Strategic Environmental Assessment of the Interim Thurrock Transport Strategy

Scoping Report

Thurrock Council

Final report

Prepared by LUC

July 2022

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Introduction

1.1 Thurrock Council (hereafter referred to as 'the Council') commissioned LUC in March 2022 to produce a Strategic Environmental Assessment (SEA) of the Interim Thurrock Transport Strategy (TTS). The emerging Interim TTS was subject to SEA Screening in early 2022, which concluded that the TTS has potential to result in likely significant effects on the environment and therefore should be screened into the SEA process. The purpose of this Scoping Report is to provide the context for, and determine the scope of, the SEA of the Interim TTS and to set out the assessment framework for undertaking the later stages of the SEA.

Description of the Interim Thurrock Transport Strategy

Context for the Interim Thurrock Transport Strategy

1.2 Thurrock is undergoing a period of rapid change - with one of the most ambitious and exciting regeneration programmes in the UK. The emerging Local Plan for Thurrock will set out the Council's plans for around 32,000 new homes over the next 30 years and 21,000 new jobs – a major expansion of the housing supply in the Borough. The growth in Thurrock is part of the much wider growth across the South Essex and Thames Estuary Area. The Association of South Essex Local Authorities (ASELA) identifies a need for 96,000 new homes across the South Essex area in the next 20 years, and these new homes will require the development of supporting infrastructure to enable their sustainable growth. This will include transport links across the

region and the Interim TTS will recognise the need to strengthen these links within and beyond the South Essex and Thames Estuary Area, as well as within Thurrock itself.

1.3 Within Thurrock, there are significant regeneration schemes. These include the redevelopment of Grays Town Centre (incorporating new crossings of the railway and opening up the riverside), as well as port expansion at Tilbury and London Gateway, and the proposed development of a logistics 'superhub' at Thames Enterprise Park, all as part of the nationally significant Thames Freeport that will stimulate investment in the Borough. Major investment at Purfleet, including a new railway station and film studios, will also rejuvenate the west of the Borough.

1.4 The proposed construction of the Lower Thames Crossing would significantly change the transport network in and around Thurrock. If the scheme goes ahead, the Council will need to mitigate the negative impacts and maximise the benefits for Thurrock residents and business. The potential transformation of Lakeside into a regional town centre, including the expansion of housing and leisure facilities and the development of the Arena Essex site to the north, will change the way in which this major urban centre operates within the Borough.

1.5 All these major developments will fundamentally change the way people and goods move around Thurrock and the wider region at a time of economic uncertainty. They will also fundamentally affect how the Council mitigates and adapts to climate change.

Scope and content of the Interim Thurrock Transport Strategy

1.6 The emerging Interim TTS will replace the current Thurrock Transport Strategy (2013-2026) once adopted and will outline how the Borough's transport network will change over the period up to 2038.

1.7 The Interim TTS covers the entire borough of Thurrock and sets the framework for developing transport networks to accommodate the proposed local growth in housing and jobs. It includes a vision for the long-term future of Thurrock and sets out a range of proposed strategic objectives and policies that will be in place to deliver this vision.

1.8 The vision is set out in four parts:

1. **Vision statements** – A concise statement of Thurrock's hopes and expectations.

2. **Goals** – Ten interconnected goals that overlap with each other. The goals set a benchmark against which projects and programmes of transport infrastructure can be judged. The goals apply to remodelling existing roads, bridges and other assets and providing new infrastructure to support growth and regeneration. The goals will guide the development of the following stages of the Transport Strategy/Implementation Plan.

3. **Strategic focus area** – Nine strategic focus areas – these are foundations for developing the Transport Strategy. The nine strategic focus areas are:

   - **Growth and regeneration** - Connecting and integrating growth and regeneration opportunity areas.
   - **Modes** - Multi-modal and modal shift.
   - **Rail** - Sub-regional rail connectivity for rail passengers and freight.
   - **Mass Rapid Transit** - A fully integrated sub-regional Mass Rapid Transit System.
   - **River** - River Thames connectivity and breaking down the barrier of the river.
   - **Walking and cycling** - walking and cycling and access for mobility impaired.
   - **Buses** - An efficient, integrated, and high-quality bus network.

- **Roads** - Planning for multi-modal roads.
- **Lower Thames Crossing** - Securing local benefits and opportunities offered by the Lower Thames Crossing.

4. **Vision 2050 Diagram** – An abstract diagram illustrating potential transport connections, interchanges, development, and regeneration by 2050.

1.9 The Interim TTS's ten key goals are summarised as follows:

- **Goal 1: An accessible and inclusive network** - a transport network that is accessible for all.
- **Goal 2: Reducing emissions and improving air quality** - reducing all transport emissions, including CO_2, nitrous oxide, noise, and particulates.
- **Goal 3: Climate change resilience and responsibility** – a transport network more adaptable to climate change effects while promoting development travel patterns to minimise and mitigate climate change impacts.
- **Goal 4: Health and wellbeing** - promoting good physical and mental health and community wellbeing.
- **Goal 5: Active travel choices** - encouraging more people to walk and cycle.
- **Goal 6: Modal shift to public transport** - a significant shift from private car use to public transportation for most journeys.
- **Goal 7: Safer roads** - a feeling of safety and security for all transport network users with no deaths and fewer accidents.
- **Goal 8**: **Facilitating development, growth, and regeneration** - transport infrastructure investment to facilitate growth and renewal.
- **Goal 9: Sustainable development** - coordinating land use and transport planning to avoid, minimise and mitigate negative economic, social, environmental and impacts, including climate impacts.

- **Goal 10: Managing and maintaining** - A well-managed and well-maintained network that is reliable, giving people confidence in journey times.

1.10 The policies can be found in chapters 6 (Regional Movement), 7 (Local Movement) and 8 (Neighbourhood Movement) of the Interim TTS.

1.11 Within chapter 6, policy R1 relates to multi-modal transport, R2-R6 concern rail transport, R7 and R8 consider mass rapid transport, R9-R11 relate to river transport and R12-R13 relate to strategic road policies and schemes. This chapter also includes Major Schemes 1-11. All of these policies and schemes are concerned with Regional Movement.

1.12 Chapter 7 covers policies related to Local Movement within the Borough. Policies L1-L7 concern multi-modal schemes, L8-L12 relate to the bus network, L13-L15 present walking and cycling schemes, L16-L22 detail local road schemes and L23-25 relate to freight. Major Schemes 12 and 13 are also outlined in this chapter.

1.13 Neighbourhood Movement within the Borough is covered within chapter 8. Policies N1-N4 relate to multi-modal schemes and N5-N6 detail walking and cycling schemes.

Stage of the Interim Thurrock Transport Strategy

1.14 Mott MacDonald is currently preparing an Interim TTS on behalf of Thurrock Council. The Interim TTS will be published for public consultation in autumn 2022 and will support the delivery of the aspirations of both the emerging Thurrock Local Plan (due for adoption in 2024) and the Council's wider transport, economic, health and environmental objectives.

LUC

Figure 1.1: Location of Thurrock

Thurrock Council boundary

Neighbouring authority boundary

Map scale 1:125,000 @ A3

0 5 10 km

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CB:AHB EB:Tomlinson_J LUC FIG1_1_6999_Location_A3L 25/04/2022
Source:LUC, TC

THURROCK COUNCIL

Strategic Environmental Assessment

1.15 Strategic Environmental Assessment (SEA) is a statutory assessment process required by the SEA Regulations **[See reference 1]** and amended by the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 (SI 2018/1232) **[See reference 2]**. As set out in the explanatory Memorandum accompanying the Brexit amendments **[See reference 3]**, they are necessary to ensure that the law functions correctly following the UK's exit from the EU. No substantive changes were made by this instrument to the way the SEA regime currently operates. Therefore, it is a legal requirement for the Interim TTS to be subject to SEA throughout its preparation.

1.16 The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment and which set the framework for future consent of projects **[See reference 4]**. The purpose of SEA is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans.

1.17 The objective of this SEA is to ensure that the environmental effects of the Interim TTS are identified during its development, providing the opportunity for negative environmental effects to be avoided, reduced or compensated and for positive environmental effects to be enhanced, where opportunities arise. In this way, environmental considerations can be integrated into the preparation of the Interim TTS.

Stages in SEA process

1.18 The SEA of the Interim TTS comprises the following principal stages:

- **Screening (completed)**: Determine whether the Interim TTS is likely to result in significant environmental effects.

- **Scoping (current stage)**: Consultation with the three statutory bodies on the scope and level of detail of the assessment.
- **Environmental Report**: An assessment of the likely significant impacts on the environment as a result of the Interim TTS.
- **Consultation** on the draft Environmental Report.
- **Evaluation** of the submissions and observations made on the draft Environmental Report prior to finalising the Interim TTS.
- Issuing of an **SEA Statement** identifying how environmental considerations and consultation have been integrated into the final Interim TTS.

Stage 1: Screening

1.19 Screening for SEA was undertaken by LUC on behalf of the Council pursuant to the criteria set out in the SEA Regulations. The SEA Screening Report concluded that, although, the Interim TTS will not directly impact on land use through the allocation of land for built development, the Interim TTS supports projects that could include built development, such as new rail interchanges, jetties, and multi-modal transport hubs. In addition, various environmental sensitivities in Thurrock have been identified, including biodiversity and historic environment designations, AQMAs and areas at high risk of flooding, all of which could potentially be affected by proposals in the Interim TTS. On this basis, it was considered that the Interim TTS has the potential to result in likely significant environmental effects and that these should be explored through a full SEA.

1.20 As part of the SEA screening process, the three consultation bodies (the Environment Agency, Historic England, and Natural England) were invited to make submissions / observations in relation to whether the Interim TTS would or would not be likely to have significant effects on the environment. The following is a summary of their responses:

Historic England

- Historic England supports the conclusion of the SEA Screening Report that the Interim TTS has the potential to result in likely significant environmental effects and that these should be explored through a full SEA. Historic England strongly advises that the conservation and archaeological team of the Council are closely involved throughout the preparation of the SEA of the Interim TTS.

Natural England

- No response.

Environment Agency

- No response.

Stage 2: Scoping

1.21 The Scoping Report is required to provide information on the intended scope and level of detail of the SEA. It is obligatory to conduct the scoping stage of an SEA such that the content and boundaries for the SEA are agreed prior to commencement of the Environmental Report.

1.22 The main stages in carrying out scoping include:

- Identifying plans, programmes, and environmental objectives of relevance to the Interim TTS.
- Scoping of SEA topics relevant to the Interim TTS **[See reference** 5**]**.
- Identifying the geographic, temporal and transboundary scope of the Interim TTS.
- Collecting baseline information.

- Identifying sustainability issues and problems.
- Developing the SEA framework comprising environmental objectives to allow the evaluation of impacts on the environment.
- Identifying reasonable alternatives to the Interim TTS.
- Consulting on the intended scope and level of detail of the SEA.

1.23 In accordance with Article 13 of the SEA Regulations, the competent authority (the Council) preparing the plan or programme is required to consult with the consultation bodies on the scope and level of detail of the information to be included in the Environmental Report. Therefore, this Scoping Report has been updated to take account of the submissions received for the Environmental Authorities.

1.24 This Scoping Report was issued to the three consultation bodies for SEA in England, namely Historic England, Natural England and the Environment Agency, for a five-week period from 13th June 2022 to 15th July 2022. One response was received from Natural England. A summary of their comments and LUC's responses are provided in Appendix A.

Stage 3: Environmental Report

1.25 Following the Scoping stage, the SEA process will move onto the next stage where the Environmental Report on the Interim TTS will be compiled, in line with the approach set out in the Scoping Report. The Environmental Report will contain the findings of the assessment of the likely significant effects on the environment resulting from implementation of the Interim TTS. It will reflect the requirements of the SEA Regulations.

1.26 The Environmental Report will be structured as follows:

- An outline of the contents of the Interim TTS and its relationship with other relevant plans and programmes.

- The environmental characteristics of the study area, including any problems and issues identified and their likely evolution without the Interim TTS.
- Key environmental policy objectives set at the international, national and local levels that are relevant to the Interim TTS.
- The SEA Framework and the criteria used to make judgements about the effects of the Interim TTS.
- The likely significant effects of the Interim TTS and reasonable alternative options appraised against each of the objectives in the SEA Framework, taking into account mitigation.
- An outline of the reasons for selecting the alternatives and a description of any difficulties encountered during the assessment process, including data limitations.
- How consultation comments have been taken into account, including those received on the Screening Report and Scoping Report.
- Proposed monitoring framework for significant effects identified (including uncertain effects where these could become significant).
- Appendices, including the consultation responses tables, and detailed results of the SEA.

1.27 The Environmental Report will clearly set out the SEA conclusions for the Interim TTS, highlighting any likely significant effects, and will make any recommendations for mitigating potential negative effects identified. The assessment of significant effects will include likely secondary, cumulative, synergistic, short-medium-long term, permanent, temporary, positive and negative effects, as well as the interrelationships between each SEA topic, as set out in Schedule 2 of the SEA Regulations. The Environmental Report will be accompanied by a Non-Technical Summary document.

Stage 4: Consultation

1.28 Public consultation will be carried out on the Environmental Report for a six-week period in autumn 2022.

Stage 5: Evaluation

1.29 The submissions and observations received during the public consultation period will be reviewed and considered during the finalisation of the Interim TTS. If the Interim TTS is further revised, these revisions will be subject to further assessment. If there are no further alterations to the Interim TTS, a Final Environmental Report will be prepared and made available on the Council's website.

Stage 6: SEA Statement

1.30 An SEA Statement will be prepared identifying how each of the requirements in Article 16 of the SEA Regulations have been met during the SEA process. The finalised SEA Statement will be published after the Council adopts the Interim TTS.

Requirements of the SEA Regulations and where these are addressed in this Scoping Report

1.31 The text in this section signposts the relevant sections of the Scoping Report that meet the requirements of the SEA Regulations (the reminder will be met during subsequent stages of the SEA of the Interim TTS). This section will be updated and included in the Environmental Report at each stage of the SEA

to show how the requirements of the SEA Regulations have been met through the SEA process.

Regulation 12 and Schedule 2

1.32 The SEA Regulations require the responsible authority to prepare, or secure the preparation of an 'environmental report'. The environmental report must identify, describe and evaluate the likely significant effects on the environment of implementing the plan or programme and reasonable alternatives, taking into account the objectives and geographical scope of the plan or programme (Regulation 12). The information required by Schedule 2 of the SEA Regulations is set out below, indicating which part(s) the SEA Scoping Report provide that information:

- An outline of the contents and main objectives of the plan or programme, and of its relationship with other relevant plans and programmes.
  - Covered in Chapters 3 to 11 of this Scoping Report.
- The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.
  - Covered in Chapters 3 to 11 of this Scoping Report.
- The environmental characteristics of areas likely to be significantly affected.
  - Covered in Chapters 3 to 11 of this Scoping Report.
- Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.
  - Covered in Chapters 3 to 11 of this Scoping Report.
- The environmental protection objectives established at international, community or national level that are relevant to the plan or programme and

the way those objectives and any environmental considerations have been taken into account during its preparation.

- Covered in chapters 3-11 of this Scoping Report. Chapter 12 describes the SEA Framework, which shows how the objectives have been taken into account.

- The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape, and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects).
  - This requirement will be met at a later stage in the SEA process. Chapter 12 describes the method by which significant effects will be identified.
- The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme.
  - This requirement will be met at a later stage in the SEA process.
- An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken, including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.
  - This requirement will be met at a later stage in the SEA process.
- A description of measures envisaged concerning monitoring in accordance with Regulation 17.
  - This requirement will be met at a later stage in the SEA process.
- A non-technical summary of the information provided under the above headings.
  - This requirement will be met at a later stage in the SEA process.

1.33 The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process, and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Reg. 12(3)):

- This is addressed throughout the Scoping Report.

1.34 When deciding on the scope and level of detail of the information which must be included in the environmental report, the responsible Authority shall consult the consultation bodies (Reg. 12(5)):

- Consultation was undertaken on the SEA Scoping Report between 13 June and 15 July 2022 with the three consultation bodies (Environment Agency, Historic England and Natural England) and other relevant stakeholders. A summary of the response received on the Scoping Report from Natural England and LUC's response to this submission is provided in Appendix A.

Regulation 13

1.35 Authorities with environmental responsibility and the public shall be given an effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Regulation 13):

- Public consultation on the Interim TTS and the accompanying Environmental Report will take place in autumn 2022.

Regulation 14

1.36 Any relevant EU Member State must be consulted where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Regulation 14):

- The Interim TTS is not expected to have significant effects on EU Member States.

Regulation 16

1.37 Provision of information on the decision: When the plan or programme is adopted, the public and any countries consulted under Reg. 14 must be informed and the following made available to those so informed:

- The plan or programme as adopted;
- A statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report, the opinions expressed, and the results of consultations entered into have been taken into account, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and
- The measures decided concerning monitoring.

1.38 To be addressed after the TTS is adopted.

Regulation 17

1.39 Monitoring of the significant environmental effects of the plan's or programme's implementation:

- To be addressed after the TTS is adopted.

Quality assurance

1.40 Environmental reports should be of a sufficient standard to meet the requirements of the SEA Regulations:

- This Scoping Report has been produced in line with current guidance and good practice for SEA and this section has demonstrated where the requirements of the SEA Regulations have been met.

Habitats Regulations Assessment

1.41 The requirement to undertake HRA of land-use plans was confirmed by the amendments to The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007 **[See reference 6]**. The currently applicable version is The Conservation of Habitats and Species Regulations 2017, as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 **[See reference 7]** (hereafter referred to as the "Habitats Regulations"). When preparing a land-use plan, the competent authority is therefore required by law to carry out an HRA. The competent authority can commission consultants to undertake HRA work on its behalf which is then reported to and considered by the competent authority.

1.42 HRA refers to the assessment of the likely significant effects of a land-use plan on 'European sites' of nature conservation importance. European sites comprise Special Protection Areas (SPAs), Special Areas of Conservation (SAC), potential SPAs (pSPAs), candidate SACs (cSACs), Sites of Community Importance (SCIs). Ramsar sites are also included although these are designated at an international level.

1.43 The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a European site and to ascertain whether it would adversely affect the integrity of that site. The competent authority will consider the HRA and may only progress the land-use plan if it considers that it will not

adversely affect the integrity of any European site or have a significant effect on qualifying habitats or species for which the European sites are designated, or if Imperative Reasons of Overriding Public Interest (IROPI) are identified.

1.44 A HRA Screening of the Interim TTS was undertaken in April 2022 which concluded that no likely significant effects are predicted on European sites, either alone or in combination with other policies and proposals. However, it is expected that any major scheme that results in development in the Borough and that the Interim TTS supports, either directly or via a feasibility study, will be required to undertake a project-level HRA to determine impacts. Therefore, an Appropriate Assessment of the Interim TTS is not required.

Structure of the Scoping Report

1.45 This chapter describes the background to the production of the Interim TTS and the requirement to undertake SEA. **Chapter 2** describes the scoping of the SEA. The remainder of this Scoping Report is structured around the SEA topics listed in Schedule 2 of the SEA Regulations. Each chapter sets out the policy context, baseline and key issues for each subject area. The subject area chapters are as follows:

- **Chapter 3:** Biodiversity, flora and fauna
- **Chapter 4:** Population and human health
- **Chapter 5:** Climatic factors
- **Chapter 6:** Air
- **Chapter 7:** Soil
- **Chapter 8:** Water
- **Chapter 9:** Cultural heritage including architectural and archaeological heritage.
- **Chapter 10:** Landscape
- **Chapter 11:** Material assets.

1.46 SEA Guidance recognises that data gaps will exist but suggests that where baseline information is unavailable or unsatisfactory, authorities should consider how it will affect their assessments and determine how to improve it for use in the assessment of future plans. Where there are data gaps in the baseline and forthcoming reports, these are highlighted in the text. The collection and analysis of baseline data is regarded as a continual and evolving process, given that information can change or be updated on a regular basis.

1.47 Relevant baseline information will be updated during the SEA process as and when data is published.

1.48 The end of each chapter identifies the key environmental issues for Thurrock relating to that subject area, informed by the preceding policy context and baseline, and sets out their likely evolution without the Interim TTS. **Chapter 12** sets out the SEA Framework against which the effects of the Interim TTS will be assessed and explains how this has been developed. **Chapter 13** outlines the next steps in the SEA process.

1.49 The SEA Regulations also require the interrelationship between the various SEA topics to be addressed. It is acknowledged that many of the environmental topics and SEA objectives overlap and interact. For example, biodiversity is affected by climate change, air pollution and environmental pollution. Human health is also influenced by these topics and by biodiversity itself. In order to minimise repetition, enable assessment and highlight specific effects, the policy review, baseline and SEA Framework are separated by topic, with the information most relevant to that topic included. Significant interactions between different effects on different topic areas will be acknowledged in the Environmental Report.

Chapter 2

Scoping the SEA

Geographical and transboundary scope of SEA

2.1 The Interim TTS covers the entire borough of Thurrock and sets the framework for developing transport networks to accommodate the proposed local growth in housing and jobs. The focus of the Interim TTS will be meeting the needs of the Borough however, consideration will also be given to the effects beyond the Thurrock Borough boundary in South Essex and the Thames Estuary Area. Transport East is the Sub-national Transport Body for Norfolk, Suffolk, Essex, Southend-on-Sea and Thurrock and work is being carried out to develop a Transport East Transport Strategy to improve the regional transport network.

Temporal scope of SEA

2.2 The Interim TTS will cover the period up to 2038. In line with the SEA Regulations, short, medium and long-term impacts (including secondary, cumulative, synergistic, permanent and temporary, positive and negative effects) will be considered during the assessment.

2.3 For the purpose of this SEA, the following time frames will be considered:

- The short term will consider the period up to 2025.
- The medium term will consider the period up to 2030 to coincide with the Net Zero Strategy **[See reference 8]** target of 50% of all journeys in towns and cities to be walked or cycled by 2030; and the Vision Zero **[See**

reference 9] interim target of a 50% reduction in road deaths and serious injuries.

- The long term will consider the period up to 2038 and beyond.

Environmental scope of SEA

2.4 In accordance with the SEA Regulations, consideration has been given to whether the environmental effects, both positive and negative, of the Interim TTS are likely to be significant. A summary of the potential issues is presented below by environmental topic and whether the SEA topic is scoped in or out for assessment in the Environmental Report.

Biodiversity, flora and fauna

- Potential for loss of functionally linked habitat and fragmentation of the Nature Recovery Network from transport infrastructure developments.
- Potential for additional pressure on designated sites (which may already be under pressure from recreational access and disturbance, pollution, agriculture and climate change) from improved accessibility as a result of the Interim TTS.
- SEA topic **scoped in** for assessment in the Environmental Report.

Population and human health

- Population growth will place pressure on the transport network.
- COVID-19 has changed work habits as the need to access workplaces is reduced. This may place different demands on transport services for example changes to commuting patterns.
- Whilst the Interim TTS aims to reduce certain transport impacts, with the scale of transport development proposed in Thurrock there is potential for

the Interim TTS to increase air and noise pollution, and road accidents and fatalities. There is also potential for the Interim TTS to reduce air and/or noise pollution by supporting a modal shift to active travel and public transport and increasing the use of electric and other low emission vehicles.

- SEA topic **scoped in** for assessment in the Environmental Report.

Climatic factors

- The Interim TTS provides various opportunities to contribute to reducing greenhouse gas emissions by:
  - reducing the need to travel by diesel and petrol vehicles;
  - accelerating a shift from private car to active transport (walking and cycling) and to improve low-carbon public transport (electric buses and trains); and,
  - decarbonising road vehicles, including increasing the uptake of electric vehicles.
- The Interim TTS also provides an opportunity to ensure new transport infrastructure is designed to be resilient to climate change impacts.
- SEA topic **scoped in** for assessment in the Environmental Report.

Air

- Transport is a significant contributor to poor air quality with resultant adverse effects on human health. The Interim TTS may have both a positive and negative effect on this SEA topic. On the one hand it supports the development of significant transport projects which may increase air pollutant emissions. On the other hand it seeks to reduce emissions by supporting a modal shift to active travel and public transport and increasing the use of electric and other low emission vehicles.
- SEA topic **scoped in** for assessment in the Environmental Report.

Soil

- Potential pressure from transport infrastructure development may cause an increase in pressure for land and result in the loss of valuable soils. There's also potential for contamination of soils from transport developments.
- SEA topic **scoped in** for assessment in the Environmental Report.

Water

- The Interim TTS has the potential to negatively affect the water environment as new infrastructure may increase water pollution and affect flood risk while also offering an opportunity to potentially increase the resilience to flooding.
- SEA topic **scoped in** for assessment in the Environmental Report.

Cultural heritage including architectural heritage

- The Interim TTS may negatively affect heritage assets due to loss or damage or setting impacts.
- By improving connectivity of rural areas, the public may have better access to heritage assets.
- Archaeological and paleo-archaeological interests could be at risk from transport infrastructure development.
- SEA topic **scoped in** for assessment in the Environmental Report.

Landscape

- New transport infrastructure may adversely affect landscape quality, including the character and visual amenity of areas beyond designations.
- SEA topic **scoped in** for assessment in the Environmental Report.

Material assets

- Potential impacts include the loss or sterilisation of mineral assets from infrastructure development, conflict with other land uses, and the generation of construction waste from new schemes.
- SEA topic **scoped in** for assessment in the Environmental Report.

Chapter 3

Biodiversity, flora and fauna

Policy context

International

3.1 United Nations Declaration on Forests and Land Use (COP26 Declaration) (2021) **[See reference 10]**: international commitment to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation.

3.2 The **2030 Agenda for Sustainable Development** (2015) **[See reference 11]**: This initiative, adopted by all United Nations Member States, provides a shared blueprint for peace and prosperity for people and the planet and includes 17 Sustainable Development Goals (SDGs), designed to achieve a better and more sustainable future for all. Relevant to this topic are:

- SDG 13: Climate Action.
- SDG 14: Life Below Water.
- SDG 15: Life on Land.

3.3 International Convention on Biological Diversity (1992) **[See reference 12]**: International commitment to biodiversity conservation through national strategies and action plans.

3.4 European Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) (1979) **[See reference 13]**: Aims to ensure conservation and protection of wild plant and animal species and their natural

habitats, to increase cooperation between contracting parties, and to regulate the exploitation of those species (including migratory species).

3.5 International Convention on Wetlands (Ramsar Convention) (1976) **[See reference 14]**: International agreement with the aim of conserving and managing the use of wetlands and their resources.

National

3.6 A requirement of the **NPPF's** (2021) **[See reference 15]** environmental objective is that the planning system should contribute to protecting and enhancing the natural environment including helping to improve biodiversity and using natural resources prudently. The NPPF is supported by planning practice guidance relating to:

- **Natural environment** (2019) **[See reference 16]** - Highlights key issues in implementing policy to protect and enhance the natural environment, agricultural land, soils and brownfield land of environmental value, green infrastructure, biodiversity, geodiversity, ecosystems and landscapes.

3.7 The **Environment Act 2021** **[See reference 17]** sets statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water, and resource efficiency and waste reduction. Biodiversity elements in the Act include:

- Strengthened biodiversity duty. Both onsite and offsite enhancements must be maintained for at least 30 years after completion of a development;
- Biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity;
- Local Nature Recovery Strategies to support a Nature Recovery Network;
- Duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;

- Conservation Covenants;
- Protected Site Strategies and Species Conservation Strategies to support the design and delivery of strategic approaches to deliver better outcomes for nature;
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation; and
- Requires regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system.

3.8 A Green Future: Our 25 Year Plan to Improve the Environment [See reference 18]: Sets out goals for improving the environment within the next 25 years. It details how the Government will work with communities and businesses to leave the environment in a better state than it is presently. Identifies six key areas around which action will be focused. Those of relevance to this chapter are recovering nature and enhancing the beauty of landscapes; securing clean, productive and biologically diverse seas and oceans; and protecting and improving our global environment. Actions that will be taken as part of these three key areas are as follows:

- Recovering nature and enhancing the beauty of landscapes:
  - Develop a Nature Recovery Network to protect and restore wildlife and provide opportunities to re-introduce species that have been lost from the countryside.
- Securing clean, healthy, productive and biologically diverse seas and oceans:
  - Achieve a good environmental status of the UK's seas while allowing marine industries to thrive and complete our economically coherent network of well-managed marine protected areas.
- Protecting and improving our global environment:

- Provide international leadership and lead by example in tackling climate change and protecting and improving international biodiversity.
- Support and protect international forests and sustainable agriculture.

3.9 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 [See reference 19] protect biodiversity through the conservation of natural habitats and species of wild fauna and flora, including birds. The Regulations lay down rules for the protection, management and exploitation of such habitats and species, including how adverse effects on such habitats and species should be avoided, minimised and reported.

3.10 England Biodiversity Strategy Climate Change Adaptation Principles (2008) **[See reference 20]:** sets out principles to guide adaptation to climate change. The principles are to take practical action now; maintain and increase ecological resilience; accommodate change; integrate action across all sectors; and develop knowledge and plan strategically. The precautionary principle underpins all of these.

3.11 Natural Environment and Rural Communities Act 2006 [See reference 21]: Places a duty on public bodies to conserve biodiversity.

Regional and local

3.12 South Essex Green and Blue Infrastructure Strategy: Resilient by Nature [See reference 22]: This strategy sets out a vision for an integrated green and blue infrastructure (GBI) network across South Essex and key objectives and projects to achieve this. This includes protecting and enhancing biodiversity, for example through habitat restoration and creation, as well as integrating green space and links into development.

3.13 Green Essex Strategy [See reference 23]: This Strategy seeks to enhance, protect and create an inclusive and integrated network of high-quality green infrastructure in Greater Essex, to create a county-wide understanding of

green infrastructure – its functions and values, and to identify opportunities for implementing green infrastructure. The Strategy recognises the importance of GI in terms of environmental benefits, including biodiversity. The Strategy highlights the importance of GI in providing ecological networks of all scales, from regional to neighbourhood scale.

3.14 South East Inshore Marine Plan [See reference 24]: The Plan introduces a strategic approach to planning within the inshore waters between Suffolk and Kent, including the Thames Estuary. The Plan seeks to protect the marine environment, including direct protection and consideration of biodiversity assets, as well as avoiding, minimising and mitigating adverse impacts on air and water quality.

3.15 Thurrock Biodiversity Action Plan 2007-2012 [See reference 25]: Although the UK Biodiversity Action Plans were archived in 2012, the document provides an evidence base and framework for wildlife conservation priorities across Thurrock. This includes the conservation and protection of priority habitats that support many species. The main objectives of the Biodiversity Action Plan are to:

- Raise awareness of the importance of biodiversity.
- Raise awareness of all biodiversity action plans, habitats and species.
- Monitor populations of BAP species and areas of BAP habitats in Thurrock.
- Maintain the existing areas of habitats and population of species listed in the BAP and work to increase these where possible.
- Ensure that habitats are managed and maintained in the light of their ecological value.
- Encourage responsible maintenance of land in Thurrock.

3.16 HRA Screening of the Interim TTS [See reference 26]: A HRA Screening of the Interim TTS was undertaken in April 2022 which concluded that no likely significant effects are predicted on European sites, either alone or

in combination with other policies and proposals. However, it is expected that any major scheme identified through feasibility studies outlined in the Interim TTS, or which the Interim TTS supports, that results in development in the Borough will be required to undertake a project-level HRA to determine impacts.

3.17 Thurrock Council is currently preparing a **Habitats Regulation Assessment of the Local Plan**, a **Green and Blue Infrastructure Strategy** and a **Local Wildlife Sites Study**, all of which will be taken into account in the next iteration of the SEA. A **Local Nature Recovery Strategy for Essex** is also due to be prepared to replace the Biodiversity Action Plan however, it is at a very early stage in development.

Implications of the policy review for the Interim Transport Strategy and SEA

In order to align with the international, national, regional and local policies outlined above, the Interim TTS should seek to protect and enhance ecological features and biodiversity and encourage habitat restoration or creation as part of transport proposals. The Interim TTS should also seek to ensure that environmental pollution from transport and transport infrastructure is minimised in order to protect land, water and air quality. The SEA is able to respond to this through the inclusion of SEA objectives relating to the protection and enhancement of biodiversity, air pollution, water quality and contaminated land.

Baseline information

3.18 Thurrock is notable for its biodiversity due to several of its characteristics, such as its geology, orientation, and microclimate, as well as past and

contemporary land usage. **Figure 3.1** illustrates the location and extent of the designated biodiversity sites in Thurrock. Notable among these is the Thames Estuary and Marshes Ramsar site and Special Protection Area (SPA) which lies partly within Thurrock. It covers approximately 5,500 hectares from the north bank of the outer estuary from Coalhouse Point in East Tilbury to the most western part of the reclaimed land at Mucking Flats. Much of the site is brackish grazing marsh, although some parts have been converted to arable use. The estuary and adjacent marsh areas support an important assemblage of wintering water birds including grebes, geese, ducks and waders. Over winter, the area regularly supports a large population of waterfowls and is also important during spring and autumn for migratory birds **[See reference** 27**]**. Further detail regarding the qualifying features and key sensitivities of this European designated site and others within 15km of the Borough is provided in the HRA Screening Report of the Transport Strategy.

3.19 Thurrock contains 12 Sites of Special Scientific Interest (SSSIs), covering a total area of over 1,300 hectares. Out of the 12 SSSIs within Thurrock, only three are in entirely favourable condition, namely Hangman's Wood SSSI, Lion Pit SSSI and Holehaven Creek SSSI. Mucking Flats and Marshes SSSI is almost entirely in favourable condition (94.13%) with the rest of the site classed as unfavourable and recovering. The following SSSIs were found to be partly or entirely in unfavourable condition **[See reference** 28**]**:

- **Purfleet Chalk Pits SSSI:** 56.57% of this SSSI is in favourable condition, with 35.48% unfavourable and declining and 7.96% destroyed.
- **Inner Thames Marshes SSSI:** 42.37% of this SSSI is in favourable condition, 31.36% is unfavourable and declining, and 17.8% is unfavourable and recovering.
- **West Thurrock Lagoon and Marshes SSSI:** 66.69% of this SSSI is in unfavourable and declining condition, with 33.31% designated as unfavourable with no change.
- **Purfleet Road, Aveley SSSI:** 75.34% of this SSSI is in unfavourable condition with no change, and 24.66% favourable.

- **Langdon Ridge SSSI:** 80.50% of this SSSI is in unfavourable and recovering condition, with the rest in favourable condition.
- **Vange & Fobbing Marshes SSSI:** 91.54% of this SSSI is in unfavourable and recovering condition, with the rest designated as favourable.
- **Grays Thurrock Chalk Pit SSSI:** 100% of this SSSI is in unfavourable and recovering condition.
- **Globe Pit SSSI:** 100.00% of this SSSI is in unfavourable and declining condition.

3.20 There are two designated Local Nature Reserves (LNRs) within Thurrock at Linford Wood and Grove House Wood. Linford Wood LNR in Linford is an area of woodland covering 3.46 hectares. It consists of a hedge bank, mixed woodland, willow plantation, ditches and an open area surrounded by arable farmland. The wood provides a habitat for wildlife, including tawny owls, great spotted woodpeckers and green woodpeckers, as well as migrant birds in spring and autumn. Grove House Wood in Stanford-Le-Hope is a 2.24 hectares area with a mixture of habitats including reed beds, a pond and brook as well as the woods. The site is an important haven for wildlife in an area where no similar large habitats are found, while dead elms in the wood provide nesting sites for woodpeckers.

3.21 There are currently 70 Local Wildlife Sites (LWSs), 12 wildlife corridors and 11 habitat chains/clusters in Thurrock **[See reference** 29**]**. According to Natural England **[See reference** 30**]**, there are 20 ancient woodland sites in Thurrock, the largest being Millard's Garden and Brannetts Wood in South Ockenden, and Northlands Woods in Langdon Hills Country Park (see **Figure 3.2**) **[See reference** 31**]**. The majority of ancient woodlands in the Borough are also designated as LWSs.

3.22 Thurrock contains a number of national Priority Habitats. The Thurrock Biodiversity Action Plan (albeit currently out of date) identified nine priority habitats that support nature conservation and biodiversity in Thurrock **[See reference** 32**]**:

- **Ancient woodland** – UK and Essex biodiversity priority habitat
- **Calcareous grassland** – UK biodiversity priority habitat
- **Coastal grazing marsh** – The main areas of marshland in Thurrock are located at the eastern and western ends of the Borough. UK and Essex biodiversity priority habitat.
- **Brownfield wildlife land** – Thurrock holds important areas of high value brownfield wildlife land, which often supports large numbers of reptiles, rare and scarce plants and invertebrates.
- **Lowland heathland** – UK priority habitat of European importance and included in the Essex Biodiversity Action Plan.
- **Reedbeds** – UK and Essex biodiversity priority habitat. Thurrock has approximately 15ha of reedbeds that support birds and insect species that are dependent on this habitat.
- **Roadside verges** – In Thurrock roadside verges contain some of the most important Thames Terrace Grassland invertebrate assemblages that support a rich variety of species.
- **Thames Terrace grasslands** – These grasslands support a diverse collection of invertebrate species that have been identified as of national importance by English Nature.
- **Urban habitats** – Grays/Chafford, Stanford/Corringham and Ockendon contain open spaces and green infrastructure which are valuable for plants and insects. UK and Essex biodiversity priority habitat.

3.23 Priority species identified within the Thurrock Biodiversity Action Plan are brown hare, bats, hedgehogs, water vole, black redstart, skylark, song thrush, adder, grass snake, great crested newts, glow-worm, hornet robberfly, shrill carder-bee, stag beetle, black poplar and broadleaved cudweed.

3.24 Thurrock contains a 'Greengrid' spanning the Borough which comprises a sustainable network of multi-functional greenspace linking Thurrock's towns and countryside. The green and blue infrastructure (GBI) network provides valuable habitats and ecological corridors for movement of species. The Greengrid

overlaps and connects with other sub-regional green infrastructure frameworks, primarily the South Essex Greengrid, the Thames Chase Community Forest in the north and west of the Borough, and the Green Arc which extends out from London and encompasses the north western area of the Borough.

3.25 Natural England's Green Infrastructure Database **[See reference** 33**]** provides an overview of Thurrock's GBI provision. Thurrock has sufficient provision of natural/semi-natural greenspace, with a current provision of 7.82 hectares per 1,000 population compared with the Field In Trust (FIT) standard of 1.8ha per 1,000. The majority of natural and semi-natural greenspace in Thurrock (69%) can be attributed to a handful of large sites; Belhus Wood Country Park, Corringham Marches, Fobbing Marsh, Langdon Hill Country Park and Rainham & Aveley Marshes. Thurrock currently has a deficiency in Local Nature Reserves based on Natural England's Accessible Natural Greenspace Standard (ANGSt).

LUC

Figure 3.1 Designated Biodiversity Assets

- Thurrock Council boundary
- Neighbouring authority boundary
- Special Area of Conservation (SAC)
- Special Protected Area (SPA)
- Site of Specific Scientific Interest (SSSI)
- Ramsar
- Local Nature Reserve (LNR)
- National Nature Reserve (NNR)

Epping Forest
Brentwood
Chelmsford
Rochford
Havering
Basildon
Barking and Dagenham
Castle Point
Bexley
Dartford
Medway
Gravesham
Bromley
Sevenoaks

0 5 10 km

Map scale 1:125,000 @ A3

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CB:AHB EB:Tomlinson_J LUC FIG3_1_11976_Designated_biodiversity_A3L 13/07/2022
Source:LUC, TC, NE

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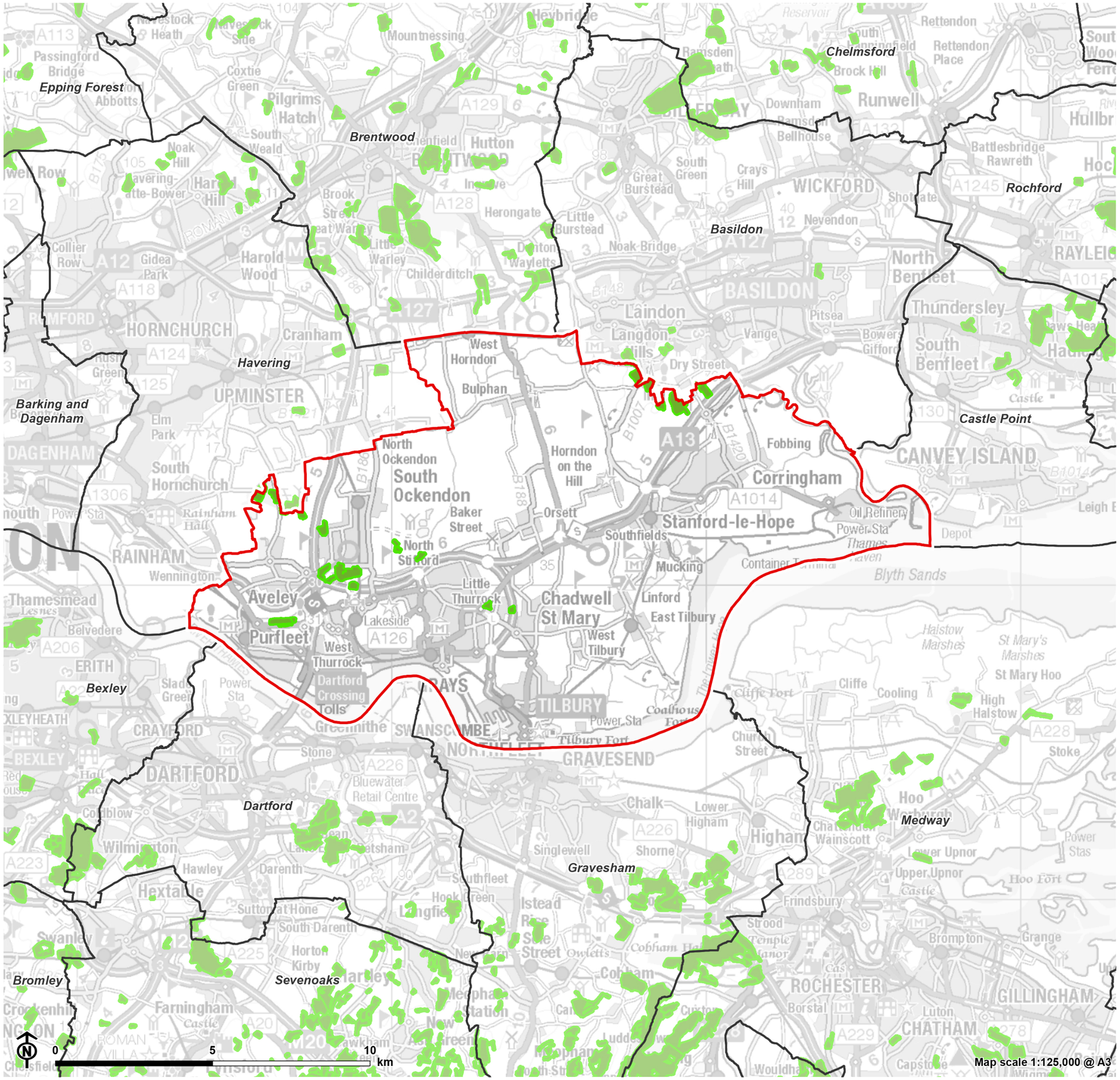
Figure 3.2: Ancient Woodland



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CB:AHB EB:Tomlinson_J LUC FIG7_2_6999_AWI_A3L 26/04/2022
Source:LUC, TC, EA, NE

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Key environmental issues and likely evolution of these issues without the Interim Thurrock Transport Strategy

3.26 Thurrock contains many areas of high ecological value including sites of international and national importance, some of which are in unfavourable condition. As well as the potential for loss of functionally linked habitat, development of transport infrastructure potentially puts pressure on designated sites (which may already be under pressure from recreational access and disturbance, pollution, agriculture and climate change) from improved accessibility as a result of the Interim TTS. The Interim TTS could also result in development that affects the noise environment for habitats and species that are sensitive to such impacts.

3.27 Although designated sites represent the most valued habitats in the Borough, the overall ecological network is important for biodiversity as a whole. The ecological network in Thurrock will form part of the national Nature Recovery Network. The Nature Recovery Network supports the health of designated sites and other wildlife-rich places, allowing species to migrate in response to climate change. Fragmentation and erosion of habitats and the Nature Recovery Network is an ongoing threat to biodiversity.

3.28 If the Interim TTS was not to be implemented, it is considered that adequate protection would be afforded to the Borough's habitats and species through policies in the Local Plan as well as through statutory protection of designated habitats and species. However, without the Interim TTS, it is possible that transport infrastructure could be sited inappropriately and adversely impact biodiversity sites, even if indirectly. The Interim TTS provides an opportunity to ensure that biodiversity is protected and enhanced through the transport system by:

- locating transport infrastructure away from the most sensitive locations;
- providing for new GBI which supports habitat creation;

- providing for habitat enhancement measures as part of transport developments;
- ensuring that transport projects do not adversely affect the current condition of biodiversity sites but, where possible, contribute to their improvement (e.g., bridges and tunnels may provide habitats for some species such as bats).

3.29 There may also be indirect benefits for species from the reduction in road traffic and congestion.