyles and community cohesion

Likely activities (operation) to result as a consequence of the proposal:

- None.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No,

SP03: Economy and skill

- This policy sets out how economic growth will be provisioned for within the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes for the provision of 1,936 ha of land for economic development, which includes, established employment areas, new site allocations and land for specialist port-related development. This policy seeks to support the development of 18.5 hectares of underutilised sites, allocating 152.9 hectares of new employment land to support Thames Freeport and to meet the needs of existing and new businesses, and allocating 27 hectares of land at the former Essex Arena site for the provision of new data centres through amendments to the Green Belt boundary

Potential likely significant effects

- Physical damage and loss
- Physical damage and loss – Functionally Linked Land (offsite)
- Non-physical disturbance
- Non-physical disturbance – Functionally Linked Land (offsite)
- Non-toxic contamination
- Air pollution
- Water quantity and quality

Is this policy likely to have significant effects?

- Yes, this policy makes provision for employment land and will therefore contribute to effects, including physical damage and loss onsite and to functionally linked land (offsite), non-physical disturbance onsite and to functionally linked land, air pollution, and water quantity and quality.

SP04: Thurrock's Centres and their Futures

- This policy related to supporting communities by ensuring local retail and services are provided within Thurrock centres.

Likely activities (operation) to result as a consequence of the proposal:

- This policy supports new development for retails, leisure and other facilities within regional centres, town centres, district centres, local centres and neighbourhood parades around Thurrock. This policy relates to a number of Site Allocation policies including, PP02 – Lakeside Regional Town Centre and PP03 Grays Town Centre.

Potential likely significant effects

- Physical damage and loss
- Physical damage and loss – Functionally Linked Land (offsite)
- Non-physical disturbance
- Non-physical disturbance – Functionally Linked Land
- Non-toxic contamination
- Air pollution
- Water quantity and quality

Is this policy likely to have significant effects?

- Yes, this policy supports development in town centres for retail, leisure and other main town centre uses. Therefore, this policy will contribute to effects, including physical damage and loss onsite, and to functionally linked land (offsite), non-physical disturbance onsite, and to functionally linked land, air pollution, recreation and water quantity and quality.

SP05: Housing

- This policy sets out the projected housing growth in Thurrock, and sets provisions that relate to the size, type and quality of new housing which will be provided within the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes for the provision of 28,880 new homes and 32,145 allocations in the period 2024-2044, supporting proposals that meet provisions for the size, type and quality of new housing.

Potential likely significant effects

- Physical damage and loss
- Physical damage and loss – Functionally Linked Land (offsite)
- Non-physical disturbance
- Non-physical disturbance – Functionally Linked Land (offsite)
- Air pollution
- Recreational input
- Water quantity and quality

Is this policy likely to have significant effects?

- Yes, this policy defines the requirement for new housing, including affordable homes and specialist housing within the borough. Therefore, the policy will contribute to effects, including physical damage and loss onsite and to functionally linked land (offsite), non-physical disturbance onsite and to functionally linked land, air pollution, recreation and water quantity and quality.

SP06: Sustainable Development and Climate Change

- This policy details specific criteria which development should adhere to, in order to mitigate and adapt to climate change, e.g encouraging clean power generation and adopting a 'Just Transition' approach to delivering new infrastructure.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that development within the borough is mitigating and adapting to climate change and is done sustainability. Therefore, this policy will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

SP07: Environment

- This policy seeks to work towards a cleaner and greener Thurrock, where growth and the natural environment are complimentary and the quality of environment for those who live and work is enhanced; where natural resources are effectively protected and managed, and where biodiversity is increased, habitats are improved and development results in the cleaning and decontamination of land.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that new development conserves and enhances the natural environment e.g. Greening of the urban environment, facilitating development to achieve a minimum of 10% Biodiversity Net Gain with the opportunity to uplift to up to 20% Biodiversity Net Gain on strategic sites, and protecting designated sites including the Thames Estuary RAMSAR site; Sites of Importance for Nature Conservation (SSSI's), identified Local Wildlife Sites and sites of Regional Geological Interest from adverse development impact.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

SP08: Infrastructure

- This policy ensure that the growth of Thurrock is supported by the delivery if new infrastructure, in collaboration with the public and private sector. This policy sets out how the council will work towards securing social and physical infrastructure.

Likely activities (operation) to result as a consequence of the proposal:

- Yes, this policy outlines the delivery of new and improved strategic infrastructure including major highways and public transport schemes. This policy supports a number of major infrastructure projects within and around Thurrock including the Lower Thames Crossing and the Norwich to Tilbury Power Lines.

Potential likely significant effects

- Physical damage and loss
- Physical damage and loss – Functionally Linked Land (offsite)
- Non-physical disturbance
- Non-physical disturbance – Functionally Linked Land (offsite)
- Air pollution
- Recreational input
- Water quantity and quality

Is this policy likely to have significant effects?

- Yes, this policy sets out how the council will work in cooperation with public and private partner organisations to secure the delivery of new or improved strategic infrastructure, including major highways and public transport schemes. This policy requires securing of social and physical infrastructure in the borough by working in cooperation with public and private partner organisations to secure

the delivery of new or improved strategic infrastructure. This policy will therefore require development within the borough.

SP09: Transport and Movement

- This policy seeks to provide improved accessibility to jobs, services and facilities via an enhanced and better integrates transport network. This includes promoting sustainable means of transport, integration of AI, protection of wharfs and jetties while promoting use the River Thames and promoting delivery of transport infrastructure schemes and improvements that will reduce congestion and improve air quality and journey times

Likely activities (operation) to result as a consequence of the proposal:

- This policy promotes development of transport infrastructure schemes and improvements. E.g. improving safety and convenience and promoting sustainable travel options, however it does not commit to delivering development directly. Therefore, this policy will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

SP10: Circular economy and waste

- This policy seeks to increase the importance of waste management in Thurrock to reduce waste, increase recycling and composting, and treat waste as a resource. This policy includes the creations of a sustainable network of waste management facilities that complements the sustainability objectives in accordance with the Thurrock Sustainable Communities Strategy. In order to achieve this, this policy encourages the co-location of a range of waste management activities within the broad locations of Tilbury – Purfleet and the London Gateway.

Likely activities (operation) to result as a consequence of the proposal:

- This policy makes provisions for how waste is to be handled sustainability and how new development of landfills or other waste management facilities should be assessed. Therefore, this policy will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

SP11: Minerals

- This policy proposes a framework for the management and safeguarding of mineral resources and associated infrastructure. It seeks to ensure a steady and sustainable supply of minerals in Thurrock, while protecting important mineral resources and encouraging recycling and secondary materials instead of relying solely on new extraction.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets a strategic framework for maintaining a mineral landbank, safeguarding mineral resources and existing facilities and encouraging recycling and secondary aggregates.

Potential likely significant effects

- Physical damage and loss
- Physical damage and loss – Functionally Linked Land (offsite)
- Non-physical disturbance
- Non-physical disturbance – Functionally Linked Land (offsite)
- Air pollution

- Water quantity and quality.

Is this policy likely to have significant effects?

- Yes, this policy sets out Mineral Safeguarding Areas within the borough for chalk, sand and gravel.

.

Places and Site Allocations

Grays, West Thurrock and Purfleet-on-Thames

Place Policy PP01: Purfleet Port

- This policy seeks to safeguard land for port operation activity which includes employment related uses, in recognition of its strategic importance to international trade and the UK economy. Development will be permitted where it supports the operational requirements of the port, including freight handling, storage, distribution, logistics, and associated transport infrastructure.

Likely activities (operation) to result as a consequence of the proposal

- This policy is design to support development within the Purfleet ports safeguarded land but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Place Policy PP02: Lakeside Regional Town Centre

- This policy seeks to ensure that Lakeside Regional Town Centre continues to be the principal focus for retail and leisure provision. This policy will support the evolution of Lakeside into a functional regional town centre and includes provisions for new residential development, as well as social and community facilities.

Likely activities (operation) to result as a consequence of the proposal

- This policy is design to support development within Lakeside Regional Town Centre but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No

Place Policy PP03: Greys Town Centre

- This supports regeneration, mixed-use and residential development within Grays Town Centre, including enhanced leisure, evening economy uses and reconnection to the riverside for recreational purposes

Likely activities (operation) to result as a consequence of the proposal

- This policy is design to support development within Grays Town Centre but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Place Policy PP04: Local Green Space in Greys, West Thurrock and Purfleet-on-Thames

- This policy designates and protects Local Green Spaces and restricts development within them. The policy is protective in nature and does not promote development or land-use change. It does not create pathways for effects on Habitats sites, either alone or in combination.

Likely activities (operation) to result as a consequence of the proposal

- This policy is design to support development within broad areas of Thurrock but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Strategic Site Allocations

Place Policy SS01: Grays Shopping Centre, High Street, Grays

- This policy refers to the development of the Grays shopping centre and seeks to reinvigorate Grays Town Centre.

Likely activities (operation) to result as a consequence of the proposal:

- This policy allocates the Grays Shopping Centre site (2ha) for comprehensive mixed-use redevelopment including approximately 600 residential units and enhanced leisure, retail and public realm provision.

Potential likely significant effects

- Air pollution
- Recreational input
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy will result in mixed-use redevelopment within the town centre and therefore could contribute to significant effects, including increased air pollution, increased recreation pressure and decreased water quality and quantity
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy SS02 Purfleet-on-Thames Regeneration

- This policy will support proposals that will transform Purfleet-on-Thames into a thriving riverside town with a well-connected mixed-use centre that provides essential services and facilities that meets the needs of its residents whilst supporting a sustainable local economy and vibrant community life.

Likely activities (operation) to result as a consequence of the proposal:

- This scheme will be a medium-high density residential-led mixed use development that delivers approximately 3,000 high quality homes, a new mixed-use centre for Purfleet-on-Thames with a range of community and commercial facilities, new employment areas and a primary school with early years childcare provision

Potential likely significant effects

- Air pollution
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy will result in mixed-use redevelopment within the town centre and therefore could contribute to significant effects, including increased air pollution, and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy SS03 Former Arena Essex site and fishing lake, Lakeside

- This policy seeks to provide a data centre campus, defined as critical national infrastructure within the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy scheme will deliver approximately 135,000 sqm of floorspace for B8 use and ancillary office use and supporting infrastructure. The scheme will create a new publicly accessible open space provision to the west of the site and enable increased vehicle access.

Potential likely significant effects

- Increased air pollution
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy will result in development within the town centre and therefore could contribute to significant effects, including increased air pollution, and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Non-Strategic Site Allocations

Place Policy NS01 Blackshots Estate redevelopment

- This policy outlines the plans for the redevelopment of the Blackshots estate.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for the demolition of Kier Hardie House, Bevan House and Morrison House and the creation of approximately 286 high quality affordable homes at medium to high density across three sites. Additionally, this will include the reprovision of 168 homes on site as part of the redevelopment, as well as additionally parking within the site.

Potential likely significant effects

- Recreational input
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for the redevelopment of the Blackshots estate and therefore could contribute to significant effects, including increased recreation pressure and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites

Place Policy NS02 Land adjacent to Brookmans Avenue and North of Long Lane, Grays

- This policy seeks to develop a 1.25ha site for a medium density residential led development

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential led development providing approximately 34 high quality homes.

Potential likely significant effects

- Increased recreation pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased recreation pressure and decreased water quality and quantity. This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS03 Land North of Stifford Clays Road, Grays

- This policy seeks to develop a 14.7ha site for a medium density residential led development

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential led development providing approximately 400 high quality homes in an accessible location. This will include a new shared pedestrian and cycle route along Stifford Clays Road that connects into the existing walking and cycling network, and provision for parking accommodated within the site layout.
- This policy also outlines the plans for the retention and reinforcement of boundary landscaping to the north to provide appropriate screening and a buffer from the A13 and requirements for the development proposal to be accompanied by a noise and air quality assessment with appropriate mitigation incorporated into the development where required.

Potential likely significant effects

- Air pollution
- Increased recreational pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS04 Land East of the A1012, Grays

- This policy seeks to develop a 7.3ha site for a medium density residential led development

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential led development providing approximately 200 high quality homes in an accessible location. This will include provision for parking accommodated within the site layout.
- This policy also outlines the plans for the retention and reinforcement of boundary landscaping to the north to provide appropriate screening and a buffer from the A13 and requirements for the development proposal to be accompanied by a noise and air quality assessment with appropriate mitigation incorporated into the development where required.

Potential likely significant effects

- Air pollution
- Increased recreational pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS05 Land East of Malvern Road, Grays

- This policy seeks to develop a 1.4ha site for a medium density residential led development

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a medium density residential development providing approximately 49 high quality homes in an accessible location.

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS06 Land North of Manor Road, Grays

- This policy seeks to develop a 0.63ha site for a medium density residential led development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a medium density residential development providing approximately 43 high quality homes in an accessible location. This policy also requires the development to mitigate its risk to river flooding through design and address surface water drainage on site.

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS07 Whitehall Works, Whitehall Lane, Greys

- This policy seeks to develop a 0.16ha site on Whitehall lane with a medium density residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy will be a medium density residential development, providing 6 high quality homes in a sustainable location. Increased vehicular access will also be provided.

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS08 Telephone Exchange, Bradleigh Avenue, Grays

- This policy seeks to develop 0.47ha of land for a medium density residential led development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a medium density residential development providing approximately 31 high quality homes in an accessible location. This policy also requires the development to retain existing trees and integrate them within the design.

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS09 Land Adjacent Dell Road and Orsett Road, Grays

- This policy seeks to develop a 0.61 ha site adjacent to Dell Road with a medium density residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy will be a medium density residential development, providing specialist accommodation for older people through the delivery of approximately 82 bedspaces. .

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreation pressure.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS10 Gas Valve Compound Drake Road Chafford Hundred Grays

- This policy seeks to develop a 1.16 ha Gas Valve Compound site with a low-density residential development

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a low-density residential development providing approximately 18 high quality homes in an accessible location and Policy 13 Maximising the delivery of Affordable Housing.

Potential likely significant effects

- Air pollution
- Increased recreation pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a low-density residential development and therefore could contribute to significant effects, including increased air pollution and recreational pressure, and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS11 Rippleside Metalworks, Thames Road, Grays

- This policy seeks to develop a 0.75 ha metal works site with a high-density residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a high-density residential development providing approximately 170 high quality homes in a highly sustainable town centre location. The policy requires the provision of parking to be within the site layout and in line with the latest Parking Standards and requires the development to mitigate its risk to river flooding through design and address surface water drainage on site

Potential likely significant effects

- Increased recreation pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a high-density residential led development and therefore could contribute to significant effects, including increased recreational pressure and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS12 Crown Road and Darnley Road Car Parks, Grays

- This policy seeks to develop a 0.59ha site with a medium-high density residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a medium-high density residential development providing approximately 53 high quality homes in an accessible town centre location that respects the character of the neighbourhood. This policy also requires amenity space to be provided onsite with contributions to enhance nearby open space provision.

Potential likely significant effects

- Air pollution
- Increased recreation pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a medium density residential led development and therefore could contribute to significant effects, including increased air pollution and recreational pressure, and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS13 Land at Hillside, Devonshire Close

- This policy seeks to develop light industrial and office use

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for approximately 4,000 sqm of flexible floorspace for light industrial and office use (Class E(g)(i-iii)), compatible with neighbouring land uses. This policy will include a new public footway to be provided along boundary of site on Devonshire Close to enable safe pedestrian and cycle access from the development and sufficient parking for all vehicles.

Potential likely significant effects

- Air pollution

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a light industrial and office use development and therefore could contribute to significant effects, including increased air pollution.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS14 Land North of Magnet Road

- This policy seeks to develop underutilised site within a designated Employment Area.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for the development of an underutilised site within a designated Employment Area. The site will provide approximately 2,000 sqm floorspace suitable for light industrial (Use Class E(g)(iii)) and general industrial use (Use Class B2).

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a development of underutilised site and therefore could contribute to significant effects, decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS15 Thurrock Shopping Park Site, West Thurrock

- This policy seeks to develop a northern extension to the designated Employment Area Lakeside/ Waterglade Industrial Estates

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a northern extension to the designated Employment Area Lakeside/ Waterglade Industrial Estates, the site will provide approximately 62,000 sqm of flexible floorspace for storage and distribution (Use Class B8) . Additionally, this development proposals will ensure that flood risk is minimised, mitigated and informed by a site-specific Flood Risk Assessment.

Potential likely significant effects

- Air pollution
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a development of employment areas and therefore could contribute to significant effects, increased air pollution and decreased water quality and quantity.

- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS16 Kerneos Site, South of London Road, West Thurrock

- This policy seeks to develop underutilised site within a designated Employment Area.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for the development of an underutilised site within a designated Employment Area. The site will provide approximately 36,900 sqm floorspace for general industrial (Use Class B2), storage and distribution (Use Class B8) and sui generis employment uses. This policy will also provide improved vehicular access onto London Road with an upgraded internal service road through the site that also provides safe access for pedestrians and cyclists.
- This policy ensures that this development should be designed and landscaped to create a high-quality sustainable employment area which seeks to preserve and where possible enhance existing habitats and waterways. Additionally, this development proposals will ensure that flood risk is minimised, mitigated and informed by a site-specific Flood Risk Assessment and ensure that consideration is given to the impact of operations on the adjacent Air Quality Management Area and sensitive receptors and provide mitigation measures, where required

Potential likely significant effects

- Air pollution
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a development of underutilised site and therefore could contribute to significant effects, increased air pollution and decreased water quality and quantity.

- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS17 Land east of Ship Lane adjacent to A1306 and Junction 31 of M25, Purfleet-on-Thames

- This policy seeks to develop light industrial and general industrial use.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for approximately 35,000 sqm of flexible floorspace for light industrial (Use Class E(g)(iii)) and general industrial use (Use Class B2). This policy also outlines plans for improved vehicular access on to Ship Lane and mitigation measures to minimise the impact of development on the local and strategic highway network

Potential likely significant effects

- Increased air pollution
- Reduced water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a light industrial and general industrial use development and therefore could contribute to significant effects, including increased air pollution and reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS18 Land South of Burnley Road, West Thurrock

- This policy seeks to develop a vacant site within a designated Employment Area for employment use.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for approximately 16,000 sqm floorspace suitable for light industrial (Use Class E(g)(iii)), general industrial use (Use Class B2) and storage and distribution (Use Class B8).

Potential likely significant effects

- Reduced water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a vacant site use development and therefore could contribute to significant effects, including reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS19 Land East of Stoneness Road and North of Thurrock Sub Station, West Thurrock

- This policy seeks to develop a vacant site within a designated Employment Area for employment use.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for approximately 14,000 sqm floorspace suitable for light industrial (Use Class E(g)(iii)), general industrial use (Use Class B2) and storage and distribution (Use Class B8).

Potential likely significant effects

- Increased air pollution
- Reduced water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a light industrial and general industrial use development and therefore could contribute to significant effects, including increased air pollution and reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS20 Land at eastern end of Manor Way Industrial Estate, Grays

- This policy seeks to develop an underutilised site within a designated Employment Area for employment use.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for approximately 3,000 sqm of flexible floorspace suitable for light industrial and office use (Class E(g)(i-iii)), compatible with neighbouring land uses.

Potential likely significant effects

- Reduced water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land plans for a vacant site use development and therefore could contribute to significant effects, including reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS32 Land south of South Essex College, Thurrock Campus, Grays

- This policy seeks to reserve land for the development of educational facilities.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for development within the site that also complied with DM policy 34 – Education and Early Years Childcare.

Potential likely significant effects

- Increased recreation pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for educational development and therefore could contribute to significant effects, including increased recreational pressure and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Tilbury, East Tilburys and Chadwell St Mary

Place Policy PP05 Port of Tilbury, Tilbury 2 and Tilbury 3

- This policy seeks to safeguard land for port operational activity, which includes employment/economic activity related uses, in recognition of their strategic importance to international trade and the UK economy. Development will be permitted where it supports the operational requirements of the port, including freight handling, storage, distribution, logistics, and associated transport infrastructure.

Likely activities (operation) to result as a consequence of the proposal:

- This policy is design to support development within the Tilbury ports safeguarded land but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Place Policy PP06 Tilbury Ferry and Cruise Terminal

- This policy supports the full refurbishing of Tilbury's Grade II listed historic Cruise Terminal and Riverside Railway Station, bringing them back to life, blending community and commercial uses together, whilst safeguarding their heritage for the future.

Likely activities (operation) to result as a consequence of the proposal:

- This policy is design to support the refurbishing of Tilbury's Grade II listed historic Cruise Terminal and Riverside Railway Station, but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Place Policy PP07 Tilbury District Centre

- This policy supports development that will enhance the town centre environment, particularly around Civic Square, through public realm improvements, landscaping, streetlighting and improved accessibility.

Likely activities (operation) to result as a consequence of the proposal:

- This policy is design to support the Tilbury District Centre improvement, but does not specifically allocation development. Therefore, development will not occur as a direct result of this policy.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Place Policy PP08 Local Green Space in Tilbury, East Tilbury and Chadwell St Mary

- This policy seeks to protect green space within the Borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy designates and protects Local Green Spaces in Tilbury, East Tilbury and Chadwell St Mary. The policy is protective in nature and restricts development. It does not promote land-use change or create pathways for effects on Habitat sites, either alone or in combination.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Policy PP09 North Thames Marshes Ecology Masterplan

- This policy seeks to protect North Thames Marshes within the Borough, but requiring development proposal within a defined area to align with the North Thames Marshes Ecology Masterplan and demonstrate that adequate ecological avoidance, mitigation and where necessary compensation and biodiversity net gain requirements will be provided.

Likely activities (operation) to result as a consequence of the proposal:

- This policy designates and protects North Thames Marshes. The policy is protective in nature and restricts development. It does not promote land-use change or create pathways for effects on Habitat sites, either alone or in combination.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Strategic Site Allocations

Policy SS04 Land West of East Tilbury

- This policy seeks to develop medium density residential-led mixed use development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a plan for a medium density residential-led mixed use development that delivers approximately 830 high quality homes with a housing mix in accordance with Policy 11 Housing Mix, a primary school, a health centre, retail, commercial, leisure and community use floorspace and vehicular

and pedestrian crossing in East Tilbury over the London to Southend railway line. In addition, this policy provides enhancements to the existing public rights of way and bridleways and new publicly accessible open space and child play space

Potential likely significant effects

- Physical damage and loss – vis functionally linked land
- Recreational input

Is this policy likely to have significant effects?

- Yes. This policy will result in development and therefore could contribute to effects, including physical damage and loss to functionally linked land (offsite), and recreational input.

Policy SS05 Land East of Chadwell St Mary

- This policy seeks to develop medium density residential-led mixed use development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a plan for a medium density residential-led mixed use development that delivers approximately 2,000 high quality homes, a primary and secondary School, sports provision and an adaptable retail, commercial, leisure and community use floorspace (Use Class E and F) in a new neighbourhood centre. In addition, this policy provides enhancements to the existing public rights of way and bridleways and new publicly accessible open space and child play space

Potential likely significant effects

- Recreational input

Is this policy likely to have significant effects?

- Yes. This policy will result in development and therefore could contribute to effects, including increased recreational input

Policy SS06 Land West of Brentwood Road, Chadwell St Mary

- This policy seeks to develop medium density residential-led mixed use development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines a plan for a medium density residential-led mixed use development that delivers a comprehensively planned new sustainable extension to Chadwell St Mary with approximately 900 high quality homes and a primary school.

Potential likely significant effects

- Recreational input

Is this policy likely to have significant effects?

- Yes. This policy will result in development and therefore could contribute to effects, including increased recreational input

Policy SS07 Tilbury 3

- This policy seeks to enable port expansion at Tilbury as part of Thames Freeport.

Likely activities (operation) to result as a consequence of the proposal:

- This will included approximately 45 hectares of land for container handling operations, storage and distribution (B8 Use Class) and general industrial use (B2 Use Class) which will include up to 140,000 sqm of floorspace for storage

and distribution warehousing (B8 Use Classes) and up to 238,745 sqm of floorspace for motor vehicle storage as well as ancillary office use (E(g)(i) Use Class). In addition, this policy plans for a new access road connecting onto Windrush Way with a secondary access point connecting into Tilbury2, a new railway link from Tilbury2 and will aim to utilise the existing deep-water berth

Potential likely significant effects

- Physical damage and loss – vis functionally linked land
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy will result in development and therefore could contribute to effects, including physical damage and loss to functionally linked land (offsite), and reduced water quality and quantity.

Non-Strategic Site Allocations

NS21 Tilbury Football Club, Chadfields, Tilbury

- This policy seeks to improve the tilbury football facilities.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for the relocation of Tilbury Football Club stadium and the redevelopment of the former stadium site to deliver approximately 112 high quality homes at medium to high density

Potential likely significant effects

- Air pollution
- Recreation input

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased air pollution and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS22 Car Park, Coronation Avenue, East Tilbury

- This policy seeks to provide medium density residential developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 7 high quality homes in a sustainable location.

Potential likely significant effects

- Physical damage and loss of habitat – Functionally linked land
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS23 Land adjacent and rear of George and Dragon Public House, Linford

- This policy seeks to provide medium density residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 230 high quality affordable homes in a sustainable location

Potential likely significant effects

- Physical damage and loss of habitat – Functionally linked land
- Increased recreation input

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS24 Land at East Tilbury Road, Linford

- This policy seeks to provide medium residential developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 148 high quality homes in a sustainable location. This policy also outlines provisions for open space and play provision on site and/or enhancements to Linford Recreation Ground and play area or other nearby open space provision, as well as ensuring that development proposals ensure that flood risk is minimised, mitigated and informed by a site-specific Flood Risk Assessment

Potential likely significant effects

- Physical damage and loss of habitat – Functionally linked land

- Increased recreation input

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS25 Land at Linford Road and Turnpike Lane, Chadwell St Mary

- This policy seeks to provide medium density developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for a medium density residential development providing approximately 130 high quality homes. This policy includes a new vehicular access onto Linford Road along with improvements to Linford Road and a new public footway to be provided along Linford Road that connects to existing footpaths to enable safe pedestrian and cycle access from the development to facilities and services in Chadwell St Mary.

Potential likely significant effects

- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS26 Land at St Johns Road, Chadwell St Mary

- This policy seeks to provide medium density developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for a medium density residential development providing approximately 37 high quality homes.

Potential likely significant effects

- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.

Policy NS27 Garage site east of Vigerons Way, Chadwell St Mary

- This policy seeks to provide medium density developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for a medium density residential development providing approximately 7 high quality affordable homes in a sustainable location

Potential likely significant effects

- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS28 11 River View, Chadwell St Mary

- This policy seeks to provide medium density developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for a medium density residential led mixed use development providing approximately 9 high quality homes with flexible ground floor retail/ commercial units (Use Class E).

Potential likely significant effects

- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS29 Land North of B149 Wood View and River View, Chadwell St Mary

- This policy seeks to provide medium density developments.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for a medium density mixed use development in a sustainable location providing approximately 80 high quality homes and approximately 2,000 sqm floorspace for a foodstore/ supermarket (Use Class E). This policy also outlines provisions for development proposal to be accompanied by a noise and air quality assessment with appropriate mitigation incorporated into the development where required and opportunities to connect into and enhance Chadwell Recreation Ground, which is both an open space and Local Green Space should be taken.

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased air pollution and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS30 Chadfields Travelling Showpeople Yard

- This policy seeks to develop special housing for travelling showpeople.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes the provisions for specialist housing for travelling showpeople. This site allocated provides a minimum of 4 plots however proposals to increase the number of plots through reconfiguring the site would be supported where they accord with a pitch deliverability assessment approved by the Council

Potential likely significant effects

- Air pollution
- Increased recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased air pollution and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS31 Lower Crescent, Linford

- This policy seeks to increase the accommodation within the Borough for gypsies and travellers.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for 20 residential pitches within approximately 1.1 ha of land.

Potential likely significant effects

- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS33 Land to the North West of Thames Industrial Estate, East Tilbury

- This policy seeks to develop underutilised sites within designated Employment Area.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for the development of underutilised site within a designated Employment Area. The site will provide approximately 10,000 sqm of flexible floorspace for light industrial and office use (Use Classes E(g)(i-iii)), compatible with neighbouring land uses

Potential likely significant effects

- Physical damage and loss of habitat – Functionally linked land
- Air pollution

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land, and increased air pollution.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy NS34 Land to the South West of Thames Industrial Estate, East Tilbury

- This policy seeks to develop underutilised sites within designated a Employment Area.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for the development of underutilised site within a designated Employment Area. The site will provide approximately 1,250 sqm of

flexible floorspace for light industrial and office use (Use Classes E(g)(i-iii)), compatible with neighbouring land uses

Potential likely significant effects

- Physical damage and loss of habitat – Functionally linked land
- Air pollution

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land, and increased air pollution.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Stanford-le-hope and Corringham

Policy PP10 London Gateway Port

- This policy seeks to develop the London Gateway Port.

Likely activities (operation) to result as a consequence of the proposal:

- This policy safeguards the London Gateway Port for port-related operational activities, including freight handling, storage, distribution, logistics, and associated transport infrastructure, in recognition of its strategic importance to international trade and the UK economy. The policy resists non-port-related development that would prejudice the efficient operation, future expansion or viability of the port

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No. The policy does not allocate new land for development but applies to the existing London Gateway Port area as defined on the Policies Map. Therefore, no LSE's are considered to occur as a result of this policy and accordingly, the policy is screened out of further assessment.

Policy PP11 Stanford-le-Hope District Centre

- This policy seeks to support development within Stanford-le-Hope District Centre.

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to urban town centre regeneration. This policy is design to support development within broad areas of Thurrock but do not specifically allocation development. Therefore, they do not result in LSE

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No. This does not allocate land for development and does not create any credible pathway for effects on Habitats sites. Accordingly, the policy is screened out of further assessment.

Policy PP12 Local Green Space in Stanford Le Hope and Corringham

- This policy seek to protect local green space.

Likely activities (operation) to result as a consequence of the proposal:

- This policy safeguards the London Gateway Port for port-related operational activities, including freight handling, storage, distribution, logistics, and

associated transport infrastructure, in recognition of its strategic importance to international trade and the UK economy. The policy resists non-port-related development that would prejudice the efficient operation, future expansion or viability of the port

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No. This policy is protective in nature, does not allocate land for development, and does not create any credible pathway for effects on Habitats sites. Accordingly, the policy is screened out of further assessment.

Policy PP13 Rail improvements in Stanford-le-Hope

- The policy seeks to support rail travel within Stanford-le-Hope .

Likely activities (operation) to result as a consequence of the proposal:

- This policy supports a package of rail and public transport improvements in Stanford-le-Hope, including redevelopment of the railway station, provision of a shuttle bus connection to London Gateway, and electrification of the Thames Haven Branch Line linking the Tilbury Loop with London Gateway Port. The policy aims to improve passenger and freight rail connectivity, support economic growth and facilitate a shift from road to rail, contributing to decarbonisation objectives.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

C.2 No. Stanford-le-Hope lies partly within 2km of Thames Estuary and Marshes SPA and Ramsar and Benfleet and Southend Marshes SPA and Ramsar and therefore may have an LSE on the Habitat sites through habitat loss by functionally

linked land. However, this policy generally supports upgrades to existing rail infrastructure and facilities within an established transport corridor, rather than new rail alignments or encroachment into undeveloped or designated land. Therefore, no LSE's are considered to occur as a result of this policy and accordingly, the policy is screened out of further assessment.

Policy PP14 Corringham District Centre

- This policy seeks to support development within the Corringham District Centre.

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to regeneration and intensification within an existing urban district centre.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No. This policy does not allocate land for development and does not create any credible pathway for effects on Habitats sites. Accordingly, the policy is screened out of further assessment.

Policy PP15 New Transport Interchange in Corringham

- This policy seeks to support rail infrastructure within Corringham.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that the Council will explore the potential to deliver a new transport interchange station including a new Railway Station to the north of Corringham. This will be completed in collaboration with key partners including Network Rail, Transport East, Government departments such as the DfT, BEIS

and MHCLG and relevant agencies as well as engagement with the local community.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No. This policy does not allocate land for development and does not create any credible pathway for effects on Habitats sites. Accordingly, the policy is screened out of further assessment.

Policy PP16 Sustainable Connections with Canvey Island

- This policy seeks to investigate the feasibility of new sustainable connections within the Borough..

Likely activities (operation) to result as a consequence of the proposal:

- This policy commits the Council to working with neighbouring authorities and Government bodies to explore the feasibility of a sustainable transport link between the Coryton peninsula and Canvey Island, incorporating bus-only and active travel routes and forming part of a wider cycle route along the River Thames.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No. This policy does not allocate land for development and does not create any credible pathway for effects on Habitats sites. Accordingly, the policy is screened out of further assessment.

Strategic Site Allocations

Policy SS08 Land to the Northeast of Corringham

- This policy supports the development of mixed dwelling in the northeast of Corringham.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes plans to deliver a minimum of 2000 homes across the plan period, within the land to the northeast of Corringham, as outlined in the policy. This policy also outlines plans for new primary schools.

Potential likely significant effects

- Recreational input

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased air pollution and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy SS9 London Gateway Port and Logistics Park

- This policy seeks to develop a 270ha site, to support the continued development of the London Gateway Port and Logistics Park.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes plans for the additional land to the west and southwest of the existing London Gateway development to be allocated for employment uses to continue to deliver the Freeport development of strategic and national importance.

Potential likely significant effects

- Physical damage or loss of Habitat – via functionally linked land
- Air pollution

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land, and increased air pollution.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Place Policy SS10 Thames Enterprise Park and Thames Oilport

- This is an employment-based policy.

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes proposals that deliver an advanced manufacturing, logistics and energy park to bring a historically important site back into economic life providing jobs, investment and economic vibrancy to the region and the UK. Specifically, this site will deliver up to 700,000sqm and a minimum of 400,000sqm of employment floorspace (Use Class B2/B8), energy related infrastructure, a central hub with supporting uses and appropriate ecological mitigation and green infrastructure

Potential likely significant effects

- Physical damage or loss of Habitat – via functionally linked land

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land.

- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Non-Strategic Site Allocations

Policy NS35 Land to the east of Butts Lane

- This policy seeks to develop a 7.61ha site within Stanford-Le-Hope.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a range of residential densities on site to deliver around 190 dwellings. The policy also outlines the requirements for a multi-functional SuDS network, coordinated with topography, that should be designed across the site to accommodate the change in topography

Potential likely significant effects

- Physical damage and loss of habitat – Functional linked land
- Recreation input

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land, and recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS36 Whitwell Court

- This policy seeks to develop a 0.15ha site within Stanford-le-Hope.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development of around 6 homes.

Potential likely significant effects

- Physical damage and loss of habitat – Functional linked land
- Recreation input
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land, increased recreational input and reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS37 Land to the rear of Fairview Avenue

- This policy seeks to develop a 0.3ha site within Stanford-le-Hope.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium-high density residential development to deliver approximately 10 dwellings

Potential likely significant effects

- Physical damage and loss of habitat – Functional linked land
- Recreation input
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land, increased recreational input and reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS38 Land at Wharf Road, Stanford-le-Hope

- This policy seeks to develop a 12.68ha site within Stanford-le-Hope.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development to deliver around 300 homes

Potential likely significant effects

- Physical damage and loss of habitat – Functional linked land
- Recreation input
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land, increased recreational input and reduced water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS39 Land east of Rainbow Lane, Stanford-le-Hope

- This policy seeks to develop a 10.53ha site within Stanford-le-Hope.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development delivering approximately 430 dwellings.

Potential likely significant effects

- Physical damage or loss of Habitat – via functionally linked land
- Air pollution
- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage or loss via functionally linked land, increased recreational input and increased air pollution.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS40 Land at Lyndhurst Road, Stanford-le-Hope

- This policy seeks to develop a 0.22ha site within Stanford-le-Hope.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density redevelopment of the existing garage site for approximately 6 dwellings

Potential likely significant effects

- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS41 Former Police Station, Gordon Road, Corringham

- This policy seeks to develop the former police station, a 0.25ha site within Corringham.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density redevelopment of the site to provide approximately 34 dwellings

Potential likely significant effects

- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS42 The Springhouse, Corringham

- The policy seeks to develop a 3.43ha site within Corringham.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium-high residential development to deliver approximately 100 homes.

Potential likely significant effects

- Physical damage and loss of habitat – functionally linked land
- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land and increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS43 Land between Thames Haven Road and Rookery Hill, Corringham

- This policy seeks to develop a 5.11ha site in Corringham.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development delivering around 100 homes.

Potential likely significant effects

- Physical damage and loss of habitat – functionally linked land
- Air pollution
- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land, increased air pollution and increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS44 Land west of Church Road, Corringham

- This policy seeks to develop a 0.59ha site in Corringham.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development delivering around 21 homes

Potential likely significant effects

- Physical damage and loss of habitat – functionally linked land
- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including physical damage and loss of habitat via functionally linked land, and increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS45 Manor View, Corringham

- This policy seeks to increase the accommodation within the Borough for gypsies and travellers.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for 6 residential pitches within approximately 1.1 ha of land. This policy aims to support *DM Policy 13 – Gypsy, Traveller and Travelling Showpeople Sites* which requires specialist housing for gypsies and travellers to be provided.

Potential likely significant effects

- Air pollution
- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased air pollution and increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS46 The Paddock, Corringham

- This policy seeks to increase the accommodation within the Borough for gypsies and travellers.

Likely activities (operation) to result as a consequence of the proposal:

- This policy seeks to provide specialist housing for gypsies and travellers and traveling showpeople. This policy aims to support *DM Policy 13 – Gypsy, Traveller and Travelling Showpeople Sites* which requires specialist housing for gypsies and travellers to be provided

Potential likely significant effects

- Air pollution
- Increase recreation pressure

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increased air pollution and increased recreational input.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Averley and South Ockendon

Policy PP17 Aveley Local Centre

- This policy seeks to support development within the Averley local centre.

Likely activities (operation) to result as a consequence of the proposal:

- This policy concerns the upgrading of the existing local centre in Averley and therefore does not require new land for development. Accordingly, the policy is screened out of further assessment

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Policy PP18 South Ockendon District Centre

- This policy seeks to support development within the South Ockendon District Centre.

Likely activities (operation) to result as a consequence of the proposal:

- This policy concerns urban regeneration and connectivity improvements within an existing local centre and therefore does not require new land for development. Accordingly, the policy is screened out of further assessment.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Policy PP19 Local Green Space in South Ockendon

- This policy seeks to protect green space within the Borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy is protective in nature, does not allocate land for development, and does not create any credible pathway for effects on Habitats sites. Accordingly, the policy is screened out of further assessment

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Strategic Site Allocations

Policy SS11 Land south of Aveley

- This policy seeks to develop 63 ha within Aveley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential-led mixed use development south of Averley. This includes a minimum of 1,600 new homes, a primary school, approximately 2,000sqm floorspace for a foodstore/supermarket (Use Class E), new health centres and pubs, new road links and new publicly accessible open space and child play space.

Potential likely significant effects

- Air pollution
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy SS12 Land to the west of Romford Road

- This policy seeks to develop 14.51ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential-led mixed use development. This includes a minimum of 450 new homes, community facilities such as a potential new health centre, Retail, commercial and community floorspace and new publicly accessible open space and child play space.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy SS13 Land south-east of South Ockendon

- This policy seeks to develop three sites of 96.41ha, 26.75ha and 2.67ha within Averley.

Likely activities (operation) to result as a consequence of the proposal:

C.3 This policy outlines the plans for a medium density residential-led mixed use development. This includes a minimum of 2,000 new homes, a school, adaptable retail, commercial, leisure and community use floorspace (Use Class E and F) in a new neighbourhood centre, provision of new link road between South Road and Medebridge Road and new publicly accessible open space, a new school and child play space

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy SS14 Land north-east of South Ockendon

- This policy seeks to develop 109.44ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential-led mixed use development. This includes a minimum of 2,500 new homes, a school, adaptable retail, commercial, leisure and community use floorspace (Use Class E and F) in a new neighbourhood centre, provision of new link road between South Road and Medebridge Road and new publicly accessible open space and child play space

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy SS15 Land north of South Ockendon

- This policy seeks to develop two sites of 94.27 and 35.13ha within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential-led mixed use development. This includes a minimum of 1,800 new homes, a school, adaptable retail, commercial, leisure and community use floorspace (Use Class E and F) in a new neighbourhood centre, provision of vehicular and pedestrian crossing over railway line and new publicly accessible open space and child play space

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy SS16 Distribution Centre, Arisdale Avenue

- This policy seeks to develop 3.57ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential-led mixed use development. This includes approximately 350 new homes, adaptable retail, commercial, leisure and community use floorspace (Use Class E and F), a new public realm, upgrades to Ockendon railway station and new vehicular and cycle parking.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy SS17 Buckles Lane, South Ockendon

- This policy seeks to develop 22ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for the provision of 22ha of land to provide permanent yard space for Travelling Showpeople.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Non-Strategic Site Allocations

Policy NS47 Land west of Park Lane, Aveley

- This policy seeks to develop land within Aveley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 90 new homes.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.

- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS48 Former St Michaels Church Hall, Mill Lane

- This policy seeks to develop 0.19ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 9 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS49 Land at former library & public hall, Purfleet Road

- This policy seeks to develop 0.24ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 16 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS50 Former Prince of Wales Public House, West Road, South Ockendon

- This policy seeks to develop 0.07ha of land within Averley.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 9 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS51 Land & garages to rear of 20-24 and 34-44 Anton Road, South Ockendon

- This policy seeks to develop the land and garages on Anton Road, South Ockendon for residential purposes.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 7 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS52 Land adjoining Tamarisk Road, South Ockendon

- This policy seeks to develop 0.43ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 38 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS53 Land east of South Road & adj. Echo Farm & Mollands Lane, South Ockendon

- This policy seeks to develop 4.52ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 69 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS54 Former Culver Centre & land to rear, Daiglen Drive, South Ockendon

- This policy seeks to develop 4.44ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 170 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS55 Land east of South Road & north of Buckles Lane, South Ockendon

- This policy seeks to develop 1.33ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 70 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS56 1 to 431 odds Broxburn Drive

- This policy seeks to develop 1.72ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 33 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS57 Jack O' Lantern Public House, Daiglen Drive

- This policy seeks to develop 0.16ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 17 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS58 Belhus Park Boxing Club, Darenth Lane

- This policy seeks to develop 0.15ha of land for housing.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 24 new homes in a sustainable location.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS59 The Willows (adjacent to Buckles Lane)

- This policy seeks to develop land for gypsies and travelling Showpeople.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines Specialist housing for gypsies and travellers and travelling show people.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS60 Holy Lands (adjacent to Buckles Lane)

- This policy seeks to develop land for gypsies and travelling Showpeople.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines Specialist housing for gypsies and travellers and travelling show people.

Potential likely significant effects

- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS61 Extension to Hangmans Wood

- This policy seeks to develop 2.5ha of land for employment purposes.

Likely activities (operation) to result as a consequence of the proposal:

- This policy will provide approximately 10,000 sqm of flexible floorspace suitable for light industrial (Use Class E(g)(iii)), general industrial use (Use Class B2) and storage and distribution (Use Class B8).

Potential likely significant effects

- Air pollution
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Rural Thurrock

Policy PP20 Local Green Space in Rural Thurrock

- This policy seeks to protect green pace within the Borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy is protective in nature, does not allocate land for development, and does not create any credible pathway for effects on Habitats sites. Accordingly, it is screened out of further assessment.

Potential likely significant effects

- None

Is this policy likely to have significant effects?

- No.

Policy PP21 Infill Development within Village Boundaries

- This policy seeks to ensure areas are designated for within rural settlement boundaries.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out criteria for development within village boundaries, including setting the character and pattern of development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Non-strategic Site Allocations

Policy NS62 Land north of Church Road, Bulphan

- This policy allocated 0.68 ha of land to residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a residential development fronting Church Road providing approximately 16 new homes.

Potential likely significant effects

- Increased recreational pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increase recreational input and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS63 Land south of School Lane, Orsett

- This policy allocated 1.51ha of land to residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 50 new homes.

Potential likely significant effects

- Increased recreational pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increase recreational input and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

Policy NS64 Land adjacent to The Paddocks, Hillcrest Road, Horndon-on-the-Hill

- This policy allocated 1.55ha of land to residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the plans for a medium density residential development providing approximately 50 new homes.

Potential likely significant effects

- Increased recreational pressure
- Water quality and quantity

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increase recreational input and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

West Horndon

Policy SS18 West Horndon New Town

- This policy allocated land for residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy allocates approximately 463 ha of land south of West Horndon for a residential-led mixed-use new town delivering around 10,000 dwellings, employment floorspace, community, health, education, leisure, and retail facilities.

Potential likely significant effects

- Increased recreational pressure
- Water quality and quantity
- Air pollution

Is this policy likely to have significant effects?

- Yes. This policy allocates land for development and therefore could contribute to significant effects, including increase recreational input, increased air pollution and decreased water quality and quantity.
- This policy can be screen out for effects from other impact pathways due to the distance from the Habitats sites.

- Key aspects of mitigation as also outlines in this policy including comprehensive Green and Blue Infrastructure network, biodiversity net gain and nature-based SuDS.

Development Management Policies

Climate Change and Sustainable Development

DM Policy 01 - Operational Carbon

- This policy sets out specification for new buildings, to ensure they are designed and built to be Net Zero Energy and Carbon in operation. They must be ultra-low energy buildings, be fossil fuel free, and generate renewable energy on-site to at least match annual energy use. This policy includes 5 requirements for all new builds and provides explanation of the alternate routes for meeting the policy requirements

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensure that all new buildings are built to be Net Zero Energy and Carbon in operation, however it will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

DM Policy 02 - Embodied Carbon

- This policy ensures that all development proposals must demonstrate the measures taken to minimise embodied carbon (subject to meeting DM Policy 1 Operational Carbon requirements first) and how circular economy principles have been embedded into the design. The policy prioritises re-using, renovating and retrofitting existing buildings and all new buildings must demonstrate that upfront embodied carbon has been considered and reduced as far as possible. Set limits for upfront embodied carbon are set for major residential and non-residential development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to minimising embodied carbon and promoting the circular economy within development. Therefore, this policy will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 03 - Water Efficient Development

- This policy ensures that all development will demonstrate water efficient design. It sets out criteria that developments proposals must adhere to, in order to demonstrate water efficient design and ensure sustainable use of water resources

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that all new development demonstrates water efficient design and therefore will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

-

DM Policy 04 - Integrating renewable development

- This policy outlines how the Council will assess proposals for renewable and low carbon energy schemes and outlines what proposal should demonstrate and what impacts are acceptable

Likely activities (operation) to result as a consequence of the proposal:

- This policy supports proposal for renewable and low carbon energy schemes and therefore will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

DM Policy 05 - Reducing Waste and promoting a Circular Economy

- This policy ensures proposed developments will minimise waste, make efficient use of resources, and support a closed-loop system where materials are reused, repaired, or recycled rather than discarded

Likely activities (operation) to result as a consequence of the proposal:

- This policy proposed a framework to support waste reduction and promoting a circular economy, and therefore this policy will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 06 - Contaminated Land

- This policy relates to the provision of sufficient information when development is proposed on contaminated land and the requirement for remediation of a contaminated site.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that development within contaminated land is remediated so the site does not pose a threat to public health or that of the environment, nor pose a threat of pollution to controlled waters including ground water. This policy, therefore, will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 07 - Construction Environmental Management

- This policy ensures that environmental disturbance will be limited during construction and demolition as well as during excavations and construction of subterranean developments

Likely activities (operation) to result as a consequence of the proposal:

- This policy includes provisions of sufficient information which must be submitted Construction Management Statements and therefore will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Economy, Employment and Skills

DM Policy 08 - Protecting Designated Employment Areas

- This policy seeks to safeguard designated employment areas within the borough.

C.4 Likely activities (operation) to result as a consequence of the proposal:

- This is a criteria-based policy concerned with safeguarding and managing existing employment areas. While it does not allocate land, propose development, or increase development quantum, safeguarding of land may lead to development in the future.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 09 - Employment Uses Outside Designated Employment Areas

- This policy outlines the required criteria for employment developments outside of the designated Employment Areas.

Likely activities (operation) to result as a consequence of the proposal:

- It does not allocate land, propose development, or increase development quantum, and therefore will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 10 – Business, Employment and Skills

- This policy ensures that all major developments deliver measurable benefits for local businesses and residents. This is achieved by outlining the provisions for a Construction Local Employment, Skills and Supply Plan, required to be submitted for Council approval prior to commencement of works.

Likely activities (operation) to result as a consequence of the proposal:

- This policy requires the council to enforce a framework on major developments to ensure the delivery of measurable benefits for local businesses and residents. This policy, therefore, will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Housing

DM Policy 11 – Housing Mix

- This policy is a criteria-based policy that applies to residential development proposals and seeks to secure an appropriate mix of dwelling types, tenures, and accessibility standards

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to the provision of appropriate housing mixes in the borough. This policy, therefore, will not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 12 – Maximising the delivery of Affordable Housing

- This policy relates to the provision of new affordable housing within the borough e.g. 35% of the total number of residential units to be provided and maintained as affordable housing

Likely activities (operation) to result as a consequence of the proposal:

- In order to achieve provisions for affordable housing the council will set out the definitions and considerations required to meet the conditions of 'affordable housing' This policy, therefore, will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 13 – Gypsy, Traveller and Travelling Showpeople Sites

- This policy seeks to meet the borough's need for Gypsy and Traveller households in the Borough. This policy outlines provision for the accommodation needs of Gypsy, Traveller or Travelling Showpeople with allocated sites within the Local Plan

Likely activities (operation) to result as a consequence of the proposal:

- This policy specifies how the council will accommodate the provision of Gypsy and Traveller households through allocated sites in the plan; however, the policy itself does not include for development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 14 – Ensuring that specialist housing needs are met

- This policy seeks to meet the borough's need for older people or groups with particular housing needs in the Borough. This policy outlines provision for the accommodation needs of older people or groups with particular housing needs with allocated sites within the Local Plan.

C.5 Likely activities (operation) to result as a consequence of the proposal:

- This policy supports the development of housing for older people or groups with particular housing needs however, it will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 15 – Self & Custom Build Housing

- This policy outlines the Councils support for the development of self-build and custom-build housing in line with the spatial strategy and other policies in this Plan.

Likely activities (operation) to result as a consequence of the proposal:

- This policy supports development of self-build and custom-build housing, however, it will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 16 – Build to Rent Housing

- This policy provides a framework for Build to Rent Housing developments, where it contributes to widening housing choice and forms part of a balanced and well-integrated neighbourhood

Likely activities (operation) to result as a consequence of the proposal:

- This policy support Build to Rent Housing development, however it will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

DM Policy 17 – Housing in Multiple Occupation

- This policy seeks to regulate the development of housing in multiple occupation, to ensure housing is fit for purpose, including providing provisions for sufficient size to provide safe, functional and healthy living conditions, with a high standard of amenity, for existing and future users.

Likely activities (operation) to result as a consequence of the proposal:

- This policy development of housing in multiple occupation, however it will not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

Centres, Retail and Services

DM Policy 18 - Primary Shopping Areas

C.6 This policy sets out the requirements for Primary Shopping Areas, identified within the Policies Map for each town.

Likely activities (operation) to result as a consequence of the proposal:

- This policy supports the Site Allocation policy *Policy SP04: Hierarchy of Centres*, however this policy does not result in development itself.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 19 – Centres Sequential Test

- This policy outlines the requirements for a sequential test in line with National Policy when submitting proposed development for retail and other main town centre uses that are not within town.

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to the requirements for development proposals that are not within designated areas within town, district or local centre boundaries. This policy focuses on the criteria set out in the sequential test and therefore does not result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 20 - Local Impact Assessment

- This policy outlines the requirements for an impact assessment when submitting any proposal for retail or leisure development, which is not within a town, district or local centre boundary and is over 280 sqm (gross), to considers the long-term impact on the centres' vitality and viability. This policy aims to ensure that retail or leisure development, which is not within a town, district or local centre boundary, contributes to the diverse offer, attraction and viability of the town and local centres

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to the requirements for development proposals to undertake an impact assessment and therefore does not result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 21 - Hot Food Takeaways

- This policy regulates how hot food takeaways within the borough will impact the environments and surrounding neighbourhoods.

Likely activities (operation) to result as a consequence of the proposal:

- This policy focuses on the requirements for hot food vendors to ensure the borough centres/parades are adequate, and therefore does not result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

DM Policy 22 – Local Shops

- This is a development management policy relating to the retention and small-scale provision of local shops. This policy resists the changing of use of local shops, and set out requirements for the creation of new or extension of local shops.

Likely activities (operation) to result as a consequence of the proposal:

- This is a criteria led policy and will not result in direct development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

Natural Environment and Landscape

DM Policy 23 - Thames Estuary Marshes Special Protection Area Zone of Influence

- This policy outlines protections for the natural environment and landscape from recreational activities but adhering a Zone of Influence (ZOL) of 8.1km of the Thames Estuary Marshes Special Protection Areas (SPA) and Ramsar sites. As such, all residential developments with a net increase in dwelling located within this ZOL will be subject to screening and appropriate assessment under the

Habitats Regulations and will be required to implement mitigation measures to ensure that there are no likely significant effects on the protected features of those sites.

Likely activities (operation) to result as a consequence of the proposal:

- This policy is focused on protecting the Thames Estuary Marshes SPA and will not result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 245 - Biodiversity and Geodiversity

- This policy outlines the Council's strategy for Biodiversity Net Gain. Specifically, this policy ensures that Biodiversity Net Gain measures will be informed by the Local Nature Recovery Strategy and Thurrock Green Grid network. Additionally, this policy seeks to gain benefits from partnering with local stakeholders such as Essex Wildlife Trust and Thames Chase Community Forest when undertaking BNG.
- This policy sets out the BNG guidelines for off-site habitat enhancements, ensuring offsite enhancement are undertaken locally, and within the borough and ensures that BNG measures on strategic sites that are informed by the LNRS will result in a 15% increase in BNG credit value.

Likely activities (operation) to result as a consequence of the proposal:

- This policy set out the councils' requirements for proposals and seeks to protect and enhance biodiversity and geodiversity resources in the borough. This policy does not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 25 - Trees and Hedgerows

- This policy focuses on the delivery of landscape schemes that are multi-functional, visually attractive, enhances biodiversity, priorities native species, incorporates sustainable drainage measures, and manages micro-climate

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the Councils expectations for tree and hedgerow management, enhancement and retention in the borough. This policy does not directly result in development

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 26 - Landscape Character

- This policy outlines how the Council will maintain the landscape character

Likely activities (operation) to result as a consequence of the proposal:

- This policy relates to the landscapes character and therefore will not result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 27 - Open Spaces, Sports and Recreation

- This policy seeks to improve the provision of and accessibility to open space, sport and recreation facilities in the borough with designated areas. It also outlines areas for open the criteria required to be met for current and new development proposals that would result in the loss of areas designated for open spaces, sport and recreation.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out criteria by which any development proposed will adhere to, to ensure development contributes positively to the quality, accessibility and distribution of open spaces. This policy does not directly result in development itself.

Potential likely significant effects

- No.

Is this policy likely to have significant effects?

- None.

DM Policy 28 - Riverside Uses, including River-dependent, River-related and Adjacent Uses

- This policy seeks to regulate riverside uses and development, to protect the River Thames and its tributaries.

Likely activities (operation) to result as a consequence of the proposal:

- This is a criteria-based development management policy relating to development along the River Thames and its tributaries. While it supports certain forms of development in principle, including mixed-use schemes, it does not allocate land or set development quantum and includes strong requirements to protect and enhance biodiversity, habitats, and the river environment. The policy will not, therefore, directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No

DM Policy 29 - Managing Flood Risk and Riverside Design

- This policy seeks to manage flooding risk in the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out the requirements for new development to comply with the relevant requirements of the NPPF and other relevant flood risk assessments. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 30 - Minimising Pollution and Impacts on Amenity, Health and Safety

- This policy seeks to minimise the impact of pollution in the borough, including air pollution, noise, vibration and light pollution and the impact on privacy, outlook, sunlight and daylight by development.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out the requirements for new developments in relation to adverse impacts on the amenity of neighbouring or future occupiers in respect to overlooking and privacy, daylight/sunlight, outlook, lighting, noise and vibration, and pollution. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Infrastructure

DM Policy 31 – Utilities

- This policy seeks to ensure that major developments considered the capacity of the utilities required for the function of the proposed infrastructure.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that new major developments will provide sufficient availability and connections to surrounding amenities. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 32 – Space for Culture

- This policy seeks to enhance the cultural experience in the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that new major developments will have regard to the 'Thurrock Plan for Culture 2025-2029' and 'Thurrock's Meanwhile Opportunities Strategy 2023'. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 33 – Community, Health, Leisure and Cultural Facilities

- This policy seeks to meet the needs of both existing and future residents of the borough, by protecting and enhancing existing community and social infrastructure and providing new facilities

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that development proposals will retain and maintain existing facilities that are valued by the community; or improve the quality and capacity

of facilities valued by the community will be supported. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 34 - Education and Early Years Childcare

- This policy seeks to improve the education facilities within the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out the criteria for development proposals for new education or childcare facilities in the borough. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 35 – Digital Communications Infrastructure

- This policy seeks to promote enhanced digital communications infrastructure.

Likely activities (operation) to result as a consequence of the proposal:

- This policy will promote enhanced digital connectivity throughout the Borough and ensure new developments consider the importance and implications of high-speed broadband and telecommunication infrastructure. This policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

C.7 No.

DM Policy 36 - Delivery of Infrastructure

- This policy seeks to ensure that all new infrastructure contribute adequately to the provision of the infrastructure need that it will generate. This will be achieved through the planning application stage for major developments, where they will be required to demonstrate that they comply with the specific infrastructure policies and infrastructure provisions within the Place Sections and Site Allocations of this Plan.

C.8 Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out what is expected of infrastructure development within the Brough and supports the Site Allocations within the Place Policy section. However, this policy does not result in development itself.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

Travel, Transport and Movement

DM Policy 37 - Active Travel, Transport and Cycling

- This policy seeks to reduce adverse effects by new developments on the surrounding environment due to transport and movement around the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out requirements for new proposals to mitigate and minimise adverse transport, movement and connectivity impacts on the transport networks that will serve them, and on their surroundings, including residential amenity and the wider environment. Therefore, this policy does not directly result in development.

Potential likely significant effects

- None.

Is this policy likely to have significant effects?

- No.

DM Policy 38 - Parking and Electric Vehicle Charging

- This policy seeks to ensure adequate parking within the borough, focusing on residential development parking, off-street parking, vehicle charging, car clubs, car parks and car free developments. Provisions for electric vehicle charging is an integral part of this policy, and guidelines and criteria are set out to ensure new developments provide adequate provisions.

Likely activities (operation) to result as a consequence of the proposal:

- This is a development management policy concerned with the delivery and funding of infrastructure required to support development. It does not allocate land, promote development, or increase development quantum. The policy will not, therefore, directly result in development

Potential likely significant effects?

- None.

Greenbelt

DM Policy 39 – Development in the Green Belt

- This policy seeks to protect and enhance the natural open character of the Green Belt within Thurrock is maintained, protected and enhanced in accordance with the provisions of the NPPF. This will be achieved by looking for opportunities to provide access to the countryside, provide opportunities for outdoor sport and recreation, to retain and enhance landscapes, visual amenity and biodiversity, and to improve damaged and derelict land.

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out clear guidance on the types of development that will be permitted within Thurrock's Green Belt and the reasonable limitations that will apply to those developments. No development will occur as a direct result of this policy.

Potential likely significant effects?

- None.

Good Design

DM Policy 40 - Cohesive and Distinctive Places

- This policy is part of the Good Design process which aims to set design standards and processes, commission good quality, support diversity, and champion good design within the Thurrock borough

Likely activities (operation) to result as a consequence of the proposal:

- This policy sets out the design standards for cohesive and distinctive places by ensure design is well-integrated, the density and site are optimised, distinctive character is maintained, the urban structure and grain of developments are considered, and development proposals integrate positively as 'good neighbours'. This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 41 - Delivering Great Design

- This policy seeks to ensure new development are designed with a robust and standardized approach, to ensure Great Design is adhered to within the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the latest guidance and standards, set out by the Council or other public sector partners, that must be considered during the design of developments. This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 42 - Health Impact Assessments

- This policy ensures that all development proposals are designed to help promote healthy and active lifestyles and avoid causing adverse impacts on public health. This policy sets out criteria and thresholds that proposals must meet in order to achieve this objective, none of which will directly result in built development

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 43 - Design of Residential Development

- This is criteria-based policy that outlines the key aspects and development requirements that must be considered during the design phase of residential developments, including household design quality, residential amenity and tenure blind. This policy will not directly result in development

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 44 - Householder Alterations and Extensions

- This policy sets out criteria that all planning applications for new household alterations and extensions must include in order to encourage 'Good Design'. This policy will not directly result in development

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 45 - Commerce & Industrial Development

- This policy sets out criteria that all planning applications for commercial and industrial developments must include in order to encourage 'Good Design'. This policy will not directly result in development

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 46 - Mixed-Use Development

- This policy sets out priorities for mixed-use developments in order to improve the services available to meet local needs within the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy promotes mixed-use developments within larger schemes to provide services to meet local needs, conveniently located where they are most accessible. Criteria for the redevelopment of urban sites to prioritise mixed use development are provided in this policy. This policy will not directly result in development.

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 47 - Layout, Streets and Public Realm

- This policy aims to provide designs that are attractive, safe, inclusive and legible. supporting active places, social interaction, and a sense of community.

Likely activities (operation) to result as a consequence of the proposal:

- This is a criteria-based policy that sets out requirements for the development and design of streets, layouts and public spaces. This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 48 - Accessibility and Inclusive Design

- This policy seeks to improve the accessibility of the borough.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that major developments will be accessible to all and will take into account the relevant guidance, including Department for Transport's *Inclusive Mobility*, the RIBA stages *Inclusive Design Overlay*, and the Design Council's *Inclusion by Design*, or any updated or equivalent future guidance to ensure accessibility and inclusive design in development proposals. This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 49 - Design of Landscape and Green-Blue Infrastructure (GBI)

- This policy requires developments to consider several key requirements during the design phase, to ensure Green-Blue infrastructure is achieved. This policy will not directly result in development

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development.

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 50 - Design of parking, servicing and utilities

- This policy seeks to ensure the integration of new parking in the borough is consistent with the wider urban design strategy. This policy draws on Policy 41 to ensure parking is safe and functional.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that 'Good Design' practice is achieved when designing parking, services and utilities and sets out specific criteria for well-integrated parking, services and utilities. This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 51 - Sustainable Design

- This policy ensures that planning applications maximise their sustainability. For example, this includes consideration of the following: *Appropriate orientation of*

buildings on the site in relation to sun, wind, and microclimate, to optimise energy efficiency and user comfort. Use of passive design principles and low-tech solutions as a primary strategy.

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 52 - Advertisements, Signage and Shop Fronts

- This policy seeks to regulate the advertising, signage and shop fronts within the borough to ensure it does not detract from the overall character of the area or place.

Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that advertising abide by the Town and Country Planning Regulations 2017 or are regulated by the Council during the planning application stage. This policy, therefore, does not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 53 - Tall Buildings

- This policy seeks to ensure that new tall building developments do not diminish the character of sensitive landscapes, and negatively impacting the public realm and neighbouring amenity.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines regulations for planning applications submitted for tall buildings (defined as buildings 'that are taller than six storeys (approx. 18m) or in areas with sensitive heritage assets or landscape character, two storeys above the prevalent form of development, whichever is the lesser). This policy draws reference to the locations identified within the Place Sections and Site Allocations policies. This policy, therefore, outlines the requirements for tall buildings in both design and site allocation, but does not directly result in development. The development of tall buildings will be considered for potential likely significant effects within the Place Section and/or Site Allocations policies.

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

Heritage

DM Policy 54 - Designated Heritage Assets.

- This policy seeks to maintain the boroughs historic environment and heritage assets.

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the requirements for development proposals that may have an impact on Design Heritage Assets, to ensure that heritage assets are

conserved. Requirements include undertaking a Heritage Impact Assessment, among other things. This policy, therefore, does not directly result in development.

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 55 - Conservation Areas

- This policy seeks to conserve, and, wherever possible, enhance those buildings heritage assets and areas which are of special value and historical interest.

C.9 Likely activities (operation) to result as a consequence of the proposal:

- This policy ensures that development proposals located within or that would have an impact on an adjacent conservation area should be designed to ensure that it preserves or enhances its character, appearance and significance. This policy, therefore, does not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 56 - Archaeological Assets

- This policy details how the Council will protect, reveal and celebrate remains of archaeological importance

Likely activities (operation) to result as a consequence of the proposal:

- This policy outlines the criteria for development proposal which affect Archaeological Assets and Archaeological Priority Areas. This policy, therefore, does not directly result in development

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

DM Policy 57 - Non – Designated Heritage Assets

- This policy seeks to protect and conserve non-designated heritage assets. This policy, therefore, does not directly result in development

Likely activities (operation) to result as a consequence of the proposal:

- This policy will not directly result in development.

Potential likely significant effects

- None.

Potential likely significant effects?

- None.

References

- 1 Thurrock Council (2016) Thurrock Local Plan Issues and Options (Stage 1) Report of Consultation [pdf] Available at: https://www.thurrock.gov.uk/sites/default/files/assets/documents/localplan_issue_options1_201602_comments.pdf
- 2 Thurrock Council (2016) Thurrock Local Plan Issues and Options (Stage 2) [pdf] Available at: <https://www.thurrock.gov.uk/sites/default/files/assets/documents/lpcons-issuesandoptions2-201812-v01.pdf>
- 3 The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 (2007) SI No. 2007/1843. TSO (The Stationery Office), London.
- 4 The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).
- 5 The exception to this would be where 'imperative reasons of overriding public interest' can be demonstrated; see paragraph 1.17.
- 6 The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated. (Source: UK Government Planning Practice Guidance)
- 7 <https://www.gov.uk/guidance/appropriate-assessment>
- 8 Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive')
- 9 Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the 'Birds Directive')
- 10 The network of protected areas identified by the EU: https://ec.europa.eu/environment/nature/natura2000/index_en.htm
- 11 <https://www.gov.uk/government/publications/changes-to-the-habitats-regulations-2017/changes-to-the-habitats-regulations-2017>
- 12 Defra and Natural England (2021) Guidance - Habitats regulations assessments: protecting a Habitats site, <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-Habitats-site>
- 13 NPPF para 176, available from <https://www.gov.uk/guidance/national-planning-policy-framework>

-
- 14** The HRA Handbook, Section A3. David Tyldesley & Associates, a subscription based online guidance document:
<https://www.dtapublications.co.uk/handbook/Habitats>
 - 15** UK Government Planning Practice Guidance, available from
<https://www.gov.uk/guidance/appropriate-assessment>
 - 16** The HRA Handbook. David Tyldesley & Associates, a subscription based online guidance document: <https://www.dtapublications.co.uk/handbook/>
 - 17** Conservation objectives are published by Natural England for SACs and SPAs
 - 18** In line with the CJEU judgment in Case C-323/17 People Over Wind v Coillte Teoranta, mitigation must only be taken into consideration at this stage and not during Stage 1: HRA Screening.
 - 19** In addition to SAC and SPA citations and conservation objectives, key information sources for understanding factors contributing to the integrity of the sites include (where available) conservation objectives supplementary advice and Site Improvement Plans prepared by Natural England:
<http://publications.naturalengland.org.uk/category/5458594975711232>
 - 20** The Conservation of Habitats and Species Regulations 2017 (2017) SI No. 2017/1012, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579).
 - 21** Chapman, C. & Tyldesley, D. (2016) Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects – a review of authoritative decisions. Natural England Commissioned Reports, Number 207.
 - 22** Obtained from the Natural England website. Available at:
www.naturalengland.org.uk
 - 23** Natural England (undated) Conservation Objectives for European Sites [online]. Available at:
<http://publications.naturalengland.org.uk/category/6490068894089216>
 - 24** SI No. 2017/2012.
 - 25** ECJ Case C-127/02 “Waddenzee” Jan 2004.
 - 26** Assessment of plans and projects significantly affecting HabitatsHabitat sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Habitats Commission Environment DG, November 2001.
 - 27** Ibid.

-
- 28** Rink, M. and Sinsch, U. (2007), Radio-telemetric monitoring of dispersing stag beetles: implications for conservation. *Journal of Zoology*, 272: 235-243.
<https://doi.org/10.1111/j.1469-7998.2006.00282.x>
- 29** British Wildlife Magazine. October 2007
- 30** Air Quality Consultants (2020) Ammonia Emissions from Roads for Assessing Impacts on Nitrogen-sensitive Habitats
- 31** A range of categories for which outputs from the traffic model are grouped into to describe their emissions.
- 32** *Wealden v SSCLG* [2017] EWHC 351 (Admin)
- 33** JNCC (2021) Guidance on decision-making thresholds for air pollution, <https://hub.jncc.gov.uk/assets/6cce4f2e-e481-4ec2-b369-2b4026c88447>
- 34** Essex County Council. Essex Coast Recreational disturbance Avoidance & Mitigation Strategy (RAMS). Habitat Regulations Assessment Strategy document 2018-2038.
- 35** Bird Wise North Kent (2025). Visitor Survey Results Summary.
- 36** LUC (2020). Appendix 2 of SAC Mitigation Strategy update. Epping Forest SAC Mitigation Report
- 37** Essex and Suffolk Water Resources Management Plan, 2024. Available at <https://www.eswater.co.uk/help-and-support/water/revised-draft-water-resources-management-plan-2024/>
- 38** Natural England (2024) Nutrient Neutrality Catchments Portal. Accessible at: <https://naturalengland-defra.opendata.arcgis.com/datasets/nutrient-neutrality-catchments-england/explore>
- 39** Assessment of plans and projects significantly affecting European sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. European Commission Environment DG, November 2001.
- 40** Available at: [APIS - Air Pollution Information System | APIS](#)
- 41** Lower Thames Crossing, 2022, 6.5 Habitats Regulations Assessment Screening Report and Statement to Inform an Appropriate Assessment. <https://nsip-documents.planninginspectorate.gov.uk/published-documents/TR010032-001776-6.5%20Habitats%20Regulations%20Assessment%20-%20Screening%20Report%20and%20Statement%20to%20Inform%20an%20Appropriate%20Assessment.pdf>

-
- 42** Available at: Personal Water Craft Code of Conduct | Essex Police
- 43** Essex and Suffolk Water (2024). *Water Resources Management Plan 2024 (WRMP24)*. Essex and Suffolk Water. Available at:
https://www.nwg.co.uk/globalassets/wrmp/nwg/october-24/esw/esw-wrmp24-main-report_final-oct-24.pdf
- 44** Southern Water (2023). Drainage and Wastewater Management Plan Gravesend Wastewater System Plan
- 45** JNCC (2019) UK Protected Area Datasets for Download [online]. Available at:
<https://jncc.gov.uk/our-work/uk-protected-area-datasets-for-download/>
- 46** Natural England (2014-2015) Site Improvement Plans: East of England [online]. Available at: <http://publications.naturalengland.org.uk/category/4873023563759616>
- 47** Natural England (undated) Conservation Objectives for Habitats sites [online]. Available at:
<http://www.naturalengland.org.uk/ourwork/conservation/designations/sac/conservationobjectives.aspx>

Report produced by LUC

Report produced by LUC

Bristol

12th Floor, Beacon Tower, Colston Street, Bristol BS1 4XE
0117 389 0700
bristol@landuse.co.uk

Cardiff

Room 1.12, 1st Floor, Brunel House, 2 Fitzalan Rd, Cardiff CF24 0EB
0292 254 0920
cardiff@landuse.co.uk

Edinburgh

Atholl Exchange, 6 Canning Street, Edinburgh EH3 8EG
0131 326 0900
edinburgh@landuse.co.uk

Glasgow

37 Otago Street, Glasgow G12 8JJ
0141 403 0900
glasgow@landuse.co.uk

London

250 Waterloo Road, London SE1 8RD
020 7199 5801
london@landuse.co.uk

Manchester

4th Floor, 57 Hilton Street, Manchester M1 2EJ
0161 802 2800
manchester@landuse.co.uk

Sheffield

32 Eyre Street, Sheffield, S1 4QZ
0114 392 2366
sheffield@landuse.co.uk

landuse.co.uk

Landscape Design / Strategic Planning & Assessment / Transport Planning
Development Planning / Urban Design & Masterplanning / Arboriculture
Environmental Impact Assessment / Landscape Planning & Assessment
Landscape Management / Ecology / Historic Environment / GIS & Visualisation