

Lower Thames Crossing

7.2 Planning Statement

Appendix H Green Infrastructure Study

APFP Regulation 5(2)(q)

Infrastructure Planning (Applications:
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An aerial photograph of a river winding through a landscape of green fields and brown patches, likely agricultural land. The river is a light brownish-green color. The text is overlaid on the upper left portion of the image.

LOWER THAMES CROSSING **GREEN INFRASTRUCTURE STUDY**

OCTOBER 2022



**LOWER THAMES CROSSING
GREEN INFRASTRUCTURE STUDY**

GREEN INFRASTRUCTURE GLOSSARY

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| Areas of Outstanding Natural Beauty (AONBs) | Areas of countryside considered to have significant landscape value in England, Wales or Northern Ireland, that have been specially designated by Natural England on behalf of the United Kingdom government. |
| Ancient Woodland | Ancient, semi-natural woods which have had a continuous cover of native trees and plants since at least 1600 AD. Having not been cleared and/or extensively replanted since then, Natural England and other organisations regard Ancient Woodland sites as being important for nature conservation. |
| Biodiversity Action Plan (BAP) | Countywide plans identifying priority habitats and targets for enhancement/habitat creation |
| Biodiversity Opportunity Areas (BOAs) | Regional priority areas of opportunity for restoration and creation of Biodiversity Action Plan (BAP) habitats. |
| Byways open to all traffic (BOATs) | BA highway over which the public have a right of way for vehicular and all other kinds of traffic but which is used by the public mainly for the purpose for which footpaths and bridleways are used. |
| Conservation Areas | An area, as defined in the Planning (Listed Building and Conservation Areas) Act 1990, designated as being of special architectural or historical interest and therefore protected from any alterations which would destroy its character. |
| Corridors | Linkages that connect green infrastructure nodes (see below) into coherent, landscape scale frameworks that deliver significantly greater value than the nodes in isolation. Corridors represent the means for wildlife to move between nodes providing different habitat functions and for people to move between population centres and nodes. Examples include watercourses and bridleways. |
| Countryside Access Plan | Aims to improve access to the countryside in a chosen area. |
| CRoW Act 2000 | CRoW The Countryside and Rights of Way Act 2000 (CRoW Act 2000). |
| GI Typologies | GI Commonly used acronym for Green Infrastructure. GI Typologies refers to areas that can form part of networks of green infrastructure. GI Architecture is phrase used in the PUSH strategy as an expression of the current strategic spatial form of green infrastructure. |
| Green Bridge | A bridge built to allow wild life to move over highways safely |
| Green links | Green corridors (primarily for movement and access but also considering other functions such as for habitat connectivity) – a key part of the green infrastructure network. |
| EA | Commonly used acronym for the Environment Agency |
| Habitat Regulations Assessment (HRA) | Assessment of the effects of a plan on European designated sites under the Habitats Directive/Regulations. |

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| LA | Commonly used acronym for Local Authority |
| Landscape character | The distinct, recognisable and consistent pattern of elements that occurs consistently in a particular landscape and how these are perceived. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement. |
| Landscape character areas | Single unique areas that are the discrete geographical area of a particular landscape type. |
| Landscape character types | Distinct types of landscape that are relatively homogenous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but share broadly similar combinations of geology, topography, drainage patterns, vegetation, historic land use and settlement pattern. |
| Landscape Quality | This is not the same as scenic beauty. Landscape quality is a function of certain characteristics that are capable of definition and appraisal. There are two major contributors to the quality of a landscape: its strength of character and the condition of the elements of which it is composed. |
| Landscape Sensitivity | The ability of a landscape to sustain development and other forces which trigger landscape change. |
| LDF | Commonly used acronym for Local Development Framework |
| Listed Buildings | <p>English Heritage is responsible for identifying and protecting historic buildings by recommending the most important of them for 'listing'. There are three grades of listed buildings depending on their relative importance:</p> <ul style="list-style-type: none"> • Grade I Buildings are those of exceptional interest • Grade II* Buildings are particularly important buildings of more than special interest • Grade II Buildings are of special interest, warranting every effort to preserve them. |
| Local Authority | An administrative unit of local government |
| Local Biodiversity Action Plan (LBAP) | A process rather than a plan which seeks to ensure that nationally and locally important species and habitats are conserved and enhanced in a given area through focused local action. |
| Local Nature Reserve (LNR) | Local Nature Reserves are designated under the National Parks and Access to the Countryside Act (1949) by local authorities (which must have some legal control over the site) in consultation with Natural England. These sites are designated for their locally important wildlife or geological features and are generally intended for educational and amenity uses in addition to conservation. |

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| Locally Important Geological Sites | Non-statutory sites which represent locally important places for geology, geomorphology and soils. These sites are considered worthy of protection for their education, research, historical or aesthetic importance. |
| Multi-functionality | Multi-functionality refers to the integration and interaction of different functions or activities on the same piece of land. This is key to the efficient and sustainable use of land, especially in small and crowded urban environments where pressures on land are high. |
| National Park | A reserve of natural or semi-natural land, declared or owned by a government, set aside for animal safety and/or human recreation and enjoyment, and protected from most development. |
| Natura 2000 sites | Sites of pan European nature conservation importance, e.g. SPAs and SACs. |
| National Cycle Network (NCN) | A scheme promoted by the charity Sustrans which led to the development of 10,000 miles of linked cycle routes by August 2005. The NCN is partly funded by the Millennium Commission, with approximately 80% of funding coming from other sources including the National Lottery. |
| Rights of Way (RoW) | All rights of way are legally highways and anyone may use them at any time. All can be used by pedestrians, but some have extra rights to ride a horse, cycle or drive a vehicle. |
| Scheduled Monument | Nationally important archaeological site or historic building, given protection against unauthorised change. |
| Site of Special Scientific Interest (SSSI) | Designated under the Wildlife and Conservation Act 1981, as amended, for their outstanding interest in respect of flora, fauna, geology and or limnology. |
| Sites of Importance for Nature Conservation (SINCs) | Designations applied to the most important nature conservation sites. Can be designated for both their ecology and geological interest. |
| Special Area for Conservation (SACs) | Special Areas of Conservation (SACs) are strictly protected sites that have habitat types and species that are considered to be most in need of conservation at a European level (excluding birds). |
| Special Protection Areas (SPAs) | Strictly protected sites classified for rare and vulnerable birds, and for regularly occurring migratory species. |
| Strategic Development Areas (SDA) | Broad locations for major mixed-use development well served by public transport, including housing. |
| Strategic Sustainable Drainage Systems or SuDS | Formerly called Sustainable Urban Drainage Systems. An approach to managing rainfall and run off in developments, with a view to replicating natural drainage. SuDS also aim to control pollution, re charge ground water, control flooding, and often provide landscape and environmental enhancement. |
| Sustainability Appraisal (SA) | Generic term to describe the form of assessment that considers environmental, social and economic effects, whilst also incorporating the requirements of the SEA Directive |

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Baseline Mapping

Biodiversity
Landscape Character
Open Space, Heritage and Sense of Place
Connections
Green Infrastructure Typologies

APPENDIX II: STAKEHOLDER RESPONSE AND MAPPING

Environmental Stakeholder Workshop 5th September 2018
Environmental Stakeholder Project Identification Record
Local Authority Engagement Responses
Stakeholder Project Identification Mapping (1:25,000 2 @ A1)
NPS-TIER 1 Recommended mitigation and TIER 2 Opportunities (1:25,000 2 @ A1)

APPENDIX III: RECOMMENDATIONS

EXECUTIVE SUMMARY

VISION

"We aim to put people at the heart of our work by designing an inclusive, resilient and sustainable road network; appreciated for its usefulness but also its elegance, reflecting in its design the beauty of the natural, built and historic environment through which it passes, and enhancing it where possible." (National Highways)

The tapestry of landscape surrounding the Lower Thames Crossing comprises a rich integrated network of Green Infrastructure which supports natural and ecological processes capable of delivering a wide range of environmental and quality of life benefits for the local communities. As part of the vision for the Lower Thames Crossing the Project will help contribute to wider Green Infrastructure by working with stakeholders to support prioritisation of initiatives of projects to ensure improved and enhanced access to open space as well as enhancement and creation of ecological assets and networks. This will help benefit the mental and physical well-being for the existing and future needs of affected communities and multiple biodiversity benefits as part of the legacy of Lower Thames Crossing.

This Green Infrastructure Study is a unique and significant study and the largest of its type in support of a DCO ensuring that Green Infrastructure mitigation is planned positively on a 'landscape – scale' and that the mechanisms are in place to ensure its delivery and that benefits are secured for the future.

GREEN INFRASTRUCTURE

The National Planning Policy Framework (NPPF) (Revised National Planning Policy Framework 20 July 2021)

The NPPF sets out that planning authorities should ensure that development meets economic, social and environmental objectives.

The environmental objective is defined by the NPPF as:
to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

Green Infrastructure (GI) is defined by NPPF as:

A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities.

This network includes parks, green spaces, gardens, woodlands, street trees, hedges, green walls and green roofs. Each element of GI is an important asset for local communities, providing places to play and enjoy and together they make attractive places to live and invest in.

Green Infrastructure often works hand in hand with "blue infrastructure" such as rivers, streams, canals, lakes and other water bodies; both blue and green infrastructure are multi-functional.

The NPPF recognises that Green Infrastructure has a value and recommends assessing the wider benefits of the natural environment using two approaches:

- natural capital – a way of thinking about the natural environment as an asset
- eco-systems services - the benefits to people provided by the natural environment and ecosystems.

The Landscape Institute Position Statement on GI (March 2013) defines Green Infrastructure as: 'the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. It is a natural, service providing infrastructure that is often more cost-effective, more resilient and more capable of meeting social, environmental and economic objectives than 'grey' Infrastructure.'

Natural England's definition of Green Infrastructure states that, 'Green Infrastructure is a strategically planned and delivered network comprising the broadest range of high-quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types. Green Infrastructure includes established green spaces and new sites and should thread through and surround the built environment and connect the urban area to its wider rural hinterland. Consequently, it needs to be delivered at all spatial scales from sub-regional to local neighbourhood levels, accommodating both accessible natural green spaces within local communities and often much larger sites in the urban fringe and wider countryside.'

The fundamental principles of Green Infrastructure are their multi-functionality and connectivity. The multi-functionality of Green Infrastructure is important to ensure the maximisation of public benefit, while the connectivity aspect ensures that the network functions on a large scale and that its overall public benefit is greater than the sum of its parts.

GREEN INFRASTRUCTURE STUDY OBJECTIVES AND PURPOSE

The Green Infrastructure Study (the Study) has been prepared on behalf of National Highways to support the Development Consent Order (DCO) for the Lower Thames Crossing (LTC), hereafter referred to as the Project. The Project and extent of the Green Infrastructure study area is located within the administrative boundaries of Essex County Council, Kent County Council, Greater London Authority, Thurrock Council, London Borough of Havering, Gravesham Borough Council, Brentwood Borough Council, Tonbridge and Malling District Council and Maidstone District Council. The extent of the Project is illustrated on the Location Plan as part of the Book of Plans (Application Document 2.1).

The Project's key objectives comprise three principal categories of economic, community and environment and have been developed by National Highways and endorsed by Department for Transport (DfT), after the Government commissioned National Highways to identify and assess options for a new road crossing in the Lower Thames area in 2014.

The purpose of the LTC Green Infrastructure Study is to advise on a deliverable approach to retain and improve Green Infrastructure and to help define necessary mitigation to be embedded in the Project's Environmental Masterplan providing the 'bigger picture' for the delivery of large-scale Green Infrastructure, maximising benefits for people and wildlife. The Environmental Masterplan (Application Document 6.2, Figure 2.4) defines the spatial layout of physical mitigation proposals.

The Study considers how existing and proposed Green Infrastructure can connect and enhance communities and wildlife at the sub-regional and city-scale as part of a holistic approach to mitigation and design solutions for the Project. The Study is intended to help focus attention or priority on land that needs to be safeguarded, managed or secured in positive ways to create a multi-functional network of green spaces and assets for which investment can deliver the greatest range of benefits. The Study provides a strongly context-driven and multifunctional approach to the mitigation of Green Infrastructure.

The key driver for the Green Infrastructure Study is the guidance contained within the Government's National Policy Statement National Networks (NPSNN/NPS) as the primary policy framework for the consideration of LTC as a Nationally Significant Infrastructure Project (NSIP). This requires that where Green Infrastructure is affected, projects should aim to ensure that the functionality and connectivity of Green Infrastructure networks are maintained, and any necessary work undertaken in order to mitigate any adverse impacts. Particular emphasis is placed on networks of Green Infrastructure identified in the development plans of local planning authorities which should normally be protected from development and where possible strengthened by or integrated within it.

The NPS defines that access to high quality open spaces and the countryside and opportunities for sport and recreation can be a means of providing necessary mitigation and/or compensation requirements. Green Infrastructure can also enable developments to provide positive environmental and economic benefits. The value of linear infrastructure and its footprint in supporting biodiversity and ecosystems should also be taken into account when assessing the impact on Green Infrastructure.

For Green Infrastructure to enhance the local area and be effective and sustainable in the long-term, it needs to be strongly context drive. The context includes planning and other strategic policies, for example those relating to landscape or urban character, health and wellbeing, ecological networks, target species as well as priorities identified through consultation and engagement.

ENGAGEMENT

The Study has brought together different disciplines including landscape, ecology and heritage specialists to understand the extent and nature of Green Infrastructure provision affected by the Project and ensures Green Infrastructure is fully embedded into the design process.

Extensive stakeholder consultation with Local Authorities, Kent Downs AONB, Statutory Environmental Bodies and other interest groups has helped an understanding of existing GI assets and has provided a robust baseline enabling the identification of needs and opportunities.

The Study provides a mechanism to support the implementation of national and local planning policies and as such identifies key areas that will add value to and increase investment and interventions.

Key contributors who have shaped the outcome and opportunities of the GI Study:

- Brentwood Borough Council
- Medway Council
- Kent County Council
- Essex County Council
- Thurrock Council
- Dartford Council
- London Borough of Havering
- Historic England
- Environment Agency
- Natural England
- Marine Management Organisation
- Forestry Commission
- Kent Downs AONB
- Bumblebee Conservation Trust
- Buglife
- Essex Wildlife Trust
- Forestry Enterprise England
- Kent Wildlife Trust
- RSPB
- Woodland Trust
- Land of the Fanns
- Thames Chase Trust
- Thames and Medway Canal Association
- National Trust

OVERVIEW

The Green Infrastructure Study has been prepared to ensure that identified opportunities and recommendations are integrated into the Project with defined priority projects and priority mitigation requirements. These have been used to inform and develop the Environmental Masterplan, Design Principles and Project Design Report which set out the approach to Green Infrastructure provision as part of mitigation measures for the Project submitted for the DCO.

The Study sets out:

- Identification of Green Infrastructure needs and opportunities set out in local planning/policy documents;
- Identification of potential improvements and opportunities through site appraisals;
- Consultation with key stakeholders to identify Green Infrastructure need and potential Green Infrastructure improvement projects;
- Identification of enhanced Green Infrastructure provision of an appropriate type, standard and size in response to identified needs;
- A review of Green Infrastructure assets and projects affected by the Project, setting out recommendations based on a Tiered approach to mitigation requirements; and
- How identified opportunities support approved policy, contribute to local needs and fulfil Green Infrastructure objectives.

The Green Infrastructure Study is referenced within the following DCO Application Documents:

- 6.1 – Environmental Statement
- 7.02 – Planning Statement
- 7.04 – Project Design Report
- 7.05 – Design Principles
- 7.10 – Health and Equalities Impact Assessment

STATUS

The Study commenced in 2018, based on the statutory consultation LTC design and as such is not an impact assessment of the Project. The Study is based on information available and published policy at that time in order to inform early decision making on priority mitigation proposals.

Initial Stakeholder Engagement undertaken in 2018 and 2019 has informed the identification of projects and opportunities and consideration of the protection and enhancement of existing assets. The Study concludes with recommendations for implementing mitigation measures based on a tiered approach as follows:

- **TIER 1:** Mandatory - GI assets identified in development plans directly impacted by LTC, Mitigation measures necessary to ensure compliance with the NPSNN.
- **TIER 2:** Non-Mandatory – GI assets directly affected by LTC. Mitigation measures identified in meeting GI requirements in support of plan policies which the Project may consider.
- **TIER 3:** Out of Scope – GI assets indirectly impacted by LTC providing potentially wider GI benefits beyond the LTC Study Area which the Project may consider.

A validation of the whole Study was undertaken in 2022. The Green Infrastructure baseline has not fundamentally changed and the recommendations in the Study remain valid notwithstanding the changes to the Project since statutory consultation. It is acknowledged that across the study area the status of a minority of existing Green Infrastructure assets have changed since 2018 and additional peripheral Green Infrastructure has been included through monitoring of baseline information. Status updates are provided in Section 6: Stakeholder Project Identification Sheets and Section 10: Green Infrastructure Review.

The recommendations set out in the Study capture all identified Green Infrastructure assets and projects are classified as Tier 1, 2 or 3 mitigation. These recommendations have been used to inform early mitigation decision making and the Study has been used as a design tool to ensure Green Infrastructure protection, enhancement and creation was embedded from the outset of the Environmental Masterplan. The embedded environmental mitigation is shown in ES Figure 2.4: Environmental Masterplan (Application Document 6.2) and the Project commitments are set out in the Design Principles (Application Document 7.5).

SECTION 1: INTRODUCTION AND OBJECTIVES



1 INTRODUCTION AND OBJECTIVES

INTRODUCTION

POLICY CONTEXT

The National Networks National Policy Statement (NNNPS), hereafter referred to as 'NPS', sets out the need for, and Government's policies to deliver, development of nationally significant infrastructure projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of nationally significant infrastructure projects on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State. The NPS provides guidance and imposes requirements on matters such as good scheme design, as well as the treatment of environmental impacts. The NPS defines that access to high quality open spaces and the countryside and opportunities for sport and recreation can be a means of providing necessary mitigation and/or compensation requirements. Green infrastructure can also enable developments to provide positive environmental and economic benefits. Where networks of green infrastructure have been identified in development plans, they should normally be protected from development, and, where possible, strengthened by or integrated within it. The value of linear infrastructure and its footprint in supporting biodiversity and ecosystems should also be taken into account when assessing the impact on green infrastructure.

Paragraph 5.180 of the NPS states that where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way. The NPS also provides at paragraph 5.181 that the Secretary of State should also consider whether mitigation of any adverse effects on green infrastructure or open space is adequately provided for by means of any planning obligations, for example, to provide exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness, quality and accessibility.

Green Infrastructure is advocated by a number of government bodies, including Natural England. Natural England published its 'Green Infrastructure Guidance' 2009. This sets out the functions and benefits of planning for Green Infrastructure and how to embed Green Infrastructure in the plan making and development management process. The policy drivers behind this include:

- **economic growth and employment;**
- **protect and enhance cultural heritage;**
- **protect and enhance the landscape, geodiversity and natural environment;**
- **biodiversity conservation and enhancement;**
- **climate change mitigation and adaptation;**
- **promoting sustainable transport and reducing the need to travel by car;**
- **community cohesion and life long learning volunteering; and**
- **healthy communities, health and well being.**

OBJECTIVES OF THE GREEN INFRASTRUCTURE STUDY

Existing strategic Green Infrastructure assets form the 'backbone' or underlying framework for identifying needs and opportunities for contributing to potential GI requirements. The purpose of the LTC Green Infrastructure Study is to provide the conceptual perspective or 'bigger picture' for the delivery of large-scale Green Infrastructure as part of mitigation to be embedded in the Environmental Masterplan for LTC demonstrating that existing and proposed Green Infrastructure connects and enhanced communities and wildlife at the sub-regional and city-scale. It is intended to help focus attention or priority on land that needs to be safeguarded, managed or secured in positive ways to create a multifunctional network of green spaces and assets for which investment can deliver the greatest range of benefits. Five key objectives underpin the purpose of this study to ensure that Green Infrastructure is fully integrated in planning and mitigation across the LTC scheme.

Objective 1: To understand the existing function, quality and value of existing GI within the LTC GI Study Area

Objective 2: To identify GI issues, needs and opportunity projects through stakeholder engagement

Objective 3: To assess the direct and indirect impacts on identified existing and aspirational GI

Objective 4: To identify priority mitigation to meet requirements of the NPS and to identify compensation measures

Objective 5: To embed GI protection, enhancement and compensation within the Environmental Masterplan.

The GI Study is approached and set out in three distinct stages presented below followed by a full content and structure cross referenced to appendices and supporting information.

STAGE 1 - IDENTIFYING AND MAPPING EXISTING GREEN INFRASTRUCTURE ASSETS

Green Infrastructure Baseline

As a starting point, existing Green Infrastructure assets in and around the designated Green Infrastructure Networks have been identified and mapped through desk top studies with landscape, heritage and ecological specialists. The functions provided by the existing Green Infrastructure have appraised from site visits in July 2018 and by reference to relevant data and information. Through appraisal work in 2022 Green Infrastructure assets have been reviewed and mapping has been updated in Appendix I. The Stage 1 work includes an assessment of the connectivity of existing GI Assets in and around the designated areas for the general public as well as wildlife interests.

The key findings of the survey and appraisal are presented on the following plans in APPENDIX I of this Report:

- Biodiversity
- Landscape Character
- Connections
- Landscape, Open Space and Sense of Place

Through an understanding of the GI assets identified in the survey work an overall Green Infrastructure Typologies Plan has been prepared. Drawing on the National definition all baseline data has been classified by a GI Typology which identifies the GI functionality - comprising Green and Blue Infrastructure and identifies existing connectivity between the GI Assets. This is presented on the following plan:

- Green Infrastructure Typologies

STAGE 2 - IDENTIFYING GREEN INFRASTRUCTURE NEEDS AND OPPORTUNITIES

The aim of the second stage of the Green Infrastructure Study (GI Study) is to identify and understand the key GI needs and opportunities building upon the baseline review undertaken for Stage 1. This initial stage included site surveys and analysis providing the first step in developing an approach to enhanced GI provision and connectivity across the LTC Study Area. The Study Area extends broadly 20km east-west and 25km north-south to capture a wider area beyond the Development Boundary to comprehensively consider existing GI assets which directly and indirectly may be affected as part of the LTC and to fully understand wider connectivity. In order to advance understanding of the current GI provision and function, collation of wider policy, data and identification of needs has been sought as part of this second stage approach which has involved key stakeholders as well as environmental disciplines involved with the LTC Project. The Study builds on a wealth of information produced at a range of scales and seeks to provide the stepping stones for presenting GI Opportunities and Recommendations, demonstrating how GI is strategically planned to deliver a network of high quality interlinked multifunctional resources, capable of delivering a wide range of environmental and quality of life benefits for local communities both today and endure for future generations.

The GI Study provides a mechanism to support the implementation of national and local planning policies and as such identifies key areas that will add value to and increase investment and interventions.

- Identification of local Green Infrastructure needs, and opportunities set out in local planning/policy documents;
- Identification of potential improvements and opportunities through site appraisal carried out in Stage I of the GI Study;
- Liaison with key stakeholders to identify Green Infrastructure need and potential Green Infrastructure improvement projects;
- Identification of enhanced Green Infrastructure provision of an appropriate type, standard and size in response to identified needs;
- How identified opportunities support identified policy, contribute to local needs and fulfil Green Infrastructure Themes.

Key Outputs:

The identified needs and opportunities are presented on a **Green Infrastructure Recommendations and Opportunities Plan** which illustrates the wide ranging scale of projects and GI aspirations across the LTC Study Area with the overarching strategy to demonstrate how existing GI Assets and Opportunities can be interconnected.

The GI opportunities highlight the strategic opportunities for each district, which have been selected on the basis of:

- **Need and Policy Requirements**
- **Scale and range of the GI functions they can deliver**
- **Achievable**

STAGE 3 - INCORPORATING PROPOSALS INTO THE SCHEME DESIGN

The final stage of the project is to ensure that the green infrastructure opportunities plan and recommendations are integrated and implemented into the scheme design with defined priority projects and priority mitigation requirements. The integration of the GI Study opportunities into the LTC mitigation strategy and Environmental Management Plan will aim to provide a comprehensive approach to green infrastructure provision as part of mitigation measures for LTC. Presentation of the findings will be mapped using ARC GIS which will interactively map all data collated as part of Stages 1 and 2 to enable analysing and sharing throughout the LTC team. Appendix III of the Study sets out how and where each of the priority recommendations have been implemented as part of the Scheme Design.

CONTENT OF THE GI REPORT

The GI Study Report is structured as follows:

Chapter 2 provides a background to the identification of Green Infrastructure Themes that inform opportunities and development of GI needs.

Related Information Glossary.

Chapter 3 sets out the hierarchy of published planning policy with specific regard to heritage, landscape, open space, biodiversity and Green Infrastructure.

Related Information Appendix I Baseline Mapping.

Chapter 4 gives a general overview of Green Infrastructure Needs across the LTC Study Area informed by site survey work, desk top studies and stakeholder engagement.

Related Information Appendix I Baseline Mapping, Appendix II Stakeholder Project Mapping.

Chapter 5 sets out the outcome of the Stakeholder Engagement and Workshops that have been undertaken as part of the Stage II study.

Related Information Appendix II Stakeholder Engagement Workshops and liaison.

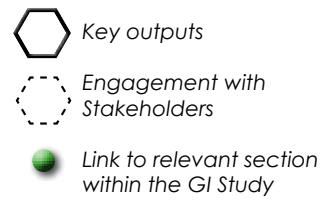
Chapter 6 provides a written overview of the high level GI guidance and opportunities for consideration within the study area.

Related Information Appendix II Stakeholder Engagement Workshops and liaison.

Chapter 7 sets out the rationale and methodology for identification of priority projects and mitigation recommendations.

Related Information Glossary.

Chapter 8 sets out the next steps for follow up of the GI Study.



STAGE 1

Study Commissioned May 2018



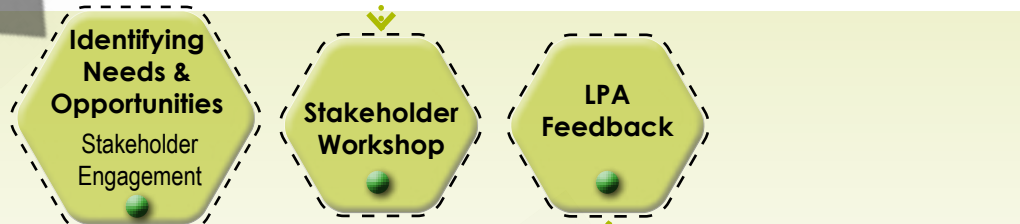
July- September 2018



Direct/ Indirect Identification of Projects

STAGE 2

September 2018



October- December 2018



STAGE 3

January- March 2019-20



Value attached to G.I. Asset

Susceptibility to change

Sensitivity of G.I. Asset

Magnitude and Significance

SECTION 2: IDENTIFICATION OF GI THEMES



GREEN INFRASTRUCTURE STUDY GUIDE

2 IDENTIFICATION OF GI THEMES

2.1 GREEN INFRASTRUCTURE DEFINITION

Green Infrastructure (GI) is a strategically planned network of high quality multi-functional green spaces and interconnecting links and other environmental features designed, developed and managed to meet the environmental, social and economic needs of communities. It is set within and contributes to a high quality natural, historic and built environment and enhances the quality of life for both current and future residents and visitors.

Natural England defines Green Infrastructure as:

"A strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types.

Green Infrastructure includes established green spaces and new sites and should thread through and surround the built environment and connect the urban area to its wider rural hinterland. Consequently it needs to be delivered at all spatial scales from sub-regional to local neighbourhood levels, accommodating both accessible natural green spaces within local communities and often much larger sites in the urban fringe and wider countryside". (Natural England, 2009)

Green Infrastructure is an essential element of development, underpinning the concept of sustainability. GI includes urban and country parks, green open recreation spaces, commons and village greens, woodland, natural and semi-natural habitats for wildlife, Local Nature Reserves and Local Wildlife Sites, historic parks, ancient monuments and landscapes, watercourses, lakes, ponds, footpaths, cycleways, allotments and other recreational routes. These spaces serve the community at all levels, including local, district-wide or at a regional level. Successful GI networks incorporate a strategic approach to enhancing wildlife networks in urban and rural areas by helping to address climate change. A GI Strategy puts the environment at the heart of the LTC planning process.

In order to realise future green infrastructure opportunities, the first step in developing this strategy was a requirement to understand the functionality of the assets as places which shape the current and future quality of life. Issues that have previously been addressed in isolation, such as biodiversity, public open space and flood prevention can be considered holistically as part of an integrated Green Infrastructure approach which delivers multiple environmental, social and economic benefits. The importance of Green Infrastructure as a way to mitigate environmental, social and economic challenges is becoming understood and can be expressed through the consideration and application of Green Infrastructure Themes.

2.2 ANALYSIS OF GI THEMES

Through an appraisal of the Stage 1 Study seven GI Themes have been identified which represent the different functions and benefits GI provides. These are illustrated below:



The GI themes reflect the key environmental and social functions that GI delivers at a strategic scale and in summary of hierarchy policy requirements. There are other benefits that GI provides to society, however those defined in Diagram 1 are most relevant to this study. The overarching objectives of each theme are outlined below:

Green Infrastructure Themes and Objectives

| Themes | Objectives |
|---|---|
| Landscape, Heritage and Sense of Place | <ul style="list-style-type: none"> To protect and enhance the distinctive landscape character of the sub-region as defined in landscape character assessments enhance, restore, manage and protect the historic environment as a key component of the green infrastructure network. GI should contribute to the management, conservation and enhancement of the local landscape, with new development respecting (and where possible enhancing) landscape character and quality. To be based on a sound understanding of the historic environment (e.g. historic landscape characterisation work). To promote the recognition of the historic environment as an integral part of green infrastructure. |
| Habitat Creation and Enhancement | <ul style="list-style-type: none"> To enhance, manage and protect existing key habitats and species (statutory and non-statutory designated sites and Biodiversity Action Plan habitats and species) as key components of the green infrastructure network; To reduce fragmentation of wildlife habitats by creating ecological corridors and networks; To contribute to Biodiversity Action Plan habitats and species targets; To reduce disturbance to ecologically sensitive sites through improved management of access, and the creation of alternative accessible natural green spaces; To be informed by ecological surveys and Biodiversity Action Plan priorities to guide the design and implementation of green infrastructure improvements and development schemes; To create new areas of habitat as part of new development |
| Water Resources | <ul style="list-style-type: none"> To support initiatives that contribute to sustainable development, including renewable energy, floodwater retention and water gathering areas |
| Access and Recreation | <ul style="list-style-type: none"> Open Space and recreational links provide an important local resource for recreation and exercise and can lead to improvements in health and well being. To create attractive destinations for daytrips and holidays, for visitors, tourists and the local population. |
| Health and Wellbeing | <ul style="list-style-type: none"> Improving the quality of place is an important factor in motivating people to enjoy and exercise in their local area. Green Infrastructure can provide much needed opportunity and motivation to increase activity and exercise. Small changes in the built environment can motivate people to exercise. Green infrastructure can improve air quality. |

Local Awareness and Community Involvement

- The natural environment delivers essential 'ecosystem services' including life-support systems such as the recycling of air and water; capturing and storing carbon in peat, woodland and soil; flood protection; and waste purification – along with many others.
- Green working environments have been shown to reduce stress amongst workforces and to stimulate higher productivity. In addition, higher quality work environments attract and retain higher calibre staff.
- Using green infrastructure as a place for communities to grow crops can provide health and education benefits whilst also supporting community cohesion.

Sustainability and resilience to climate change

- Interconnected green infrastructure is vital for managing a range of climatic changes, particularly in urban areas, where it can reduce the impact of heavy rainfall or the urban heat island effect.
- Using green infrastructure for flood alleviation and management has economic as well as environmental value.

2.3 APPLICATION OF GI THEMES

Using these seven themes, existing and proposed GI Assets have been identified and mapped according to the GI themes to which they contribute most directly.

In consideration of GI Opportunities and Needs these themes are explored in consideration of potential for positive change, particularly through the development and enhancement of Green Infrastructure. This includes identifying opportunities to develop better connected biodiversity networks, improved flood risk management and new recreational assets linking the GI Themes. Opportunities and Needs will be expressed through identified GI Functions and GI Themes.

SECTION 3: GREEN INFRASTRUCTURE POLICY



3 GREEN INFRASTRUCTURE POLICY

The policy context provides a review of existing and emerging government policy relevant to green infrastructure at the national, regional, sub-regional and local levels. At the national level, green infrastructure policy and guidance documents prepared by government agencies and non-governmental organisations were assessed, in addition to central government planning policy statements. The policy topics considered encompass the environmental, social and economic benefits of green infrastructure, the creation and enhancement of the green infrastructure network and the management and maintenance of green infrastructure. The review of existing and emerging policy provides guidance on the implications of the current planning context for the Green Infrastructure Strategy.

3.1 NATIONAL

3.1.1 NATIONAL POLICY STATEMENT NATIONAL NETWORK - (DEPT OF TRANSPORT 2014)

The importance attached to the protection and enhancement of Green Infrastructure networks is established at a national level, through the policy guidance contained within the National Policy Statement National Networks (NPSNN).

| Reference | Summary |
|-----------|---|
| 4.38 | New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the provision of green infrastructure. |
| | <u>Land Use including open space, green infrastructure and Green Belt</u> |
| 5.162 | Access to high quality open spaces and the countryside and opportunities for sport and recreation can be a means of providing necessary mitigation and/or compensation requirements. Green infrastructure can also enable developments to provide positive environmental and economic benefits. |
| 5.175 | Where networks of green infrastructure have been identified in development plans, they should normally be protected from development, and, where possible, strengthened by or integrated within it. The value of linear infrastructure and its footprint in supporting biodiversity and ecosystems should also be taken into account when assessing the impact on green infrastructure. |
| 5.180 | Where green infrastructure is affected, applicants should aim to ensure the functionality and connectivity of the green infrastructure network is maintained and any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space, including appropriate access to new coastal access routes, National Trails and other public rights of way. |

- 5.181 The Secretary of State should also consider whether mitigation of any adverse effects on green infrastructure or open space is adequately provided for by means of any planning obligations, for example, to provide exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness, quality and accessibility. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, any replacement land provided under those sections will need to conform to the requirements of those sections.

3.1.2 NATIONAL PLANNING POLICY FRAMEWORK – JULY 2021

The National Planning Policy Framework sets out the Government's planning policies for England and how these should be applied. It provides a framework within which locally-prepared plans for housing and other development can be produced.

| Reference | Summary |
|------------------|---|
| | Core Planning Principles |
| <u>Chapter 2</u> | <u>Achieving sustainable development</u> |
| 7 | The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs. At a similarly high level, members of the United Nations – including the United Kingdom – have agreed to pursue the 17 Global Goals for Sustainable Development in the period to 2030. These address social progress, economic well-being and environmental protection. |
| 8 | Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives): |
| | c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy. |
| <u>Chapter 8</u> | <u>Promoting healthy and safe communities</u> |
| 92 | Planning policies and decisions should aim to achieve healthy, inclusive and safe places which: |
| | a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages; |
| | b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas; and |

- c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.
- 93 To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:
- a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments...
- 98 Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities. Planning policies should be based on robust and up-to-date assessments of the need for open space, sport and recreation facilities (including quantitative or qualitative deficits or surpluses) and opportunities for new provision. Information gained from the assessments should be used to determine what open space, sport and recreational provision is needed, which plans should then seek to accommodate.
- 100 Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.
- 101 The designation of land as Local Green Space through local and neighbourhood plans allows communities to identify and protect green areas of particular importance to them...
- 102 The Local Green Space designation should only be used where the green space is:
- a) in reasonably close proximity to the community it serves;
- b) demonstrably special to a local community and holds a particular local significance, for example because of its beauty, historic significance, recreational value (including as a playing field), tranquillity or richness of its wildlife; and
- c) local in character and is not an extensive tract of land.
- 103 Policies for managing development within a Local Green Space should be consistent with those for Green Belts.
- Chapter 9 Promoting sustainable transport
- 104 c) opportunities to promote walking, cycling and public transport use are identified and pursued;
- Chapter 11 Making effective use of land
- 119 Planning policies and decisions should promote an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Strategic policies should set out a clear strategy for accommodating objectively assessed needs, in a way that makes as much use as possible of previously-developed or 'brownfield' land.

- 120 Planning policies and decisions should:
 a) encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains – such as developments that would enable new habitat creation or improve public access to the countryside;
 b) recognise that some undeveloped land can perform many functions, such as for wildlife, recreation, flood risk mitigation, cooling/shading, carbon storage or food production.

Chapter 13 Protecting Green Belt Land

- 147-151 The National Forest and Community Forests offer valuable opportunities for improving the environment around towns and cities, by upgrading the landscape and providing for recreation and wildlife. The National Forest Strategy and an approved Community Forest Plan may be a material consideration in preparing development plans and in deciding planning applications.

Chapter 14 Meeting the challenge of climate change, flooding and coastal change

- 154 New development should be planned for in ways that:
 a) avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure ;...

Chapter 15 Conserving and enhancing the natural environment

- 175 Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework⁵³; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

3.1.3 THE NATURAL CHOICE: SECURING THE VALUE OF NATURE – JUNE 2011

This White Paper – the first on the natural environment for over 20 years – places the value of nature at the centre of the choices our nation must make: to enhance our environment, economic growth and personal wellbeing.

| Reference | Summary |
|------------------|--|
| | <u>Reconnecting People and Nature</u> |
| 13 | The NEA and the Marmot Review, Fair Society, Healthy Lives, demonstrate the positive impact that nature has on mental and physical health. High-quality natural environments foster healthy neighbourhoods; green spaces encourage social activity and reduce crime. The natural environment can help children's learning. |
| <u>Chapter 2</u> | <u>Protecting and Improving our Natural Environment</u> Local Nature Partnerships |

2.16 Some highly effective local partnerships already exist, dealing with matters such as landscape restoration, catchment or coastal management, achievement of Biodiversity Action Plans and provision of green infrastructure. Many already make the important links between action for nature and wider economic and community priorities. We want to see widespread and joined-up partnership action. **We will encourage and support Local Nature Partnerships where local areas wish to establish them. These partnerships will work at a strategic scale to improve the range of benefits and services we get from a healthy natural environment. They will aim to improve the multiple benefits we receive from good management of the land.**

Restoring Nature in our towns, cities and villages

2.78 We need urban green infrastructure to complete the links in our national ecological network. Urban green space allows species to move around within, and between, towns and the countryside. Even small patches of habitat can benefit movement. Urban green infrastructure is also recognised as one of the most effective tools available to us in managing environmental risks such as flooding and heatwaves. It is part of the answer to the challenges posed by a changing climate.

2.81 Urban green space could be a huge asset both locally and nationally, but is often perceived as a liability, generating concerns about management costs and other risks. There is strong evidence for the economic and social benefits of green infrastructure. To take account of this, appropriate methodologies are needed so that those who may wish to retain or develop green infrastructure locally, such as local authorities, healthcare bodies and businesses, can assess the value for money of local spending on it. In chapter 4 we set out how we will work with civil society organisations, local government and relevant professional bodies to support local areas in planning and developing their green infrastructure.

4.28 We will support local areas to improve the provision and state of green infrastructure. We will work with local authorities and civil society organisations to demonstrate the social, economic and environmental benefits that green infrastructure can provide. **The Government will establish a Green Infrastructure Partnership to support the development of green infrastructure in England. This will consider how green infrastructure can be enhanced to strengthen ecological networks and improve communities' health, quality of life and resilience to climate change.**

3.1.4 BIODIVERSITY 2020

Biodiversity 2020 is a national strategy for England's wildlife and ecosystem services; it was published in summer 2011. It sets out the Government's ambition to halt overall loss of England's biodiversity by 2020, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.

| Reference | Summary |
|---|--|
| Chapter 1 Habitats and Ecosystems on Land | Ambition By 2050 our land and seas will be rich in wildlife, our biodiversity will be valued, conserved, restored, managed sustainably and be more resilient and able to adapt to change, providing essential services and delivering benefits for everyone. |
| 2020 Mission | Our mission is to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. |
| Outcome 1 – Habitats and ecosystems on land (including freshwater environments) | <p>By 2020 we will have put in place measures so that biodiversity is maintained and enhanced, further degradation has been halted and where possible, restoration is underway, helping deliver more resilient and coherent ecological networks, healthy and well-functioning ecosystems, which deliver multiple benefits for wildlife and people, including:</p> <ul style="list-style-type: none"> • 1A. Better wildlife habitats with 90% of priority habitats in favourable or recovering condition and at least 50% of SSSIs in favourable condition, while maintaining at least 95% in favourable or recovering condition; • 1B. More, bigger and less fragmented areas for wildlife, with no net loss of priority habitat and an increase in the overall extent of priority habitats by at least 200,000 ha; • 1C. By 2020, at least 17% of land and inland water, especially areas of particular importance for biodiversity and ecosystem services, conserved through effective, integrated and joined up approaches to safeguard biodiversity and ecosystem services including through management of our existing systems of protected areas and the establishment of nature improvement areas; • 1D. Restoring at least 15% of degraded ecosystems as a contribution to climate change mitigation and adaptation. |
| Rationale | Although we have made some progress, biodiversity continues to decline. The independent review of England's wildlife sites and ecological network, Making Space for Nature chaired by Professor Sir John Lawton, concluded that England's collection of wildlife areas (both legally protected areas and others) does not currently represent a coherent and resilient ecological network that would be capable of responding to the challenges of climate change and other pressures. The review concluded that establishing such a network would effectively conserve biodiversity and ecosystem services, delivering many benefits to people, while also making efficient use of scarce land and resources. It recommended that priorities in England should include better, more, bigger and joined sites for nature. Ecological networks are considered to be an effective means to conserve ecosystems and wildlife in environments, such as England, that have become fragmented by human activities. Some work on ecological restoration is already underway, but we need to extend this approach much more widely. |

3.1.5 MAYOR OF LONDON : LONDON PLAN - MARCH 2021

| Reference | Summary |
|---|--|
| <p>Policy G1 Green Infrastructure</p> | <p>A. London's network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.</p> <p>B. Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.</p> <p>C. Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to: 1) identify key green infrastructure assets, their function and their potential function 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.</p> <p>D. Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.</p> |
| <p>8.1.1</p> | <p>A green infrastructure approach recognises that the network of green and blue spaces, 133 street trees, green roofs and other major assets such as natural or semi-natural drainage features must be planned, designed and managed in an integrated way. Policy G1 sets out the strategic green infrastructure approach and provides a framework for how this can be assessed and planned for. The remaining policies in this chapter provide more detail on specific aspects of green infrastructure, which work alongside other policies in the Plan to achieve multiple objectives.</p> |
| <p>Policy G4 Local Green and Open Space</p> | <p>A Development Plans should:</p> <ul style="list-style-type: none"> • 1) undertake a needs assessment of all open space to inform policy. Assessments should identify areas of public open space deficiency, using the categorisation set out in Table 8.1 as a benchmark for the different types required.¹³⁶ Assessments should take into account the quality, quantity and accessibility of open space • 2) include appropriate designations and policies for the protection of open space to meet needs and address deficiencies • 3) promote the creation of new areas of publicly-accessible open space particularly green space, ensuring that future open space needs are planned for, especially in areas with the potential for substantial change • 4) ensure that open space, particularly green space, included as part of development remains publicly accessible. <p>B Development proposals should:</p> <ul style="list-style-type: none"> • 1) not result in the loss of protected open space • 2) where possible create areas of publicly accessible open space, particularly in areas of deficiency. |

- Policy G5 Urban Greening
- A Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.
 - B Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses).
 - C Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B)
- Policy G6 Biodiversity and access to nature
- C Where harm to a SINIC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:
 1. avoid damaging the significant ecological features of the site
 2. minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site
 3. deliver off-site compensation of better biodiversity value.
- Policy G7 Trees and woodlands
- Trees and woodlands play an important role within the urban environment. They help to trap air pollutants, add to amenity, provide shading, absorb rainwater and filter noise. They also provide extensive areas of habitat for wildlife, especially mature trees. The urban forest is an important element of London's green infrastructure and comprises all the trees in the urban realm, in both public and private spaces, along linear routes and waterways, and in amenity areas.
- The Mayor and Forestry Commission have previously published a London Tree and Woodland Framework and Supplementary Planning Guidance on preparing tree strategies to help boroughs plan for the management of the urban forest.¹⁴¹ These, and their successor documents, should inform policies and proposals in boroughs' wider green infrastructure strategies.

3.1.6 ENVIRONMENT ACT 2021

An Act to make provision about targets, plans and policies for improving the natural environment; statements and reports about environmental protection; for the Office for Environmental Protection; waste and resource efficiency; air quality; the recall of products that fail to meet environmental standards; water; nature and biodiversity; conservation covenants; the regulation of chemicals; and for connected purposes.

3.1.7 A GREEN FUTURE: OUR 25 YEAR PLAN TO IMPROVE THE ENVIRONMENT

The 25 Year Environment Plan: 'A Green Future: Our 25 Year Plan to Improve the Environment' (2018) sets out a framework to maintain and improve the environment for the next generation. It focuses on clean air and water, connecting people with the environment to improve health and wellbeing, and mitigating and adapting to climate change. It embeds the principles of 'environmental net gain' and upgrading green infrastructure standard in the planning system. Strong, evidence-based arguments are made noting the economy's dependency on environment, and that increasing and enhancing 'natural capital' assets such as green infrastructure is not only desirable, but essential for England's future success. Furthermore, the government has started working on a project to create a 'Green Infrastructure Standards Framework' to be embedded into NPPF.

The Environment Bill puts the 25-Year Environment Plan into law, and mandates 'biodiversity net gain' requiring developers to ensure wildlife habitats are left in a measurably better state than they were predevelopment. Habitat and the conditions before submitting plans will be assessed and improvements to biodiversity demonstrated, such as the creation of green corridors, planting trees, or creating local nature spaces. Green improvements on site are encouraged, but in the rare circumstances where this is not possible, developers will need to pay a levy for habitat creation or improvement elsewhere. This is a step towards natural capital net gain.

3.1.8 HEALTHY LIVES, HEALTHY PEOPLE: OUR STRATEGY FOR PUBLIC HEALTH IN ENGLAND WHITE PAPER' (2010)

This sets out the Government's long-term vision for the future of public health. It recognises the relationship between environment and health, along with education and employment, to tackle health inequalities to be achieved through empowering local government and communities to seek local solutions.



3.2 LOCAL PLANNING POLICY

3.2.1 SOUTH ESSEX PLAN (2050)

The South Essex Plan is being prepared by the six South Essex authorities of Basildon, Brentwood, Castle Point, Rochford and Southend working together with Essex County Council. Together these form ASELA (Association of South Essex Local Authorities). The Plan will set out a strategic framework for development in the area up to 2038 and will complement other work being undertaken to make South Essex a better place to live. In order to deliver the South Essex 2050 vision, the South Essex authorities are preparing a statutory Joint Strategic Plan (JSP), that will focus on key spatial planning priorities, including this South Essex Strategic Green and Blue Infrastructure Study.

EVIDENCE BASE

South Essex Green and Blue Infrastructure Study - Alexandra Steed/Urban (2020)

The South Essex Strategic Green and Blue Infrastructure Study (the "South Essex GBI") sets an inspired vision for green and blue infrastructure across South Essex, and provides high-level objectives, strategic opportunities, and policies, driven by a coordinated approach. The South Essex GBI defines an integrated green and blue network, that will provide multiple benefits and which merits prioritisation and significant investment. Moreover, it defines a spatial arrangement, articulates key moves, and describes why these are important for ongoing investment, conservation, management and development.

2.1 South Essex Estuary Park (SEE Park)

The vision for South Essex - historically a place of disconnection, and an underperforming riverside environment - seeks to restore this fractured region. By reimagining South Essex as one dynamic parkland, the tapestry of landscapes is mended.

SEE Park will comprise a network of diverse green and blue assets threading through a vast area of approximately 70,000 hectares. There are many existing parks, gardens, nature reserves, and waterways in South Essex that will be complemented by new recovery sites, including flood zones, and former industrial, mineral, and extraction sites.

Fig. 26, presents the spatial strategy as a simplified diagram. It relates directly to the Heat map, FIG. 22, in Section 2.3, that reveals areas of greatest need and greatest potential to maximise GBI benefits socially, environmentally and economically. It shows an overarching structure with vast and enveloping swathes of green infrastructure, on a fabric of rich agricultural land, and tied together with a robust network of green and blue links.



Mardyke Valley and Brentwood Parklands

A sweep of landscape scale infrastructure connects Brentwood and Thurrock in a broad stroke from north to south.

This landscape connects Rainham Marshes along the Thames River through Thurrock and the Mardyke Valley, up to Brentwood, as a strategic recreational resource in proximity to the key urban areas in the south west of the Borough. Initiatives are already underway in the Mardyke Valley to promote green travel, and habitat creation, and connect with the Thames Community Forest, although more could be done to expand this landscape.

3.2.2 BRENTWOOD BOROUGH COUNCIL - ADOPTED LOCAL PLAN 2016-2033 (ADOPTED 23RD MARCH 2022)

| Reference/Policy | Summary |
|--|--|
| 05 Resilient Built Environment Responding to Climate Change 5.10 | Building the resilience of wildlife, habitats and ecosystems to climate change, to put our natural environment in the strongest position to meet the challenges and changes ahead is one of the objectives of the National Adaptation Programme 2018 ¹¹ based on key recommendations from the Climate Change Risk Assessment 2017 ¹² . This is addressed further by a number of policies, such as Policy BE18 Green and Blue Infrastructure, Policy NE01 Protecting and Enhancing the Natural Environment, NE02 Recreational Disturbance Avoidance and Mitigation Strategy (RAMS), Policy NE03 Trees, Woodlands, Hedgerows, NE05 Air Quality, and NE06 Flood Risk. |
| Heritage 5.142 | The Council positively encourages the enhancement and understanding of the significance of heritage assets and apporions great weight to the protection of the heritage assets in any decision-making process for future development. |
| Policy C4 Management of Woodlands Strategic policy NE01: protecting and enhancing the natural environment | Existing woodlands should be retained with management appropriate to age, use, location and scientific interest. In any management scheme it is essential that the visual amenity, historical and ecological values of the woodland are safeguarded, and, where possible, enhanced. <ul style="list-style-type: none"> 1. The Council will require development proposals to use natural resources prudently and protect and enhance the quality of the natural environment. All proposals should, wherever possible, incorporate measures to secure a net gain in biodiversity, protect and enhance the network of habitats, species and sites (both statutory and non-statutory) and avoid negative impacts on biodiversity and geodiversity. Compensatory measures will only be considered if it is not possible fully to mitigate any impacts. 2. When determining planning applications, the council will apply the principles relevant to habitats and biodiversity as set out in National Planning Policy. |
| Green and Blue Infrastructure 8.26 | Green and Blue Infrastructure (GBI) is a network of multi-functional natural or semi-natural networks of green (soil covered or vegetated) and blue (water covered) spaces and corridors, in either an urban or rural setting, that connects, maintains and enhances ecosystem services. GBI should thread through and surround the built environment and connect the urban area to its wider rural hinterland. It is capable of delivering a wide range of environmental and quality of life benefits for local communities by providing recreational or cultural experiences. It can also help support a number of strategic objectives across policy areas, such as promoting public health and wellbeing, mitigating and adapting to climate change (heat risk, flood risk, sustainable drainage), improving water and air quality, as well as conserving habitats and contributing to biodiversity net-gain. |

8.28 A well connected GBI network will play a crucial role in maintaining the Borough's distinctive 'Borough of Villages' character. The Council will take a strategic approach to maintaining and enhancing networks of GBI, ensuring a variety of managed, multi-functional open spaces, coherent ecological green corridors, water courses and water bodies to promote a resilient and sustainable built environment, in line with the Council's Green Infrastructure Strategy (2015). The Council will work with statutory bodies, and wider stakeholders, including developers to conserve, enhance and maintain the natural environment.

Strategic policy NE02: green and blue infrastructure

1. Brentwood's network of green and blue infrastructure (GBI) will be protected, enhanced and managed to provide a multi-functional, high quality open space resource, capable of delivering opportunities for recreation, health and wellbeing, ecological connectivity, biodiversity net-gain as well as wider ecosystem services for climate change adaptation.

2. New development is expected, where possible and appropriate, to maximise opportunities to enhance or restore existing GBI provision and/or create new provision on site that connects to the wider GBI network. Its design and management should also respect and enhance the character and distinctiveness of the local area.

3. Developments on sites containing or are adjacent to a water course or water body (Blue Infrastructure) are required to ensure there is no adverse impact on the functioning or water quality of the Blue Infrastructure. Proposals that maximise opportunities to enhance or restore Blue Infrastructure and incorporate these features into the public realm of the development will be supported. An adequate undeveloped buffer zone should be applied as necessary to mitigate flood risk, in line with Policy NE09 and/or support sustainable drainage, in line with Policy BE05.

4. Proposals should provide appropriate specification and maintenance plans for the proposed green and blue infrastructure throughout the life of the development.

Policy NE04: Thames chase community forest

Development proposals which fall within the Thames Chase Community Forest Area should not prejudice the implementation, aims and objectives of the Thames Chase Plan.

Policy NE05: open space and recreational facilities

1. All open spaces, including the designated Urban Open Spaces, as identified will be protected and where necessary enhanced to ensure access to a network of high quality provision and opportunities for sport, play and recreation within the borough. The loss of open spaces and any ancillary facilities, such as sports, play and recreation provision, will not be permitted unless it can be demonstrated that: a. an assessment has been undertaken which clearly shows the provision and the function it performs is surplus to requirements; or b. the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable, accessible location within the local catchment area; or c. the development is for alternative sports and recreational provision, the benefits of which clearly outweigh the loss.

2. New development is required to maximise opportunities to incorporate new publicly accessible, high quality and multi-functional open space and/or, where appropriate, enhance existing provision that will serve the new and existing community, through improved connections, biodiversity net-gain and high quality sport, play and recreational amenities.

3. The amount and type of provision required will be determined according to the Council's identified needs, as set out in its Open Space and Play Pitch Strategy and adopted open space standards; with regard to children's play space, the Council will seek proposals which meet the Fields in Trust minimum standards.

3.2.3 LONDON BOROUGH OF HAVERING - HAVERING LOCAL PLAN 2016-31 (ADOPTED NOVEMBER 2021)

| Reference/Policy | Summary |
|---|---|
| Policy 30 Biodiversity and geodiversity | <p>The Council will protect and enhance the borough's natural environment and seek to increase the quantity and quality of biodiversity in Havering by:</p> <ul style="list-style-type: none"> • i. Ensuring developers demonstrate that the impact of proposals on protected sites and species have been fully assessed when development has the potential to impact on such sites or species. Appropriate mitigation and compensation measures will also need to be identified where necessary. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission will normally be refused; • ii. Not permitting development which would adversely affect the integrity of Specific Scientific Interest, Local Nature Reserves and Sites of Importance for Nature Conservation except for reasons of overriding public interest, or where adequate compensatory measures are provided; If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission will normally be refused; • iii. Supporting proposals where the primary objective is to conserve or enhance biodiversity; • iv. Encouraging developments where there are opportunities to incorporate biodiversity in and around the development; • v. Supporting developments that promote the qualitative enhancement of sites of biodiversity value, (by supporting proposals that improve access, connectivity and the creation of new habitats. Measures include maintaining trees, native vegetation, and improving and restoring open spaces and green infrastructure for the benefit of wildlife; • vi. Working with partners and local conservation groups to improve conditions for biodiversity in the borough. |

3.2.4 THURROCK BOROUGH COUNCIL - LOCAL PLAN ISSUES AND OPTIONS (STAGE 2) (DECEMBER 2018, LDS ANTICIPATED 2022)

Thurrock Council is preparing a new Local Plan that will set out the amount and location of new development across the Borough in the period up to 2037/2038. The first Local Plan Issues and Options (Stage 1) was published in February 2016 and focused on thematic policy areas. The new Local Plan Issues and Options (Stage 2) document is being consulted on.

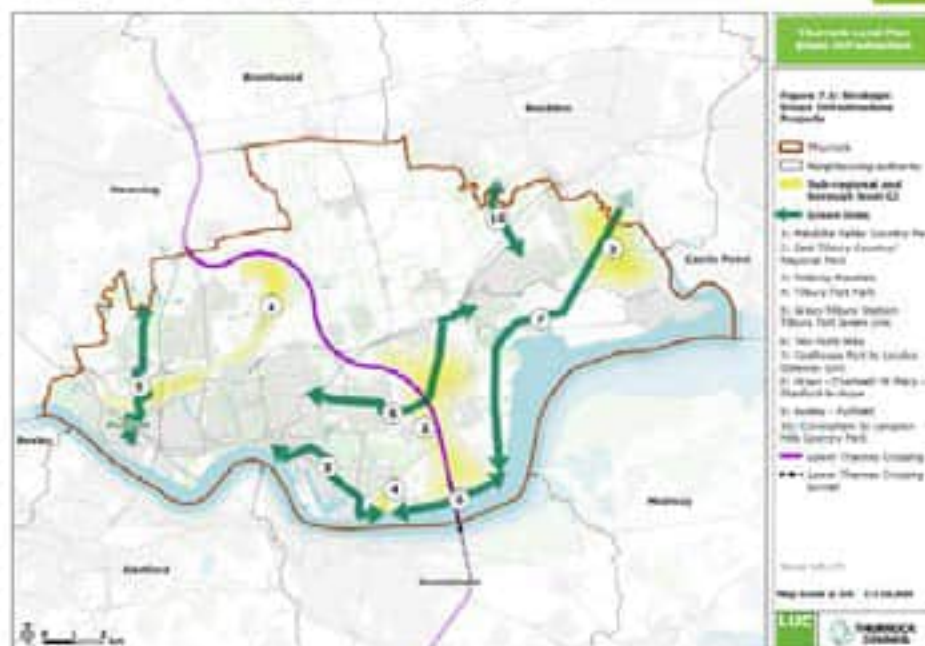
| Reference/Policy | Summary |
|---------------------------------|---|
| Section 7: Health and Wellbeing | <p>Sport and Recreation</p> <p>Paragraph 96 of The National Planning Policy Framework (NPPF) states that access to a network of high quality open spaces and opportunities for sport and physical activity are important for the health and well-being of communities. Planning policies should be based on robust and up-to-date assessments of the need for open space, sport and recreation facilities (including quantitative or qualitative deficits or surpluses and opportunities for new provision). Information gained from these assessments should be used to determine what open space, sport and recreational provision is needed, which plans should then seek to accommodate.</p> |
| Safeguarding local identity | <p>Promoting high quality design and supporting local character and distinctiveness are strong themes embodied in national policy. In planning how an area might change and develop over the next 20 years, it is important to consider the things that make that place unique and are truly valued by their communities.</p> |
| Local green spaces | <p>Green infrastructure contributes to the quality and distinctiveness of the local environment. It creates opportunities for walking and physical activity and generally adds to quality of life. Green infrastructure is diverse in character and can include formal parks and gardens, informal grassed areas, linear paths, towpaths, sports pitches and other kinds of landscaped areas. For many local communities, securing high quality green infrastructure in and around their neighbourhoods is important.</p> <p>National planning policy gives local communities the opportunity to nominate important Local Green Spaces for special protection in Local Plans. If a space is formally designated as a Local Green Space in the Local Plan, it would effectively give that space the same protection from development as a Green Belt site. In July 2016, the Council invited communities to nominate Local Green Spaces in their area that they felt meet the following criteria:</p> <ul style="list-style-type: none"> • Geographically close to the community it serves; • Special to that community because of its beauty, historic significance, recreational value (including as a playing field), tranquility or richness of its wildlife etc.; • Local scale i.e. not an extensive tract of land. <p>This consultation only generated 34 responses. Therefore, the Council has decided to reopen the nomination process as part of this consultation.</p> |

Thurrock Green and Blue Infrastructure Strategy (November 2019)

LUC is preparing a Green and Blue Infrastructure Strategy (GBI) for the borough of Thurrock. The strategy will form part of the evidence base to support the preparation of the Thurrock Local Plan and set out a co-ordinated approach to plan and deliver GBI assets across the Borough.

Proposals: green infrastructure

Sub-regional and borough level GI & green links

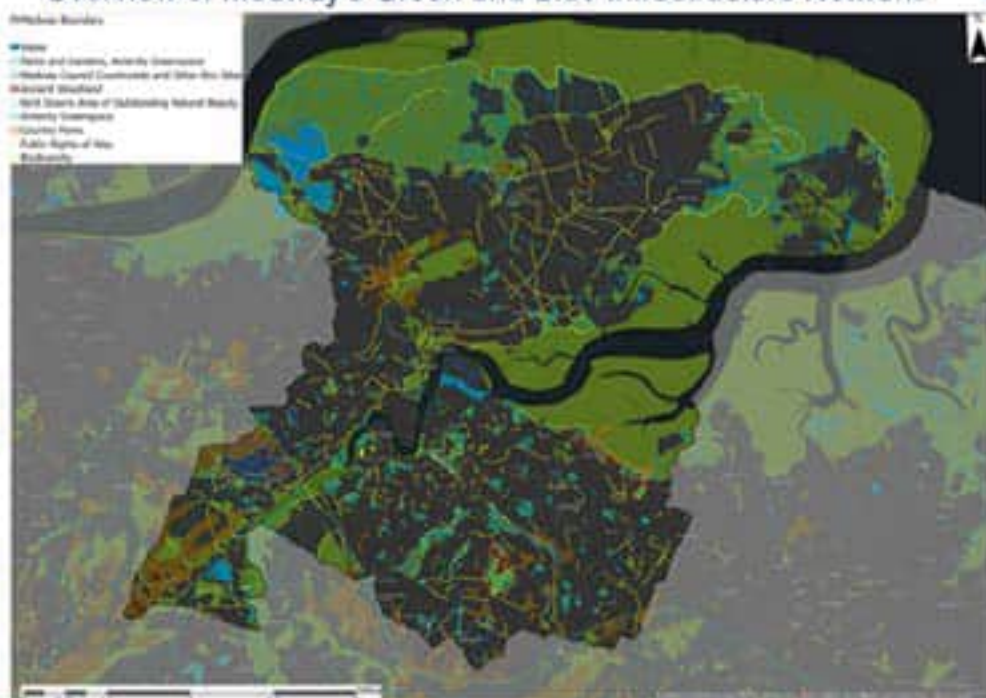


3.2.5 MEDWAY LOCAL PLAN (2019-2037)

Medway Green and Blue Infrastructure Framework - Consultation Draft 4 October 2021

Medway's Green and Blue Infrastructure Framework sets out Medway's strategic network of green and blue infrastructure. It provides an assessment of the needs and opportunities, strategic priorities and future actions. The framework takes a multi-functional and cross boundary approach to green infrastructure planning. Although this evidence base is presented in themes, an important aspect of green infrastructure planning is to take a multidisciplinary approach and to seek opportunities which address issues across many areas.

Overview of Medway's Green and Blue Infrastructure Network



Needs, Opportunities and
Priorities (pg 24)

1. Protect, enhance and improve the core biodiversity sites and take action for priority species

- 1.1. Protect and enhance the sites which form the core of the biodiversity network – those sites designated for nature conservation and those with known biodiversity value.
- 1.2. Ensure that Medway-owned sites with nature conservation value are protected and their value enhanced, bringing declining sites into good condition and reducing sources of harm.
- 1.3. Protect, enhance and seek to expand areas of Kent Biodiversity Strategy priority habitats which are notable within Medway - chalk grassland, traditional orchards, coastal and floodplain grazing marsh.
- 1.4. Protect and seek to increase populations of Kent Biodiversity Strategy priority species which are notable within Medway – water vole, common blue butterfly, turtle doves, nightingale, shrill carder bee, lapwing and Sandwich tern.

2. Create an ecologically resilient network to join habitats, allow species to move and to help nature adapt to climate change

- 2.1. Reduce sources of harm to existing biodiversity sites.
- 2.2. Develop ecologically resilient and varied landscapes through conserving and enhancing local variation within sites and habitats and making space for the natural development of rivers and coasts.
- 2.3. Establish ecological networks through habitat protection, restoration and creation.
- 2.4. Integrate climate change adaptation and mitigation measures into conservation management, planning and practice.
- 2.5. Work with partners to deliver a resilient network and with neighbouring authorities to develop connections over local authority boundaries.
- 2.6. Seek to create mosaics and overall abundance of wildlife alongside the protection of specific habitats and species.
- 2.7. Work with the Kent Nature Partnership to develop and deliver a Local Nature Recovery Strategy as part of the National Nature Recovery Network.
- 2.8. Sustain a healthy tree stock and ensure no net loss of trees, manage existing woodland estates and create and restore hedgerows.
- 2.9. Continue to increase the number of wildflower verges on council owned land.

3. Link people and nature

- 3.1. Celebrate and raise awareness of Medway iconic species and habitats and the need to conserve them.
- 3.2. Deliver education and engagement events through Medway's country parks and wider events and cultural programmes.
- 3.3. Get people involved in conservation activities and tree planting.
- 3.4. Support Friends groups and the Medway Urban Greenspaces Forum to further community engagement and action for nature and greenspace.
- 3.5. Promote the action of residents to improve wildlife through gardening for wildlife, create hedgehog highways and install swift boxes.
- 3.6. Incorporate nature into Medway-owned parks and amenity spaces so that people can experience nature close to where they live and create stepping stones for wildlife, for example through permanent wildlife areas such as wildflower meadows, or through initiatives such as 'No Mow May'.
- 3.7. Designate more Local Nature Reserves to increase the hectare provision per 1,000 people.
- 3.8. Improve school grounds, including tree planting, growing spaces and wildflower gardens.

4. Adapt and mitigate for climate change impacts

- 4.1. Bring forward nature-based solutions as cost-effective, climate adapted and biodiversity-supporting alternatives to 'grey' engineering solutions.
- 4.2. Increase tree and woodland cover, ensuring that this follows the principles of 'right tree, right place'. Trees should be planted where this fits with the landscape character and should not be planted on sites with other biodiversity interest which would be lost through tree planting. Urban trees should be fitting for the size and location of space.
- 4.3. Identify habitat areas within Medway for protection as carbon sinks and wildlife habitats. This should include both terrestrial and marine habitats.

5. Ensure development is sustainable

- 5.1. Seek 20% Biodiversity Net Gain through development, subject to viability and soundness testing.
- 5.2. Deliver ambitious biodiversity improvements through the Hoo Housing Infrastructure Fund (HIF) and its associated Strategic Environmental Management Scheme (SEMS).
- 5.3. Incorporate biodiversity into housing developments, including hedgehog highways, swift boxes and biodiversity-friendly planting in streets and gardens.

Pg 42

1. Providing access to green infrastructure close to home and which is inclusive for all.

- 1.1. Plan strategically for a reduced car Medway – planning strategically to link public rights of way, cycle routes and greenspaces.
- 1.2. Ensure that greenspace is provided by new development so that everyone has access to greenspace close to home.
- 1.3. Maximise access to the riverside, with improved access to and along this route, as this has the potential to provide a level and attractive linear route for all abilities.
- 1.4. Use green infrastructure in civic spaces and urban streets to make these places more attractive for walking and cycling, improving health and reducing car travel.
- 1.5. Make routes and spaces as accessible as possible.
- 1.6. Link town with countryside through improved routes and public rights of way.
- 1.7. Time spent in 'blue space' – near water – has also been found to improve mental and physical health. Blue space is abundant in Medway and includes the sea, coastlines, rivers, lakes, and canals. Improve access to these resources.
- 1.8. Embed green and blue infrastructure into regeneration plans and cultural programmes and strategies.

Pg 64

1. Strengthen landscape character and ensure green and blue infrastructure enhances and fits with local landscape character.

- 1.1. Protect transitional landscapes around urban fringe and built development from insensitive development and from urban– rural fringe activities that might erode distinctive character and degrade landscape condition.
- 1.2. Creation of a strongly wooded landscape framework, with extensive broad leaved woodland planting in large blocks.
- 1.3. The use of linear planting along roadsides to reduce the intrusion of traffic and the suburbanising influence of ribbon development, strong belts of woodland along major roads.
- 1.4. The planting of hedgerows, shelter belts and small woods around the fringes of built areas, to reduce their visual intrusion and provide a strong landscape framework into which future development can be absorbed.
- 1.5. Strengthening and reinforcement of natural features like watercourses as accessible green corridors linking built up areas with the wider countryside.

3.2.6 TONBRIDGE AND MALLING CORE STRATEGY - ADOPTED SEPTEMBER 2007

| Reference/Policy | Summary |
|------------------|--|
| Policy CP3 | <ul style="list-style-type: none"> 1. National Green Belt policy will be applied generally to the west of the A228 and the settlements of Snodland, Leybourne, West Malling and Kings Hill, and to the south of Kings Hill and east of Wateringbury. • National Green Belt policy is set out in PPG2. In Tonbridge and Malling, the Green Belt comprises part of the outer edge of the Green Belt surrounding London. The importance of Green Belts lies in preventing major expansion of settlements or their coalescence, and preventing development in the countryside that would affect its openness. A key feature of Green Belts is their permanence. Very special circumstances are required for any departure from Green Belt policy and an exceptional justification is required for any change to existing Green Belt boundaries. |
| Policy CP7 | <p>Development will not be proposed in the LDF, or otherwise permitted, which would be detrimental to the natural beauty and quiet enjoyment of the Areas of Outstanding Natural Beauty, including their landscape, wildlife and geological interest, other than in the exceptional circumstances of: (a) major development that is demonstrably in the national interest and where there are no alternative sites available or the need cannot be met in any other way; or (b) any other development that is essential to meet local social or economic needs. Any such development must have regard to local distinctiveness and landscape character, and use sympathetic materials and appropriate design.</p> |
| Policy CP8 | <p>Development will not be proposed in the LDF, or otherwise permitted, where it would directly, indirectly or cumulatively cause material harm to the scientific or nature conservation interest of a Site of Special Scientific Interest.</p> |
| Policy CP24 | <ul style="list-style-type: none"> • 1. All development must be well designed and of a high quality in terms of detailing and use of appropriate materials, and must through its scale, density, layout, siting, character and appearance be designed to respect the site and its surroundings. • 2. All development should accord with the detailed advice contained in Kent Design, By Design and Secured by Design and other Supplementary Planning Documents such as Village Design Statements and Planning Briefs and, wherever possible, should make a positive contribution towards the enhancement of the appearance and safety of the area. • 3. Development which by virtue of its design would be detrimental to the built environment, amenity or functioning and character of a settlement or the countryside will not be permitted. 4. The Council will seek to protect, and wherever possible, enhance, existing open spaces, including the provision of public art and ensure that new open space provision is made to meet the future needs of the Borough. 5. The environment within river corridors, including the landscape, water environment and wildlife habitats, will be conserved and enhanced. Where consistent with this intention, provision will be made for increased public access for walking, cycling and water-related recreation. Any new development adjacent to the river should respect its sensitive location and the local character at that particular section of the river and should aim to improve the appearance and biodiversity of the riverside. |

3.2.7 THE KENT DOWNS AONB MANAGEMENT PLAN 2021-2026

The first AONB Management Plan agreed a 20-year vision; while this 2004 vision remains fundamentally unchanged the context has changed markedly, with unprecedented growth predicted in Kent by the Kent Growth and Infrastructure Framework, adding around 25% to the population by 2031, just 10 years. The decline in biodiversity and impact of climate change which has been declared or recognised as an emergency by Parliament and most of the AONB partnership and there is a consensus that radical change is required by 2030 if we are to address these emergencies. The policy context that the AONB partnership is operating in is rapidly moving and in the light of this – while the partnership remains far sighted and ambitious for the AONB, with a long term overall vision for the landscape each section of the plan is re-focused order to spur impact and the achievement of the aims and principles of the plan in a 10 year period.

| Reference/Policy | Summary |
|---|---|
| 3.6 Sustainable development – principles | <p>SD1 Ensure that policies, plans, projects and net gain investments affecting the Kent Downs AONB take a landscape led approach are long term, framed by the Sustainable Development Goals appropriate to the Kent Downs, cross cutting and recurrent themes, the vision, aims and principles of the AONB Management Plan.</p> <p>SD4 A strategic, evidence led approach to both the adaptation to and mitigation of the impacts of climate change on the natural beauty and historic character of the Kent Downs, and its human consequences, will be pursued with an urgent focus on supporting greenhouse gas emission reduction and sequestration through nature based solutions.</p> <p>SD13 A strategic, landscape led approach to green infrastructure and net gain investments is taken to ensure the recovery, conservation and enhancement of the special characteristics and qualities of the Kent Downs AONB and its setting. The Kent Downs AONB takes a key role in accommodating net gain investments derived from growth elsewhere where the intended gain cannot be delivered locally.</p> |
| 4.6 Landform and landscape character - principles | <p>LLC1 The protection, conservation and enhancement of special characteristics and qualities, natural beauty and landscape character of the Kent Downs AONB will be supported and pursued.</p> <p>LLC3 The provision of co-ordinated and high-quality landscape conservation guidance will be pursued, focusing on the special characteristics and qualities, natural beauty and the landscape character of the Kent Downs AONB.</p> |
| 5.5 Biodiversity – principles | <p>BD1 Creation of new habitats, wilding and connecting habitat corridors will be pursued, informed by the Lawton principles, landscape character, the needs for new recreation, the needs for resilience and the threats to existing habitats and species. Delivery will be through collaboration to establish resilient, functional ecological nature recovery networks and high-quality green infrastructure.</p> <p>BD8 Generating a greater connection between people and nature will be pursued at the same time as dispersal of visitor pressure from sensitive wildlife sites where the biodiversity interest is at threat.</p> |
| 7.13 Woodland and trees - principles that support the sustainable management of woodlands and trees | <p>WT1 The extent of woodland, transitional habitats around woodland and trees outside woodland in the Kent Downs AONB will be retained, connected and extended.</p> |

WT2 A strategic, collaborative approach will be pursued to secure sustainable multi-purpose woodland and tree restoration, management and establishment that reduces fragmentation, responds carefully to the impact of pests and diseases and does not risk further pests and diseases, conserves and enhances the special qualities and character of the landscape, the resilience of woodlands and trees and benefits people's enjoyment, health and well-being.

8.7 Historic and cultural heritage - principles

HCH1 The conservation and enhancement of the historic character and features of the Kent Downs AONB landscape will be pursued and heritage-led sustainable economic activity and tourism encouraged.

HCH7 The protection, conservation, and enhancement of heritage features under threat will be pursued through policies, projects, training and partnerships

9.5 The Heritage Coasts - principles

HC7 The England Coast Path National Trail will be managed in a manner that is sensitive to the landscape character and qualities and in partnership to meet and retain National Trail standards. The conservation and enhancement of the landscape of the corridor of the National Coastal Trail in the Heritage Coasts will be pursued.

10.5 Geology and natural resources - principles

GNR5 A strategic collaborative Catchment Based Approach will be taken to the management of the water environment in the Kent Downs AONB to secure a more resilient water supply, achieve good ecological status in the water bodies, use natural solutions to mitigate flooding and secure the conservation and enhancement of the landscape.

GNR7 A collaborative approach will be pursued to secure the provision of appropriate ecosystems services and green infrastructure, which supports the special character and qualities of the Kent Downs, for the benefit of the community and economy, effort will be pursued to secure new Payments for Ecosystems Services (PES) that might benefit the conservation and enhancement of the Kent Downs AONB.

12.4 Access, enjoyment and understanding - principles

AEU2 Investment to secure sustainable, high quality, low impact and easy access, multi-user routes, safer highways and high-quality public transport options from towns and growth areas to the Kent Downs AONB will be pursued.

AEU4 The sustainable and enhanced management and promotion of Public Rights of Way, permissive paths and open access sites will be pursued.

SECTION 4: IDENTIFYING GREEN INFRASTRUCTURE NEEDS



4 IDENTIFYING GREEN INFRASTRUCTURE NEEDS

The functions of existing GI Assets Assessment of the connectivity of existing GI Assets in and around the designated areas for the general public as well as wildlife interests.

4.1 GREEN INFRASTRUCTURE

The broader natural environment is supported by a network of more formal green infrastructure assets. Natural England defines Green Infrastructure (GI) as strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features including natural and semi natural green space, parks and gardens, amenity space, green and blue corridors (verges and rivers) as well as a range of other greenspaces including allotments and cemeteries). GI is integral to the health and quality of life of sustainable communities.

Existing strategic GI assets form the 'backbone' or underlying framework for identifying needs and opportunities for contributing to potential GI requirements. The purpose of the GI Strategy is to provide the conceptual perspective or 'bigger picture' for the delivery of large-scale GI within the Study Area that connects communities and wildlife at the sub-regional and city-scale. It is intended to help focus attention or priority on land that needs to be safeguarded, managed or secured in positive ways to create a multifunctional network of greenspaces and assets for which investment can deliver the greatest range of benefits.

4.1.1 GREEN ARC VISION

The Vision: Bringing the BIG OUTDOORS closer to people – through the creation and protection of an extensive, attractive and valued recreational landscape of well-connected and accessible countryside around London, for people and wildlife.

GreenArc is a unique partnership concerned with the opportunities linked to the wide swathe of the environment surrounding a World City, much of it countryside of high quality. GreenArc North East is focused on the area from the north and eastern suburbs of London to Bishop's Stortford and the 'Flich Way'. The strategic objectives include:

- To promote positive uses for the Green Belt that realise the potential to improve the quality and accessibility of the land while meeting its statutory purposes
- To improve the contribution of the urban fringe countryside to the quality of life of Londoners, local residents, visitors and people beyond the outer boundary
- To conserve and enhance the biodiversity value
- To improve the linkages between existing and potential accessible open land for people and wildlife
- To create attractive destinations for daytrips and holidays, for visitors, tourists and the local population
- To support initiatives that contribute to sustainable development, including renewable energy, floodwater retention and water gathering areas
- To provide burial space 'green' or 'woodland' burials in natural environments

4.1.2 MAYOR OF LONDON: ALL LONDON GREEN GRID INFRASTRUCTURE (ADOPTED MARCH 2012)

The Mayor of London has published the All London Green Grid Infrastructure SPG. The guidance identifies 11 Green Grid areas within London for the purpose of providing a framework from which Council policies and projects can be developed and delivered.

This includes Area 3 Framework – ‘Thames Chase Beam and Ingrebourne,’ lying within LB Havering. Chapter 5 of the SPG briefly describes the Area, highlighting suggested enhancements and potential opportunities to inform the development and delivery of the network and implementation of the Green Grid.

Area Frameworks help to support the delivery of the All London Green Grid objectives. By identifying how the All London Green Grid can be delivered at the landscape scale and across administrative boundaries. ALGG Area Frameworks expand on the implementation points and strategic opportunities identified in the All London Green Grid Supplementary Planning Guidance to the London Plan. Subject to boroughs agreement ALGG Area Frameworks can also form part of Local Development Plans, Development Plan Documents and or Joint Area Action Plans.

4.1.3 GGA3 THAMES CHASE, BEAM AND INGREBOURNE

The Thames Chase, Beam and Ingrebourne includes parts of the boroughs of Barking and Dagenham, Redbridge and Havering. The area includes three of the landscape character zones identified by Natural England. The Ingrebourne Valley is a gently sloping landscape at the eastern edge of Hornchurch and Romford with a predominantly rural/urban fringe character. Access along the edge of the Ingrebourne River is good, with the London LOOP long distance footpath running almost along its full course. North of Upminster, the Ingrebourne has steeper valley sides and land use consists mainly of pasture and arable fields. The land is relatively unspoilt, unlike the lower river valley which has been affected by gravel extraction and landfill, but also contains the ecologically rich Ingrebourne Marshes, a designated SSSI.

4.1.4 CLUSTERS

The projects identified for the Area 3 Framework have been arranged into clusters that are either related in terms of geographic proximity, landscape character or where one cluster becomes the parent project of a number of smaller projects that can be implemented independently but have an over arching strategy that will deliver an interconnected project of strategic significance. The clusters which fall within the LTC GI Study Area are shown with reference to the Stakeholder Mapping pertained in Appendix II.

SECTION 5: STAKEHOLDER ENGAGEMENT AND WORKSHOPS



5 STAKEHOLDER ENGAGEMENT AND WORKSHOPS

5.1 APPROACH

The understanding of the GI network and functions identified in Stage 1 of the Study has informed the basis of understanding strengths and weaknesses across the Study Area. In order to gain a full in-depth understanding of GI needs and Priorities, Stage 2 of the Study has involved engagement with all key Environmental and Statutory Consultees as identified in **Appendix II**. This Study has been informed by a stakeholder workshop and follow up liaison which took place on the 5th September 2018. The approach was endorsed by all parties and all non-statutory groups were invited to participate in a Project Identification Workshop in September; while statutory bodies and local authorities contributed to the Study separately. The consulted development boundary was based on that presented at Statutory Consultation in October 2018. A list of the participants and full notes of the proceedings can be found at Appendix II. The Stakeholder Engagement team for LTC Environment consulted with Statutory Environmental Bodies and non-statutory environmental and community groups to identify stakeholders with ecological or cultural heritage projects within and adjacent to the Lower Thames Crossing. All non-statutory groups identified through that process were invited to participate in a Project Identification Workshop in September.

The key objectives of the workshop were to: build stakeholder engagement relationships; inform stakeholders of the approach; and to record stakeholder's issues and opportunities in map format. The workshop was attended from LTC by representatives from Construction, Environment, Stakeholder Engagement, Green Infrastructure and Consents. All issues and opportunities were recorded in follow up to the workshop collectively graphically represented through mapping and as individual project identification records, which are included in Section 6.

Identified Stakeholders who have contributed to and informed the GI Study:

- Historic England
- Environment Agency
- Natural England
- Marine Management Organisation
- Forestry Commission
- Kent Downs AONB
- Bumblebee Conservation Trust
- Buglife
- Essex Wildlife Trust
- Forestry Enterprise England
- Kent Wildlife Trust
- RSPB
- Woodland Trust
- Land of the Fanns
- Thames Chase Trust
- Thames and Medway Canal Association
- National Trust

TIER 1 Local Authorities have been contacted bilaterally with their responses included in Appendix II. It is anticipated that a follow up workshop will be held in 2019.

- Brentwood Borough Council
- Medway Council
- Kent County Council
- Essex County Council
- Thurrock Council
- Dartford Council
- Havering Borough Council

SECTION 6: IDENTIFYING OPPORTUNITIES AND OBJECTIVES FROM STAKEHOLDERS AND BACKGROUND STUDY



6 IDENTIFYING OPPORTUNITIES AND OBJECTIVES FROM STAKE HOLDERS AND BACKGROUND STUDY

This stage provides the research and review of current initiatives, projects and wider environmental aspirations that relate to GI cumulatively considering the baseline assessment work, policy review and outcome of the stakeholder engagement.

The following insert pages include collated Project Identification Records which have been prepared following the ongoing engagement with the environmental stakeholders.

Following the collection and analysis of the baseline information and outcome of stakeholder engagement, a strategic assessment was undertaken to provide the required evidence base to inform the mapping of GI opportunities to take forward for recommendations. This appraisal is split North and South of the River Thames and tabulated to present all GI information in consideration of identified GI themes, the GI assets and projects that relate to those themes, and consideration of relevant corresponding policy.

This section is to be read in conjunction with the following Drawings and information contained within Appendix II as well as the TIER 1 Local Authority responses which follow in this section.

| Name | Drawing Number | Sheet | Size |
|---|------------------------------------|--------|------|
| <i>Stakeholder Project Identification Mapping</i> | HE540039-CJV-GEN-GEN-DRA-LSC-00101 | 1 of 2 | A1 |
| <i>Stakeholder Project Identification Mapping</i> | HE540039-CJV-GEN-GEN-DRA-LSC-00102 | 2 OF 2 | A1 |

Section 6 comprises:

Stakeholder Project Identification Sheets

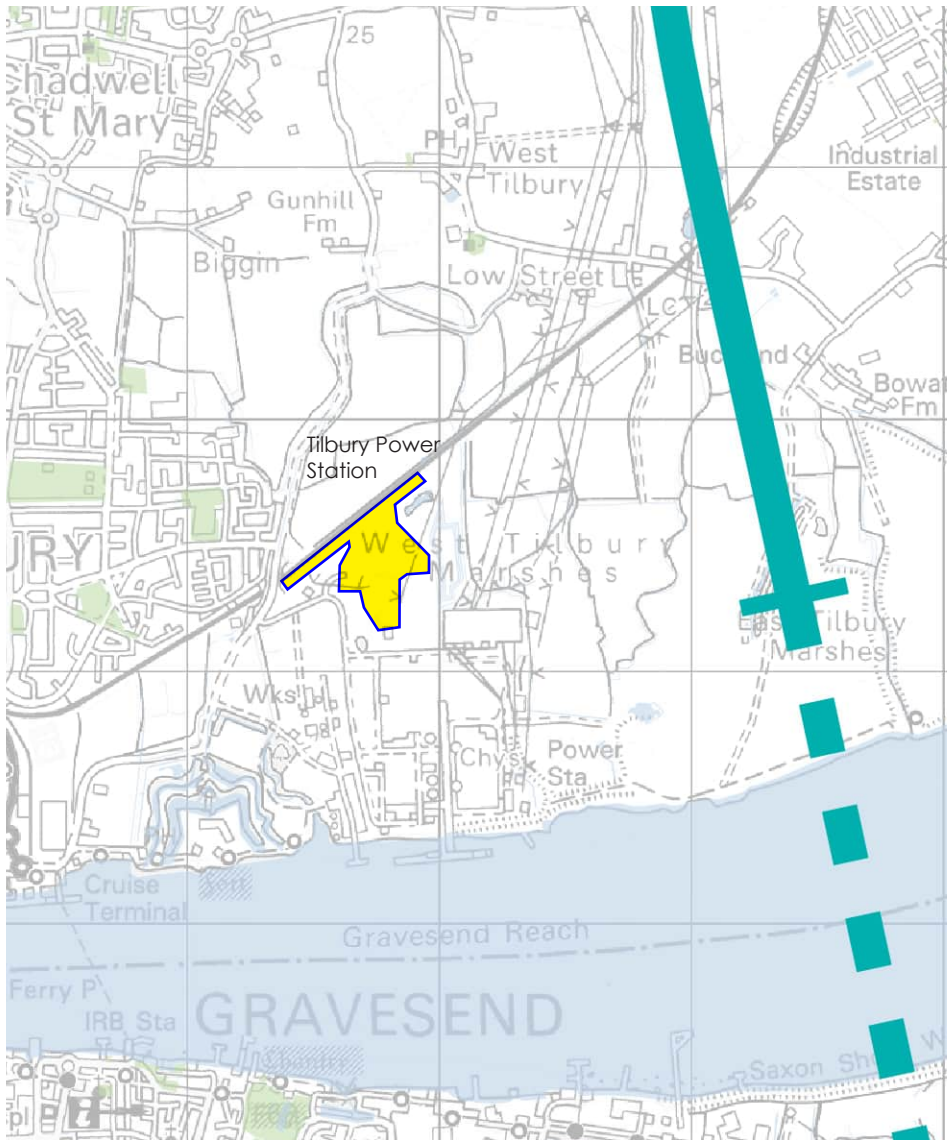
GI Theme Objectives

Local Authority GI responses

6.1 STAKEHOLDER PROJECT IDENTIFICATION SHEETS













Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



BL-01 TILBURY POWER STATION

Key Facts

Scheme:

Important Locations

Location:

Tilbury

District:

Thurrock

Land Ownership:

NA

Existing Land Use and GI Function:

Brownfield/former power station

Approximate Project Area:

NA

Project Status and Time-line:

Running, currently trying to protect from planning impacts

Project Description

NA

Background:

A nationally significant brownfield habitat, with one of the finest invertebrate assemblages in the country and "irreplaceable".

Site Access:

No public access

Description of existing assets: current functions, use and habitats

Open mosaic habitat, grasslands, ditches.

Identified GI Policy Themes, Targets and Compliance

To retain existing nationally important species and habitats.

Other Project Targets

NA

Required to achieve targets

- (i) Securing future of the site.
- (ii) Reintroduction of disturbance to expose underlying PFA periodically
- (iii) Scrub management on rotation to maintain open habitats
- (iv) Diversifying topography of some more homogeneous areas of ground, creating hummocks and damp hollows
- (v) Diversifying some lower interest areas with introduction of additional aggregates
- (vi) Creation of management plan which maintains successional mosaic and appropriate mix of managed and unmanaged grassland areas.

LTC Impacts & Opportunities

Identified Potential Impacts

Significant direct and indirect losses

Identified Opportunities

NA

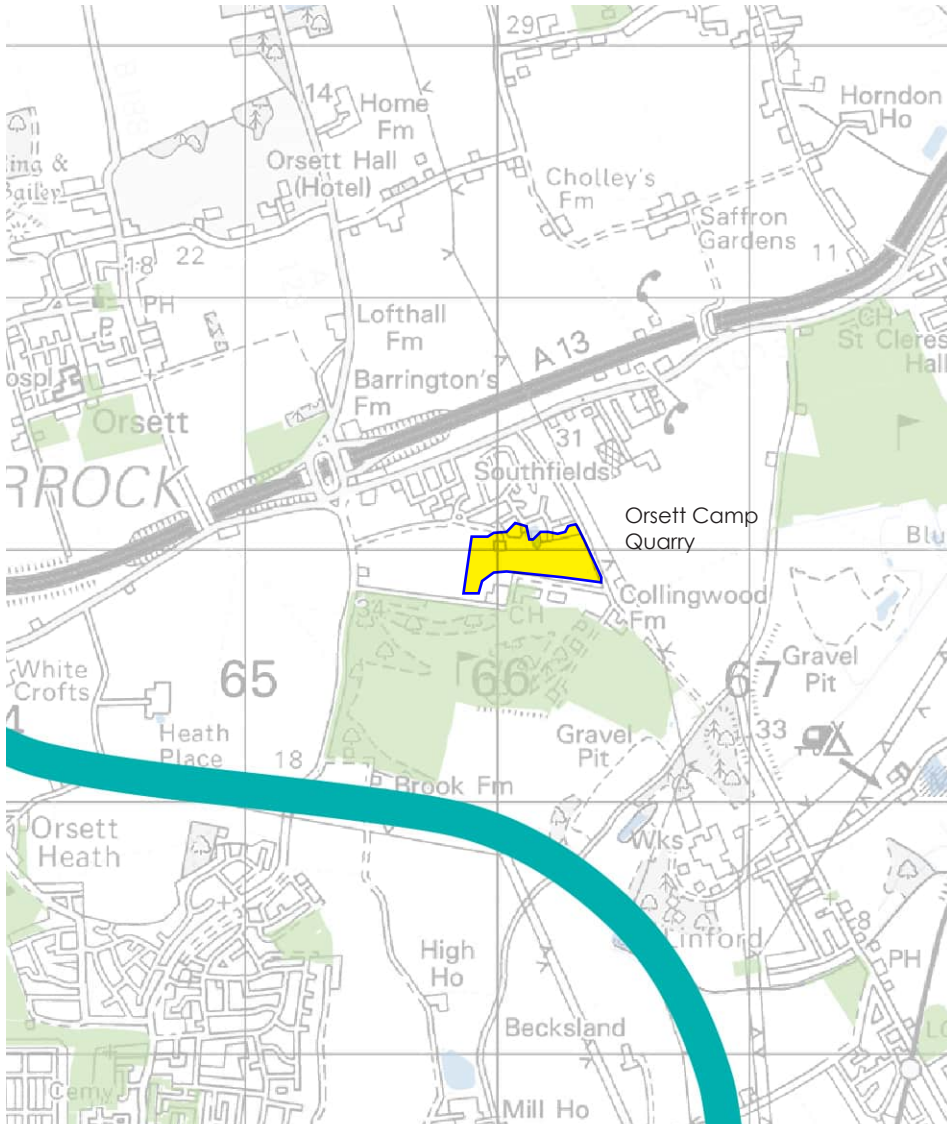
2022 Validation: Status change

Tilbury Power Station (and relevant LoWS sites in footprint) B19, BL-01, BL-04b

GI asset is now very low quality and in poor condition due to the works carried out as part of proposals to expand the Port of Tilbury (Tilbury 2).













Indicative Location Plan (not to scale)



- KEY:
-  Development route
 -  Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



BL-02

ORSETT CAMP QUARRY/ ORSETT EAST QUARRY

Key Facts

Scheme:

Important Locations

Location:

Orsett

District:

Thurrock

Land Ownership:

NA

Existing Land Use and GI Function:

Informal open space, Local Wildlife Site

Approximate Project Area:

8 ha

Project Status and Time-line:

Currently trying to protect from planning impacts. Previous discussions with land owner directly.

Project Description

NA

Background:

An absolute gem of a site, but it is in need of management. The landowner may be potentially interested in mitigation work to clear scrub. For a small site it has an outstanding species list which includes both Shrilc carder bee (*Bombus sylvarum*) and Brown-banded carder bee, Five-banded weevil wasp, a diverse range of habitat features, fly and beetle species well represented.

Site Access:

Main open space for c. 300 houses

Description of existing assets: current functions, use and habitats

Acid grassland/scrub/open mosaic habitat

Identified GI Policy Themes, Targets and Compliance

Trying to retain extremely valuable assemblage and high quality site

Other Project Targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

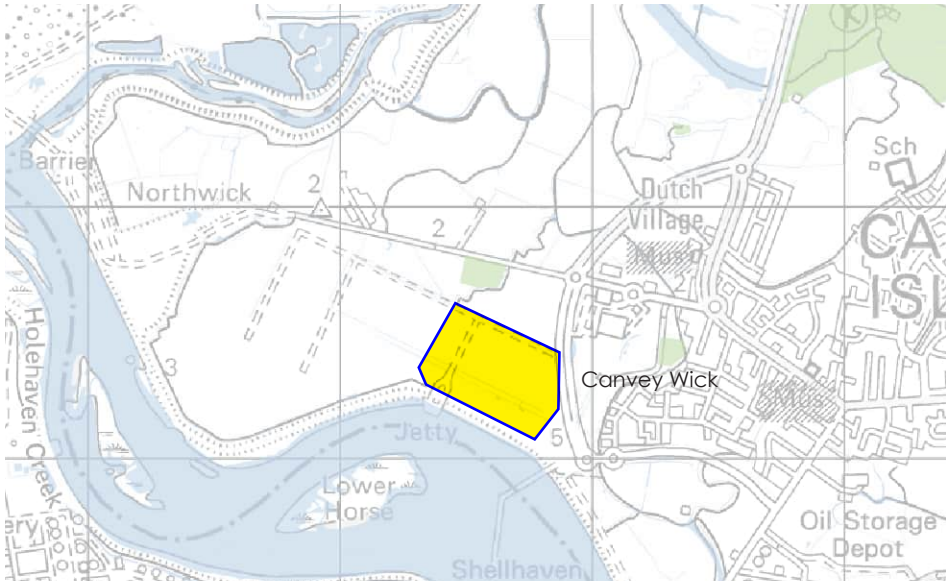
Potential nitrogen deposition impacts leading to succession.

Identified Opportunities

Funding management of site/purchase as mitigation

2022 Validation: No status change

Indicative Location Plan (not to scale)



Indicative Location Plan (not to scale)



Existing GI Asset Typology

- Country Parks
- Valley, Park and Farmland
- Formal Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes

KEY:

- Development route
- Project boundary
- Indicative project location



BL-03a CANVEY WICK MARSHES

Key Facts

Scheme:
Important Locations

Location:
Canvey Wick Marshes

District:
Thurrock

Land Ownership:
NA

Existing Land Use and GI Function:
Nature Reserve

Approximate Project Area:
90 ha

Project Status and Time-line:
Ongoing- no end date

Project Description
NA

Background:
NA

Site Access:
NA

Description of existing assets: current functions, use and habitats
Brownfield/open mosaic habitats

Identified GI Policy Themes, Targets and Compliance
Ensure open mosaic habitat and brownfield habitats are appropriately maintained and enhanced for their exceptional invertebrate assemblages

Other Project Targets
Engagement

Required to achieve targets
Staff, contractors

LTC Impacts & Opportunities

Identified Potential Impacts
Limited

Identified Opportunities
Funding for habitat enhancements to mitigate any loss of brownfield/open mosaic habitat that arises for work (off site compensation)

2022 Validation: No status change

BL-03b WEST THURROCK MARSHES

Key Facts

Scheme:
Important Locations

Location:
West Thurrock Marshes

District:
Thurrock

Land Ownership:
NA

Existing Land Use and GI Function:
Nature Reserve

Approximate Project Area:
30ha

Project Status and Time-line:
Ongoing- no end date

Project Description
NA

Background:
NA

Site Access:
Controlled access only

Description of existing assets: current functions, use and habitats
Brownfield/open mosaic habitats

Identified GI Policy Themes, Targets and Compliance
Ensure open mosaic habitat and brownfield habitats are appropriately maintained and enhanced for their exceptional invertebrate assemblages

Other Project Targets
Engagement

Required to achieve targets
Staff, contractors

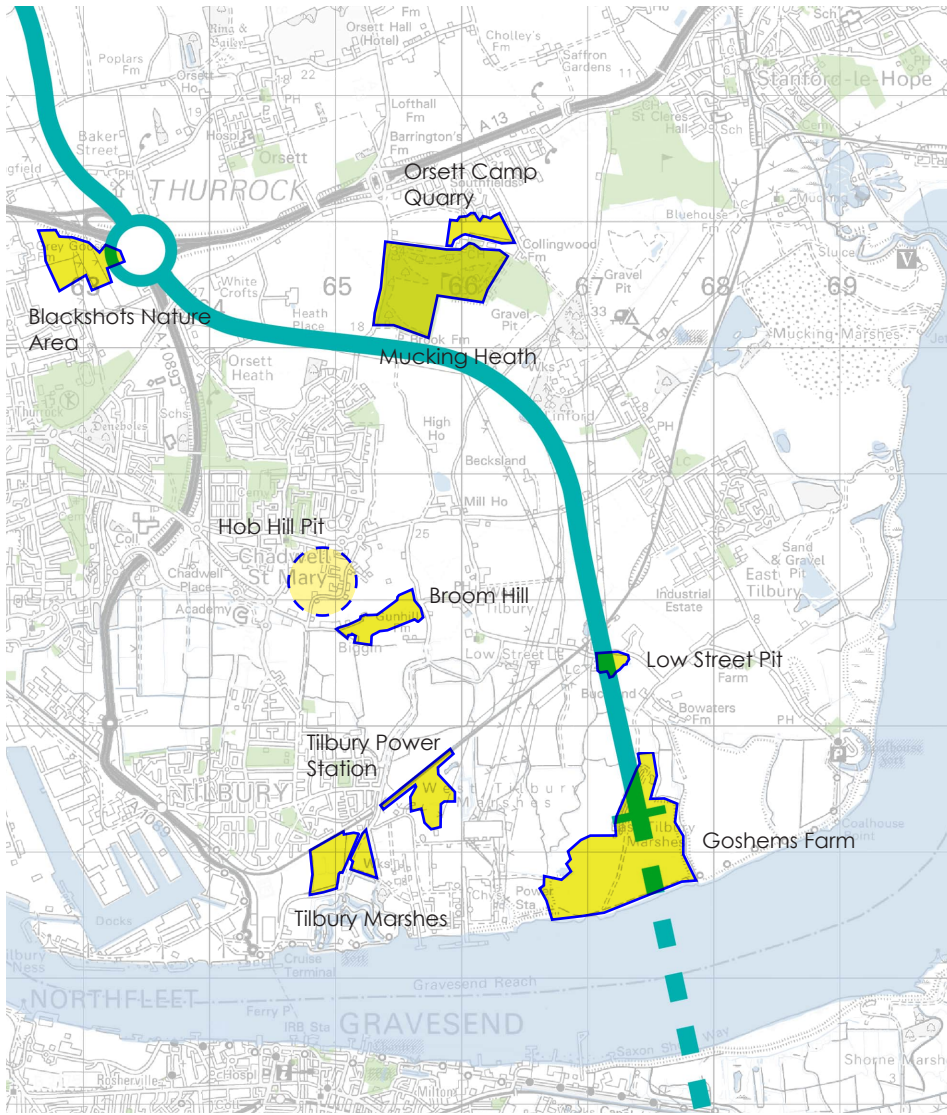
LTC Impacts & Opportunities




Identified Potential Impacts
Limited

Identified Opportunities
Funding for habitat enhancements to mitigate any loss of brownfield/open mosaic habitat that arises for work (off site compensation)











2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
-  Development route
 -  Project boundary
 -  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



BL-04 IMPORTANT INVERTEBRATE AREAS

Key Facts

Scheme:

Thames Gateway Important Invertebrate Area

Location:

Most of Thames Estuary

District:

Thurrock

Land Ownership:

Varies

Existing Land Use and GI Function:

Varies

Approximate Project Area:

Across South Essex & North Kent

Project Status and Time-line:

Planned- broad-scale national hectad map produced, no funds currently for fine-scale mapping

Project Description

There are a series of restored landfill sites in the Ockendon area which [Buglife] have never really had access to that may have significant interest/Open mosaic habitat dependent on the nature of their restoration.

It is essential to look at landscape scale issues, especially the potential impact on Shril carder bee as the work is likely to lead to significant fragmentation of nationally important populations.

Background:

NA

BL-04a Goshems Farm

Local Wildlife Site (LoWS)- largely currently being [destroyed], but any remnant PFA areas here should be retained wherever possible as this resource is dwindling and it is a very high value invertebrate habitat when at depth and with diverse topography, hydrology, etc.

BL-04b Tilbury Power Station (and relevant LoWS sites in footprint) refer to:

[BL-01 Tilbury Power Station](#)

BL-04c Tilbury Marshes LoWS

although degraded there are still many recent invertebrate records and the recent Tilbury 2 surveys highlighted this. Historically much ditch interest but has been impacted by illegal grazing.

BL-04d Low Street Pit LoWS

Low profile site but very significant as minimal management and diverse topography has maintained a rich mosaic of habitats. Includes the declining Hornet robberfly (*Asilus crabroniformis*)

BL-04e Broom Hill LoWS

An absolutely key Thames Terrace Grassland site. One of the last sites for this grassland type and filled with rare species including Hornet robberfly, Brown-banded carder bee (*Bombus humilis*), Five-banded weevil-wasp (*Cerceris quinquefasciata*), etc. Very notably nesting aggregates on bare sand and gravel faces.

BL-04f Hob Hill Pit

Not surveyed but casual visits have show very impressive habitat and range of ground nesting Hymenoptera

BL-04g Mucking Heath LoWS/Orsett Golf Course

Remnant heathland in edges of golf course is an extremely restricted habitat in the area and the site has a very strong invertebrate fauna

BL-04h Orsett Camp Quarry LoWS, refer to:

[BL-02 ORSETT CAMP QUARRY/ ORSETT EAST QUARRY](#)

BL-04i Blackshot Nature Area LoWS

A valuable site for rough grassland species requiring less management, which is surprisingly rare as a feature in the landscape- used by the Phoenix fly (*Dorycera graminum*)

Site Access:

N/A

Description of existing assets: current functions, use and habitats

Grasslands, brownfield, coastal and wetland, etc

Identified GI Policy Themes, Targets and Compliance

Improved targeting of invertebrate conservation efforts, influencing planning system to protect scarce species, awareness reason, promoting greater management coordination

Other Project Targets

Awareness, planning influence

Required to achieve targets

Funding for a workshop to fine-scale map the Thames Gateway IIA to allow it to be useful/functional to engage key stakeholders

LTC Impacts & Opportunities

Identified Potential Impacts

Network of key IIA sites not yet defined at the fine-scale

The impacts are much wider in terms of fragmentation, species movement, but also in areas such as nitrogen deposition as there are likely to be long-term impacts on the important low nutrient habitat areas.

Identified Opportunities

Opportunity to identify key areas for mitigation works to best contribute to landscape-scale conservation of invertebrates

2022 Validation: Status change

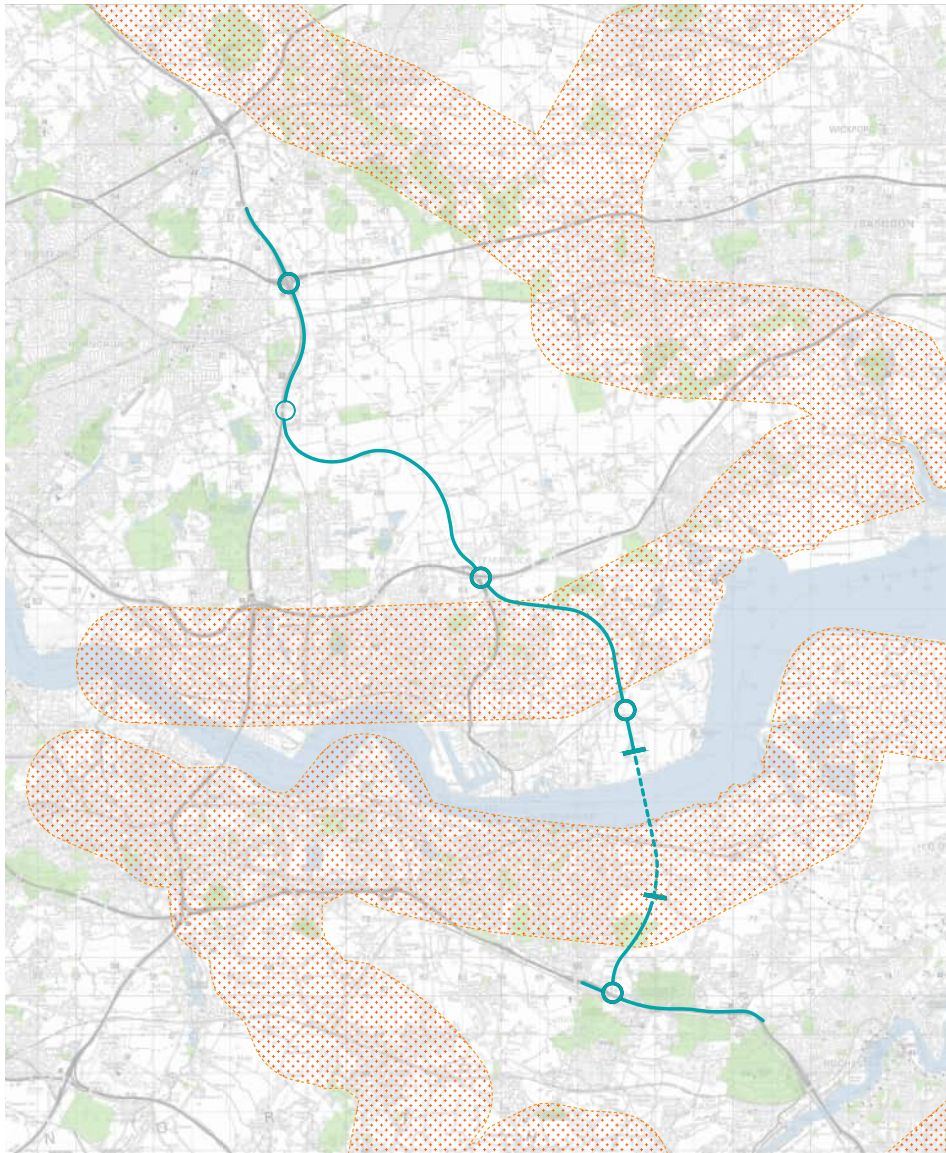
Goshem's Farm LoWS B18, **BL-04a**

GI asset is now very low quality and in poor condition due to the work being carried out by Ingrebourne Valley Ltd.

Tilbury Power Station (and relevant LoWS sites in footprint) B19, **BL-01, BL-04b**

GI asset is now very low quality and in poor condition due to the works carried out as part of proposals to expand the Port of Tilbury (Tilbury 2).

Indicative Location Plan (not to scale)













KEY:

 Development route

 Bee Lines

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



BL-05 B-LINES

Key Facts

Scheme:

B-Lines

Location:

Essex & Kent

District:

Varies

Land Ownership:

Varies

Existing Land Use and GI Function:

Varies

Approximate Project Area:

Country-wide

Project Status and Time-line:

Active- map produced, awaiting development of partnership projects to deliver wildflower enhancements throughout the network

Project Description

B-Lines are an imaginative and beautiful solution to the problem of the loss of flowers and pollinators. The B-Lines are a series of 'insect pathways' running through our countryside and towns, along which we are restoring and creating a series of wildflower-rich habitat stepping stones. They link existing wildlife areas together, creating a network, like a railway, that will weave across the British landscape. This will provide large areas of brand new habitat benefiting bees and butterflies- but also a host of other wildlife.

Background:

<https://www.buglife.org.uk/b-lines-hub>

B-Lines has the vision to help our native insect pollinators

The National Pollinator Strategy for England 2014 sets out a 10 year plan to help pollinating insects survive and thrive across England. The Action Plan for Pollinators in Wales - Scottish Pollinators Strategy set out similar plans for Wales and Scotland. These strategies outline actions to support and protect the many pollinating insects which contribute to our food production and the diversity of our environment. They also look to everyone to work together to help our pollinators.

Site Access:

Varies

Description of existing assets: current functions, use and habitats

Varies

Identified GI Policy Themes, Targets and Compliance

Improving national and regional wildflower resources to allow pollinators to move across the landscape.

Other Project Targets

Partnership project with KWT, KCC, NE, RSPB. Plus other partners e.g. Thames Water.

Required to achieve targets

Wildflower enhancement commitments from partners, funding.

LTC Impacts & Opportunities**Identified Potential Impacts**

N/A

Identified Opportunities

Targeted wildflower enhancement within the B-Lines network to contribute to the national scheme

2022 Validation: No status change**Other BUGLIFE projects and initiatives without specific location**

SOUTH ESSEX-WIDE BROWNFIELD AND THAMES TERRACE SITES

Scheme: Important locations

Location: South Essex-wide

Habitat type: Open mosaic habitat, grasslands

Project Status: Main focus is protection via planning work

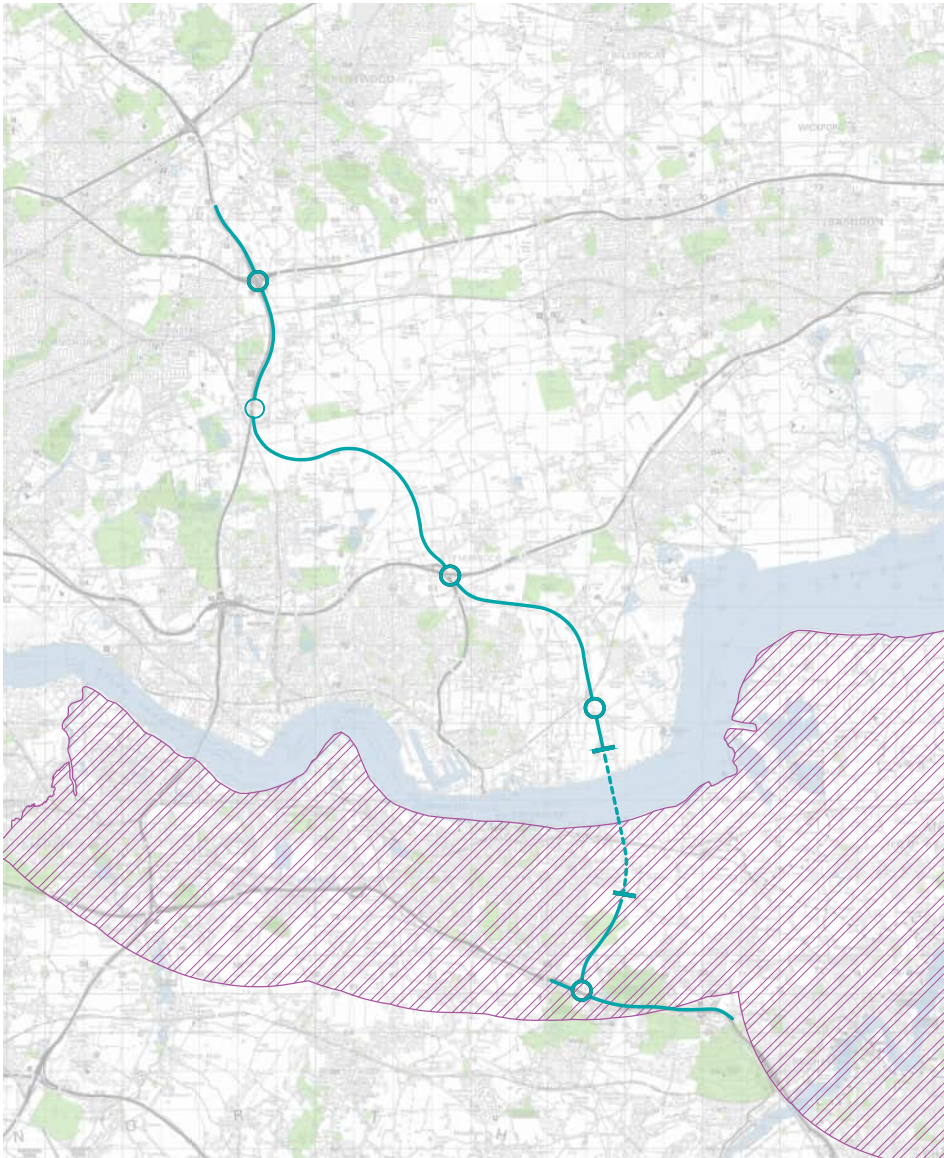
Time-line: Running

Project Targets: Preventing the loss of OMHPDL BAP habitat and the associated invertebrate fauna



Potential impact from LTC: Various- risk of direct loss of sites and indirect impacts from disturbance, fragmentation and Nitrogen deposition

2022 Validation: No status change











Indicative Location Plan (not to scale)



KEY:

-  Development route
-  Making Buzz for the Coast

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



Key Facts

Scheme:

NA

Location:

North Kent

(Dartford to Deal 5km coastal strip)

District:

Varies

Land Ownership:

Varies

Existing Land Use and GI Function:

Varies

Approximate Project Area:

765km² / 76,500ha

Project Status and Time-line:

Active, 3 year delivery phase to Oct 2020

Project Description

<https://www.bumblebeeconservation.org/making-a-buzz-for-the-coast/>

This exciting and ambitious project spans 135 miles of Kent's coastline from Dartford to Deal, and focuses on restoring and creating habitat for Kent's wild bees, especially the Shrilc carder bee (*Bombus sylvarum*).

Background:

One of the primary aims of Making a Buzz for the Coast will be to safeguard rare bee populations by creating and restoring habitat and linking isolated populations together through the creation of flower-rich 'stepping stones' and habitat along the coast. Habitat and bee surveys will be an essential part of the project to help us build better data, evaluate our activities and monitor bee populations around the coast



Site Access:

Varies

Description of existing assets: current functions, use and habitats

Grazing marsh, sea walls, vegetated shingle, saltmarsh, dunes, soft cliffs, cliff-top grasslands, calcareous grasslands, brownfield sites, native shrub & hedgerows.

Identified GI Policy Themes, Targets and Compliance

Priority S41 bumblebee species including Shrilc carder bee; S41 solitary bee species; Bumblebees, solitary bees & other pollinators. Aligns with local and national pollinator strategies.

Habitat provision, landowner advice, monitoring populations, community engagement, Buzzing Gardens

Other Project Targets

Partnership project with KWT, KCC, NE, RSPB. Plus other partners e.g. Thames Water.

Required to achieve targets

Project team, volunteers; Landowner & partner buy-in for habitat work.

LTC Impacts & Opportunities

Identified Potential Impacts

Habitat loss for priority bumblebee & solitary bee species. Thames estuary is last remaining stronghold for Shrilc carder bee. Further fragmentation of habitats.

Identified Opportunities

Wildflower habitat creation & connectivity - mitigation

2022 Validation: No status change

Other BUMBLEBEE CONSERVATION TRUST projects and initiatives without specific location

SHRILL CARDER BEE RECOVERY PROJECT

Scheme: Back from the Brink (NE / Rethink Nature partnership)**Location:** Thames Estuary - E.London to Foulness/Burnham in Essex; Hoo Peninsula in Kent**Habitat type:** Grazing marsh, sea walls, Thames Terraces**Project Status:** Active**Time-line:** 2.5 year delivery phase to Dec 2019 (BftB 4yrs)**Project Targets:** Shrilc carder bee (& other S41 bumblebee species); Habitat provision/landowner advice, surveys & monitoring. Aligns with local and national pollinator strategies.**Other Project Targets:** Development of Shrilc Carder Bee Recovery Plan; Raising awareness**Required to achieve targets:** Landowner buy-in, specialist staff.**Potential impact from LTC:** Habitat loss & further habitat fragmentation - threat to Shrilc carder bee population**Potential opportunities from LTC:** Wildflower habitat creation & connectivity - mitigation.

SHORT-HAIRED BUMBLEBEE REINTRODUCTION PROJECT

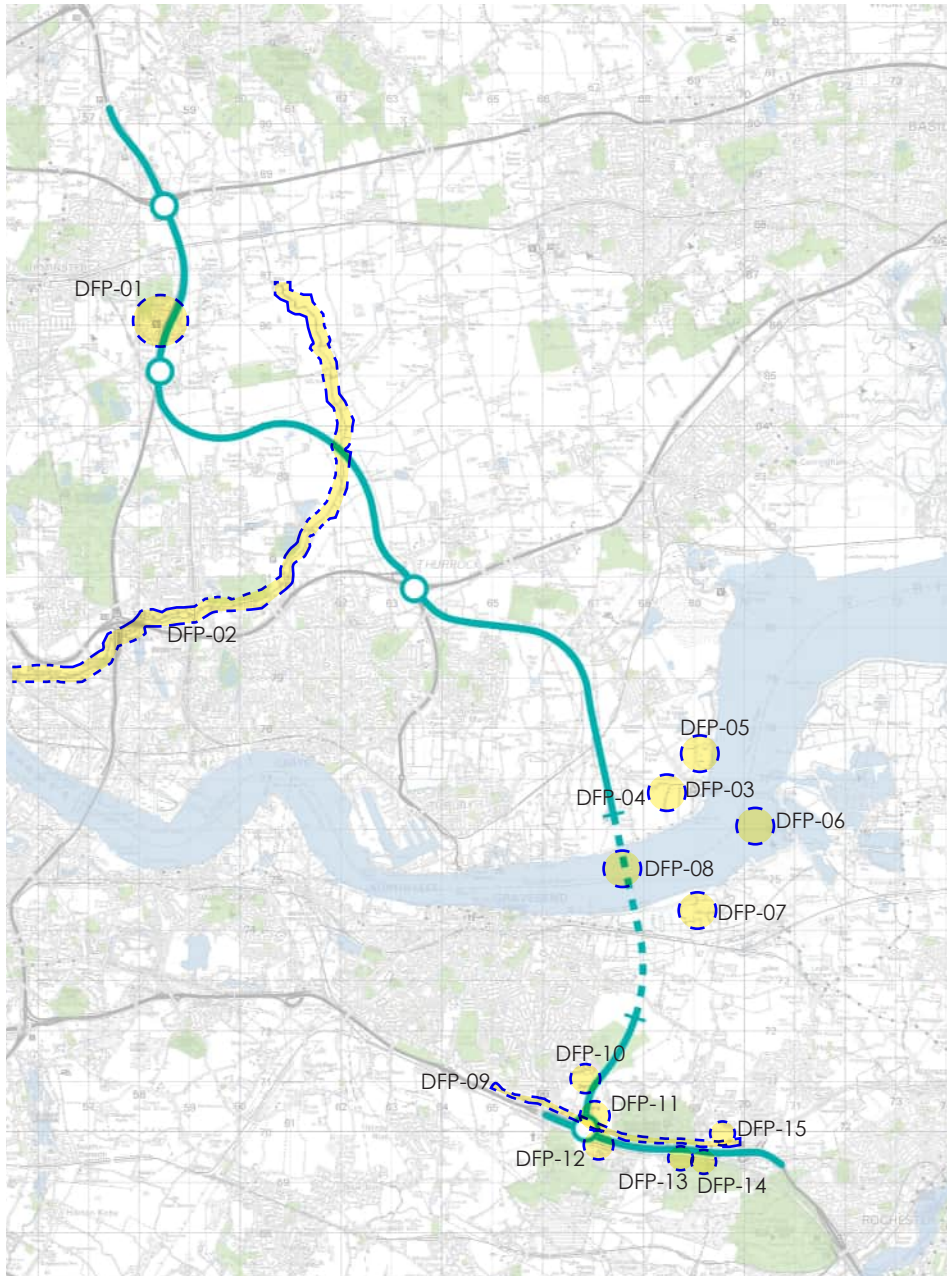
Location: Romney Marsh landscape area (Dungeness)**Project Status:** Active**Time-line:** Since 2009

BEE WALK

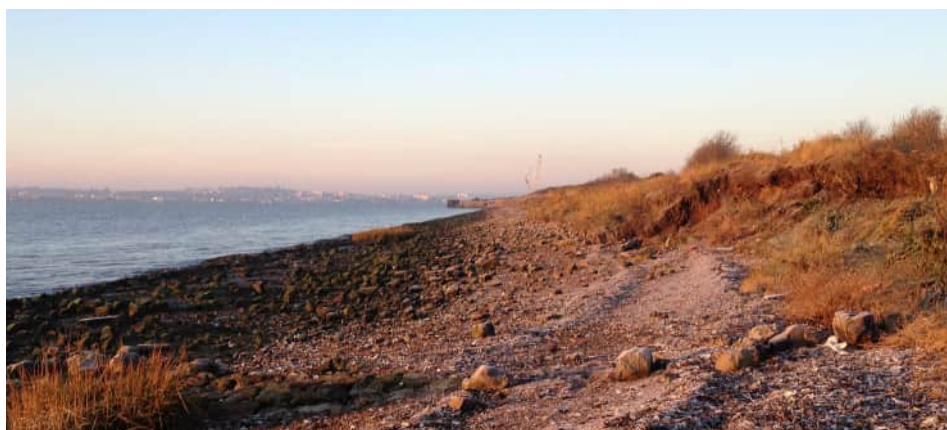
Scheme: National bumblebee recording scheme**Location:** UK wide**Project Status:** Active**Time-line:** Ongoing since 2010**Project Targets:** All bumblebee species - monitoring populations**Required to achieve targets:** Volunteer BeeWalkers**Potential opportunities from LTC:** Bumblebee monitoring

2022 Validation: No status change

Indicative Location Plan (not to scale)



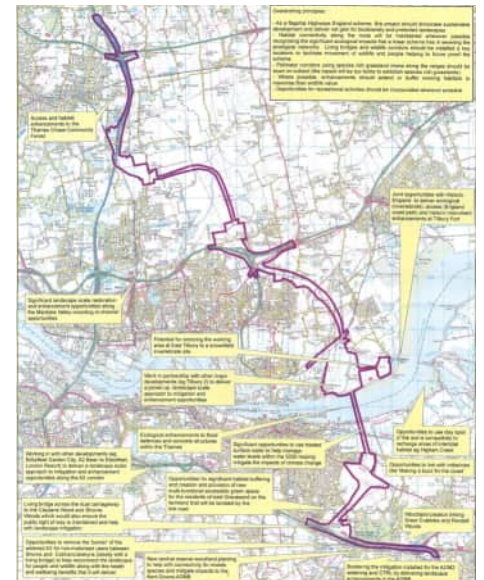
- KEY:
- Development route
 - Indicative project location



Existing GI Asset Typology

| | | |
|--|---------------------------|-------------------------------------|
| | Country Parks | <input checked="" type="checkbox"/> |
| | Valley, Park and Farmland | <input checked="" type="checkbox"/> |
| | Formal Recreation | <input checked="" type="checkbox"/> |
| | Community Forest | <input checked="" type="checkbox"/> |
| | AONB | <input checked="" type="checkbox"/> |
| | Strategic Walking Routes | <input checked="" type="checkbox"/> |
| | Heritage | <input checked="" type="checkbox"/> |
| | Biodiversity & Habitats | <input checked="" type="checkbox"/> |
| | Strategic Cycling Routes | <input checked="" type="checkbox"/> |
| | Protected Lanes | <input type="checkbox"/> |

Indicative Location Plan (not to scale):
produced by Sean Hannah, date
03/05/2018 on behalf of DEFRA.



DFP-01 TO 16

DEFRA FAMILY POTENTIAL ENVIRONMENTAL LEGACY PROJECTS

Key Facts

Scheme:

Specific to LTC route

Location:

Varies

District:

Varies

Land Ownership:

Varies

Existing Land Use and GI Function:

Varies

Approximate Project Area:

NA

Project Status and Time-line:

NA

Project Description

In 2018 DEFRA in partnership with Environment Agency, Forestry Commission, Marine Management Organisation and Natural England identified 16 potential environmental LTC legacy projects.

Background:

NA

Overarching principles

- As a flagship Highways England scheme, this project should showcase sustainable development and deliver net gain for biodiversity and protected landscapes.
- Habitat connectivity along the route will be maintained wherever possible recognising the significant ecological impacts that a linear scheme has in severing the ecological networks. Living bridges and wildlife corridors should be installed at key locations to facilitate movement of wildlife and people helping the future proof the scheme.
- Pollinator corridors using species rich grassland mixes along the verges should be sown on subsoil (the topsoil will be too fertile to establish species rich grasslands)
- Where possible, enhancements should extend or buffer existing habitats to maximize their wildlife value
- Opportunities for recreational activities should be incorporated wherever possible

PROJECTS**DFP-01: Access and habitat enhancements to the Thames Chase Community Forest****DFP-02: Landscape restoration along Mardyke Valley**

Significant landscape scale restoration and enhancement opportunities along the Mardyke Valley including in-channel opportunities

DFP-03: East Tilbury brown-field

Potential for restoring the working area at East Tilbury to a brownfield invertebrate site

DFP-04: Landscape mitigation in partnership with other major developments

Working in partnership (e.g. Tilbury 2) to deliver a joined up, landscape scale approach to mitigation and enhancement opportunities

DFP-05: Enhancements at Tilbury Fort

Joined opportunities with Historic England to deliver ecological (invertebrate), access (England coast path) and historic monument enhancements at Tilbury Fort

DFP-06: Clay Spoil in Higham Creek

Opportunities to use clay spoil (if the soil is compatible) to recharge areas of intertidal habitat e.g. Higham Creek

DFP-07: Management of water levels at SSSI

Significant opportunities to use treated surface water to help manage water levels within the SSSI helping mitigate the impacts of climate change

DFP-08: Ecological enhancements to flood defences

Ecological enhancements to flood defences and concrete structures within the Thames

DFP-09: A2 corridor enhancements

Working in with other developments (e.g. Ebbsfleet Garden City, A2 Bean to Ebbsfleet, London Resort) to deliver a landscape scale approach to mitigation and enhancement opportunities along the A2 corridor

DFP-10: Multi-functional accessible green space

Opportunities for significant habitat buffering and creation and provision of new multi-functional accessible green space for residents of east Gravesend on the farmland that will be isolated by the link road

DFP-11: Living bridge to link Claylane Wood to Shorne Woods

Living bridge across the dial carriageway to link Claylane Wood and Shorne Woods with would also ensure the public right of way is maintained and help with landscape mitigation

DFP-12: Remove the barrier of the widened A2 for non motorised users

Opportunities to remove the 'barrier' of the widened A2 for non-motorised users between Shorne and Cobham/ Jeskyns (ideally with a living bridge) to help reconnect the landscape for people and wildlife along with the health and well-being benefits that will deliver.

DFP-13: Woodland planting:

New central reserve woodland planting to help with connectivity for mobile species and mitigate impacts to the Kent Downs AONB

DFP-14: A2/ M2 widening:

Bolstering the mitigation installed for the A2/M2 widening and CTRL by delivering landscape enhancements in the AONB

DFP-15: Woodland creation:

Woodland creation linking Great Crabbles and Randall Woods

DFP-16: Making a Buzz for the Coast

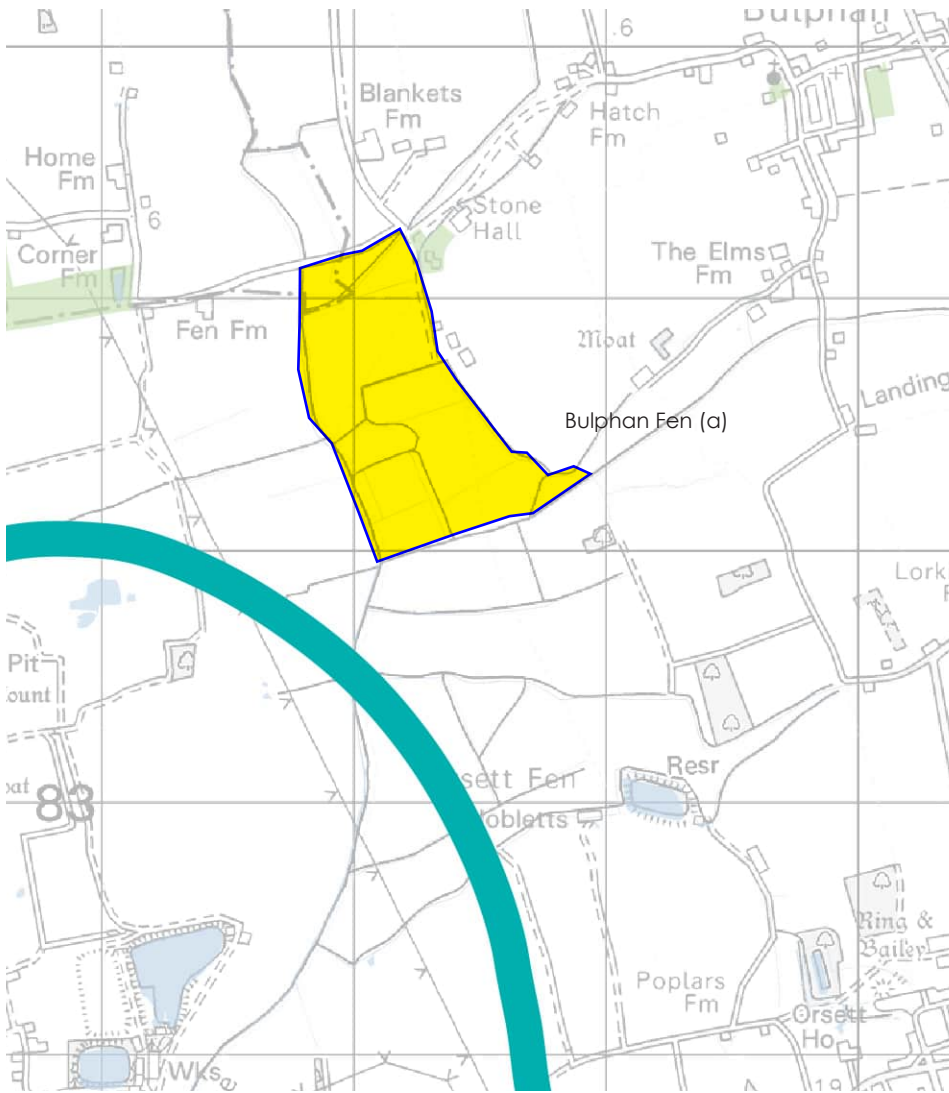
Opportunities to link with initiatives like 'Making the buzz for the coast'

2022 Validation: No status change

Crossover Stakeholders













Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



EWT-01a THE LOST FENS: BULPHAN FEN

Key Facts

Scheme:

NA

Location:

Bulphan TQ621847

District:

Thurrock

Land Ownership:

NA

Existing Land Use and GI Function:

Arable land

Approximate Project Area:

Bulphan:

71ha (as marked on the plan inset)

Project Status and Time-line:

Aspiration project

Project Description

Potential to restore area as an extensive wetland landscape. As this is the lowest point the area could act as a large scale SUDS scheme to take water from the road corridor creating significant flood storage and areas of habitat reconnecting the Mardyke to its natural floodplain

Background:

NA

Site Access:

Footpath access. Although Orsett mapped as open access land this is severely constrained by arable agriculture.

Mar Dyke river with PROW forms western boundary.

Description of existing assets: current functions, use and habitats

Arable land

Identified GI Policy Themes, Targets and Compliance

Potential fen, wet grassland and wet woodland

Other Project Targets

Supported by South Essex Catchment Partnership and Land of the Fanns partnership

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

Direct impact - fall within development boundary

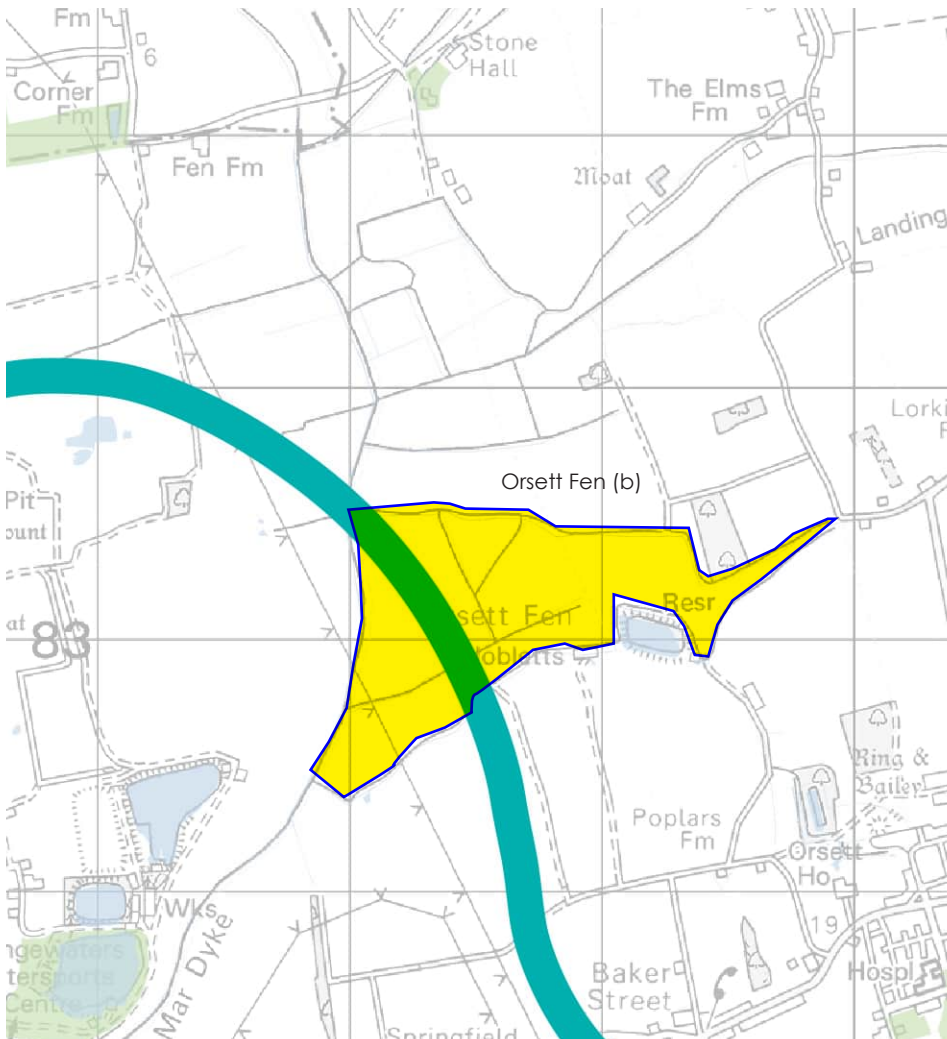
Identified Opportunities

Targets: Potential fen, wet grassland and wet woodland

Other Project Targets: Supported by South Essex Catchment Partnership and Land of the Fanns partnership











2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



EWT-01b THE LOST FENS: ORSETT FEN

Key Facts

Scheme:

NA

Location:

Orsett TQ627833

District:

Thurrock

Land Ownership:

NA

Existing Land Use and GI Function:

Arable land

Approximate Project Area:

Orsett:

95ha (as marked on the plan inset)

Project Status and Time-line:

Aspiration project

Project Description

Potential to restore area as an extensive wetland landscape. As this is the lowest point the area could act as a large scale SUDS scheme to take water from the road corridor creating significant flood storage and areas of habitat reconnecting the Mardyke to its natural floodplain

Background:

NA

Site Access:

Footpath access. Although Orsett mapped as open access land this is severely constrained by arable agriculture.

Mar Dyke river with PROW forms western boundary.

Description of existing assets: current functions, use and habitats

Arable land

Identified GI Policy Themes, Targets and Compliance

Potential fen, wet grassland and wet woodland

Other Project Targets

Supported by South Essex Catchment Partnership and Land of the Fanns partnership

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

Direct impact - fall within development boundary

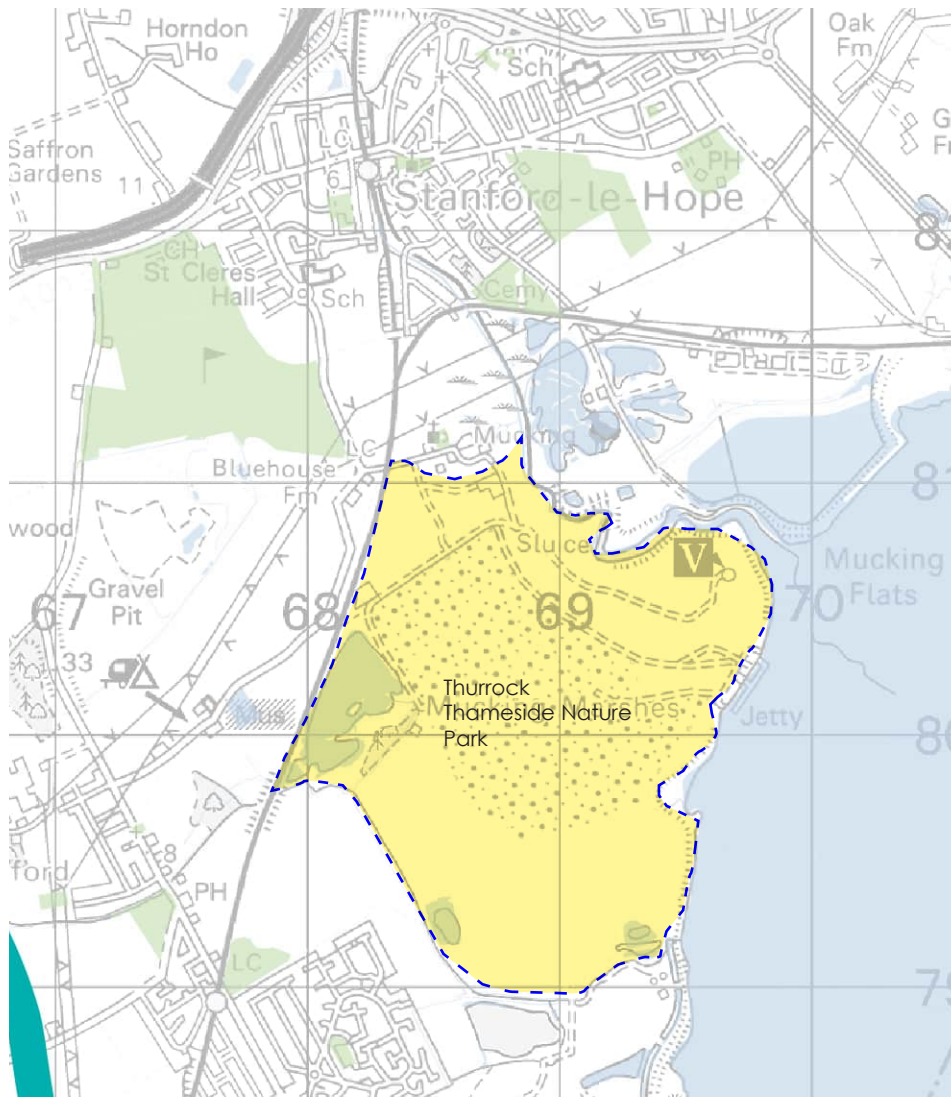
Identified Opportunities

Targets: Potential fen, wet grassland and wet woodland

Other Project Targets: Supported by South Essex Catchment Partnership and Land of the Fanns partnership

2022 Validation: No status change

Indicative Location Plan (not to scale)



KEY:

 Development route

 Indicative project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



EWT-02 THURROCK THAMESIDE NATURE PARK

Key Facts

Scheme:

NA

Location:

Wharf Rd, Stanford-le-Hope
SS17 0EQ

District:

Thurrock

Land Ownership:

Essex Wildlife Trust

Existing Land Use and GI Function:

Essex Wildlife Trust (EWT) reserve and Enoverl landfill being capped

Approximate Project Area:

304 ha (as marked on the plan inset)

Project Status and Time-line:

Active, ongoing

Project Description

Potential site to receive excavated materials by barge to create grassland/invertebrate habitat. Essex Wildlife Trust takes on the management of the completed landfill site from Enoverl in phases as they are completed

Background:

The nature park was formally a landfill site but now has a range of important habitats that reconnect the area with wildlife and people. There are footpaths, bridleways and cycle ways that allow visitors to explore the area.

Site Access:

The site is accessible by EWT

Description of existing assets: current functions, use and habitats

- Grassland
- Pond
- River Thames

Identified GI Policy Themes, Targets and Compliance

Grassland

Other Project Targets

Other Project Targets: Thames terrace grassland invertebrate assemblages Shril Carder bee etc.

Required to achieve targets

NA

LTC Impacts & Opportunities**Identified Potential Impacts**

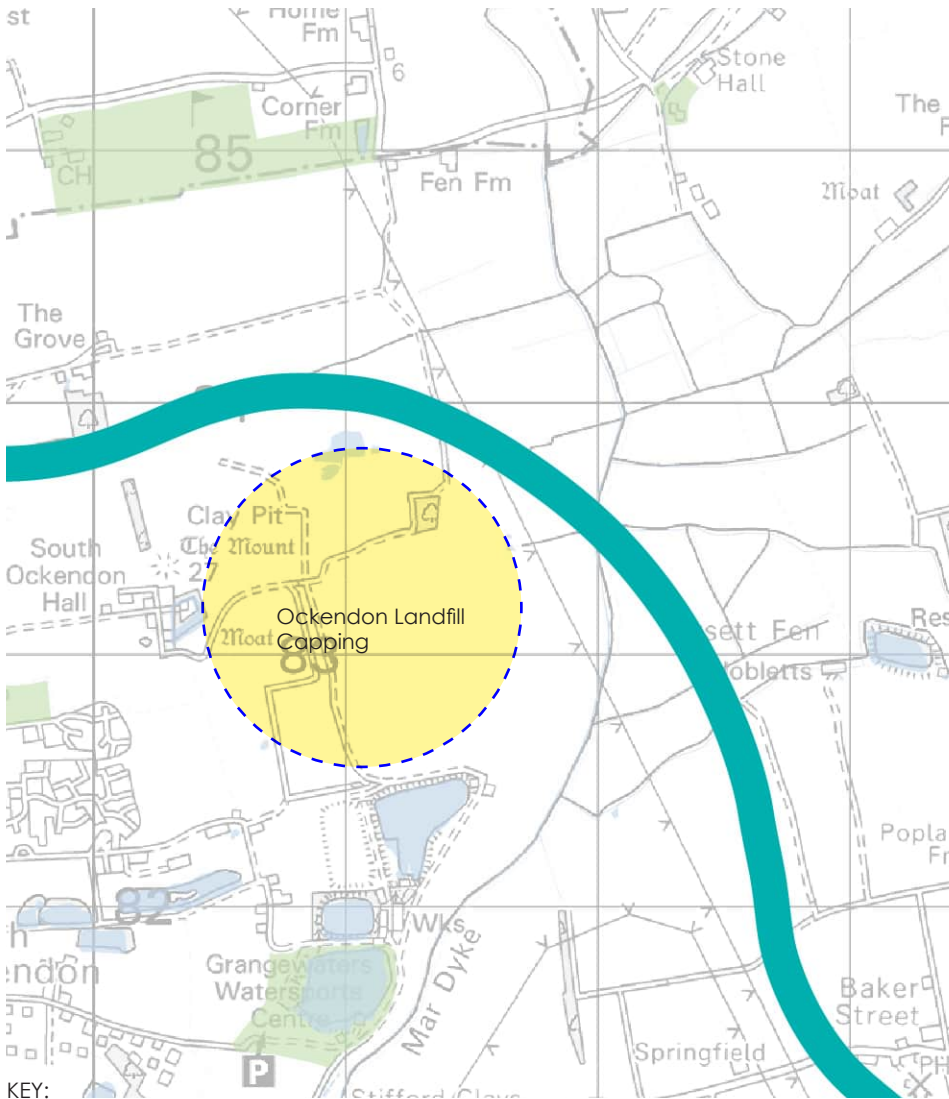
NA


Identified Opportunities

NA











2022 Validation: No status change

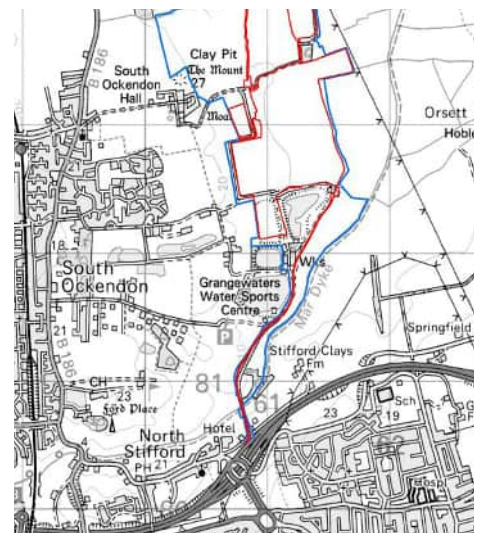
Indicative Location Plan (not to scale)



- KEY:
-  Development route
 -  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



Key Facts

Scheme:

NA

Location:

South Ockendon TQ605836

District:

Thurrock

Land Ownership:

NA

Existing Land Use and GI Function:

Landfill

Approximate Project Area:

NA

Project Status and Time-line:

Potential project

Project Description

Potential to take on management of capped and restored landfill to deliver biodiversity and public access objectives

Background:

NA

Site access:

No public access

Description of existing assets: current functions, use and habitats

Ruderal

Identified GI Policy Themes, Targets and Compliance

Direct impact - sites lies on the side of LTC development boundary

Other Project Targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

NA

2022 Validation: No status change

Other ESSEX WILDLIFE TRUST projects and initiatives without specific location

LOCAL WILDLIFE SITES (LOWS) UPLIFT

Project Description: Uplift of LoWS as appropriate with regard to ownership and existing condition and locating habitat creation and species translocation to support existing LoWS network

Location: various

Existing land use and function: various

Habitat type: Various

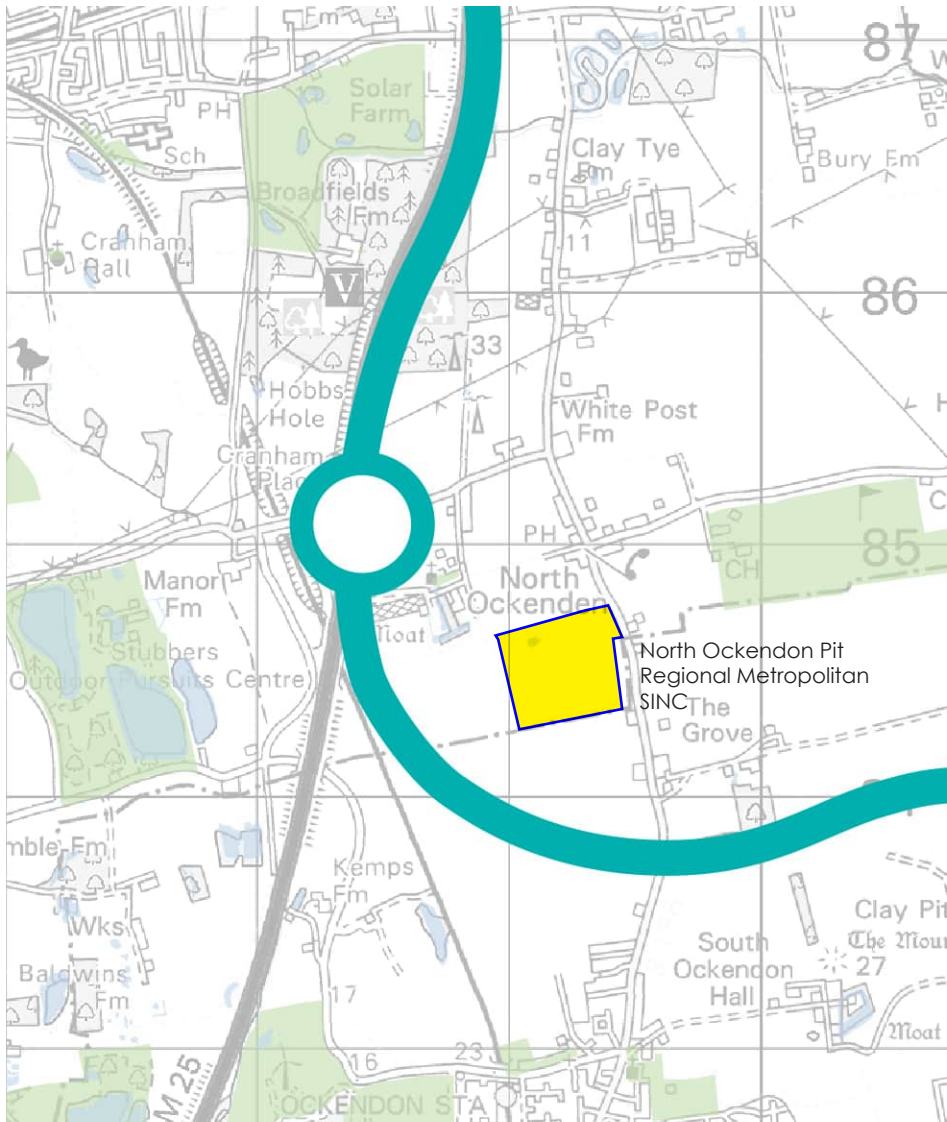
Project Status: Aspirational

Site Access: Footpath access.

2022 Validation: No status change



Indicative Location Plan (not to scale)













KEY:

 Development route

 Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



HA-01 NORTH OCKENDON PIT REGIONAL, METROPOLITAN SINC

Key Facts

Scheme:

North Ockendon Pit

Location:

North Ockendon - border of Havering with Thurrock TQ 591 844

District:

Havering

Land Ownership:

NA

Existing Land Use and GI Function:

Neutral grassland (semi-improved), tall scrub, scrub, woodland, scattered trees, standing water, hedges

Approximate Project Area:

18.7ha

Project Status and Time-line:

Running, currently trying to protect from planning impacts

Project Description and Background:

Following gravel extraction it was partially in-filled with building rubble and designated a Site of Borough Importance Grade II in 2003. The site has been locked up and left to itself with no management and largely undisturbed. The site has developed an invertebrate assemblage of national importance, including several rare bees, wasps and ants. Its geographical situation adds weight to that importance.

Site Access:

No public access

Description of existing assets: current functions, use and habitats

Neutral grassland (semi-improved).

Identified GI Policy Themes, Targets and Compliance

To retain existing regionally important species and habitats.

Other Project Targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

Regionally important - proximity to utilities working area and access track off North Road.

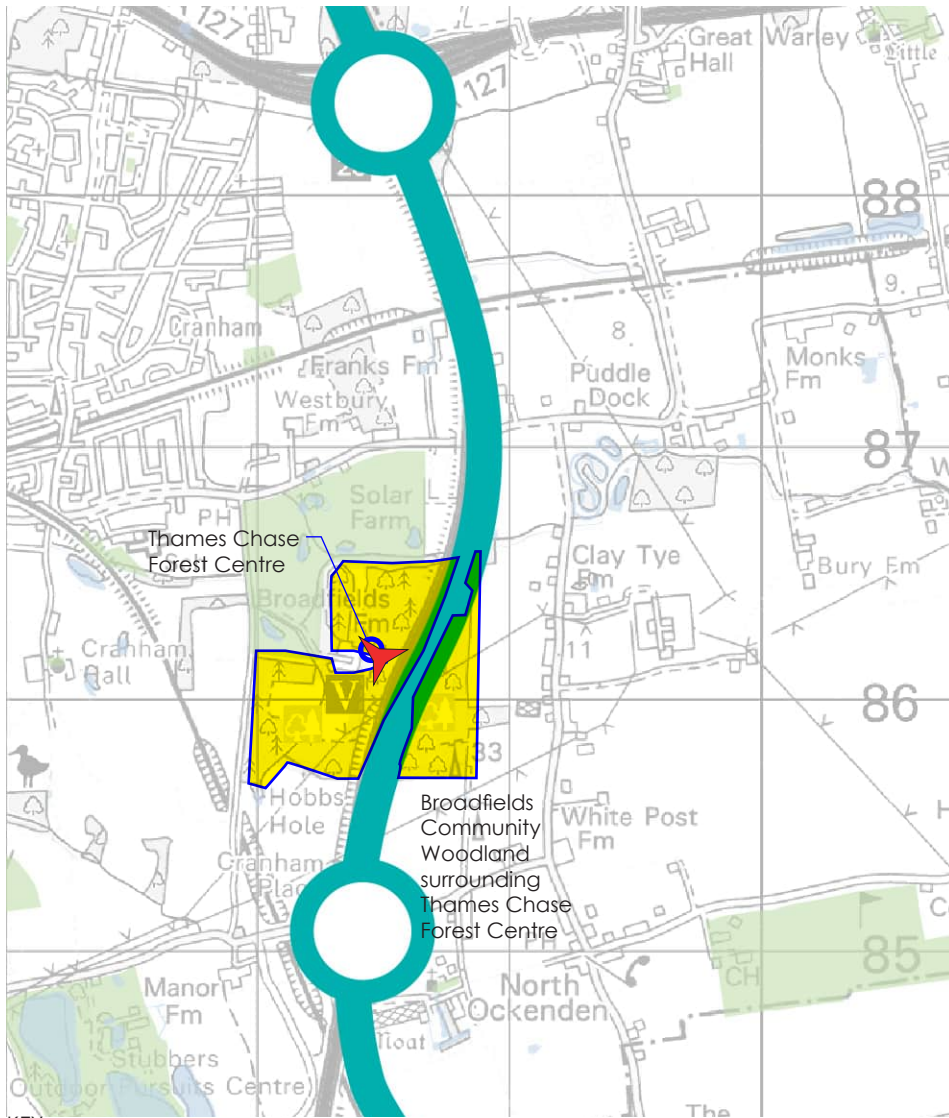
Identified Opportunities

Valuable undisturbed breeding ground for a wide variety of birds in an area dominated by arable farming, including lapwing and reed bunting.

2022 Validation: No status change











Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



TCCF-01

THAMES CHASE COMMUNITY FOREST - BROADFIELDS

Key Facts

Scheme:

NA

Location:

Broadfields

(Thames Chase Forest Centre)

Post Code RM14 3NS

OS Ref TQ 585 865

Borough:

London Borough of Havering

Land Ownership:

Forest Enterprise England (FEE)

Existing Land Use and GI Function

Community Woodland - publicly accessible green space

Approximate Project Area:

56ha

Project Status and Time-line:

Ongoing project

Project Description

Broadfields is a community woodland surrounding the Thames Chase Forest Centre which attracts 110,000 visitors per annum. Formerly called Broadfields Farm, the Forestry Commission site is now home to a variety of surfaced trails, ponds, meadows and even an orchard planted with traditional Essex apple and pear varieties.

Scattered around the site are several environmental play areas for children, including the Ants Nest, Snake Stepping Stones, Hollow Logs and the Trusty Oak, which offers beautiful views across the whole site. The Thames Chase Visitor Centre includes a shop, café, information centre and interpretation displays for children to interact with along with an education room for environmental studies.

Background:

Thames Chase is part of 12 Community Forests in England. With a network of 47 sites, its aim is to help promote the creation and continuing development of greenspace on the edge of East London and South Essex. The Forestry Commission own and manage 10 community woodlands within this area.

History:

The Grade II-listed barn next to the Centre is a classic example of a seventeenth century Essex Barn. It's one of the last remaining and best preserved of this once common county sight. Constructed over 400 years ago from older barns and local timber, it shows just how substantial Cranham's trees once were.

Site Access:

110,000 visitors per annum. 3.7km all-ability surfaced paths. Part of the footpath is PROW.

Walks: 6.4km

(2.7km is un-surfaced)

Cycling: 6.4km

Horses: 1.5km

Visitor Centre

Open 9am until dusk, car park £1.

Description of existing assets: current functions, use and habitats

- Mixed conifer/broadleaf woodland
- Ponds
- Lowland meadows
- Traditional orchard

Identified GI Policy Themes, Targets and Compliance

FEE manages the nations forests estate providing environmental, social and economic benefits from them. Deliver for people, nature and the economy. This includes managing sites for environmental benefits, community engagement and volunteer opportunities.

Aligns with local policy including Thames Chase Forest Plan and the All London Green Grid, which includes aims to connect green spaces to provide linkages for people and wildlife. The Project also aligns with key policies including national policy including Forestry and Woodland Policy Statement, DEFRA 25yr Environment Plan and Clean Growth Strategy, Natural Environment White Paper and National Planning Policy Framework.

Broadfields is part of Thames Chase Community Forest, established in 1990 as part of the National Community Forest Programme Pilot Project which sought to demonstrate the contribution of environmental improvement to social and economic regeneration. Work here is directed by the Thames Chase Plan.

NA

Other Project Targets

NA

Required to achieve targets

NA



LTC Impacts & Opportunities

Identified Potential Impacts

Direct impact - part of the site falls within development boundary

Identified opportunities

Opportunities to improve site connectivity as the site becomes more fragmented- includes within site (as site is split in half with M25) and connections from site to wider recreation network.

Explore opportunities to at least maintain the current size of Broadfields- the FC could potentially manage land adjacent to Broadfields that HE are required to purchase as part of the LTC works.

Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.

FEE Targets & The Thames Chase Plan (2014-2024)

The refreshed vision for Thames Chase Community Forest:

'By 2030, Thames Chase Community Forest will be recognised as an inspirational example of landscape regeneration where enhanced, connected woodland and green space has made a clear difference to wildlife and peoples' lives'.

Objectives:

1. To protect, improve and expand the woodland character of the Community Forest
2. To sustain the natural integrity of the Community Forest's air, land and water including wildlife.
3. To develop a connected network of links and accessible, vibrant greenspaces throughout the Community Forest.
4. To integrate climate change adaptation and mitigation responses into the developing Community Forest
5. To use the Community Forest to improve local health and well-being, volunteering, learning and employment.
6. To enable effective partnership working from national to local level to maximise impact of available resources.

Forest Wide Programmes

The Thames Chase Plan sets out five Forest-wide programmes of delivery that are in alignment with the core aims of the NPPF:

1. Forestry
2. Landscape Regeneration
3. Access
4. People
5. Promotion

The aim is for Thames Chase Community Forest to have reached its target of 30% woodland cover by 2030. This will require a combination of large scale woodland planting enabled by the strategic partnership with the Forestry Commission, supplemented by local tree planting initiatives by communities, business Corporate Social Responsibility (CSR) schemes and through development mitigation. Putting into place maintenance regimes so that these gains will be sustainable in the long term is also critical.

2022 Validation: No status change



| Contribution to Objectives | |
|---|---|
| Objective | Delivery |
| To protect, improve and expand the woodland character of the Community Forest | Ensuring that existing woodlands are protected and improved as priorities, with expansion the final priority in accordance with the Forestry Commission approach. Woodland is an integral part of the landscape character of Thames Chase. Link with Forestry Programme. |
| To sustain the natural integrity of the Community Forest's air, land and water including wildlife. | Increasing woodland will contribute towards improved air, land and water quality as well as providing more woodland habitat. Regenerating and connecting rivers and habitats will contribute towards improved air, land and water quality. |
| To develop a connected network of links and accessible, vibrant greenspaces throughout the Community Forest | Strategic woodland planting will create Greenways that connect wildlife habitats and people throughout the Community Forest. Landscape regeneration will create Greenways that connect wildlife habitats and people throughout the Community Forest. |
| To integrate climate change adaptation and mitigation responses into the developing Community Forest | Increased woodland cover will contribute towards UK's national mitigation. Tree planting mixes selected with adaptation in mind. Increased woodland cover will contribute towards UK's national mitigation. Landscape regeneration will provide strategic adaptation opportunities. |
| To use the Community Forest to improve local health and well-being, volunteering, learning and employment | Woodland environments and a connected, restored landscape can support health and well-being, provide natural conservation volunteering opportunities, act as outdoor classrooms and offer green economic opportunities. |

Partners

Since Central Government funding for Community Forests ceased and the Thames Chase Trust was established, continued funding from Essex, Havering and Thurrock has been crucial and without the strong support of these three authorities there would be no Community Forest partnership. The five local authorities also have a pivotal role as landowners and they are responsible for much of the existing woodland and recreational areas in Thames Chase.

Government Organisations

- **Essex County Council:** The largest landowner in Thames Chase, with an estate of farms, country parks and school sites in Brentwood, a small number of which fall within or close to the forest.
- **The London Borough of Havering:** Pioneered urban fringe/countryside management in London's Green Belt during the '80s and '90s, and nearly half of Thames Chase is in Havering. Havering is another large landowner whose estate covers key areas of Thames Chase.
- **Thurrock Council:** Has extensive experience of environmental regeneration and almost a third of Thames Chase falls within Thurrock.
- **The London Borough of Barking and Dagenham:** Regards environmental improvement as vital to the long-term economic prospects of this part of East London. In the borough lies the strategic Dagenham corridor with Eastbrookend Country Park.

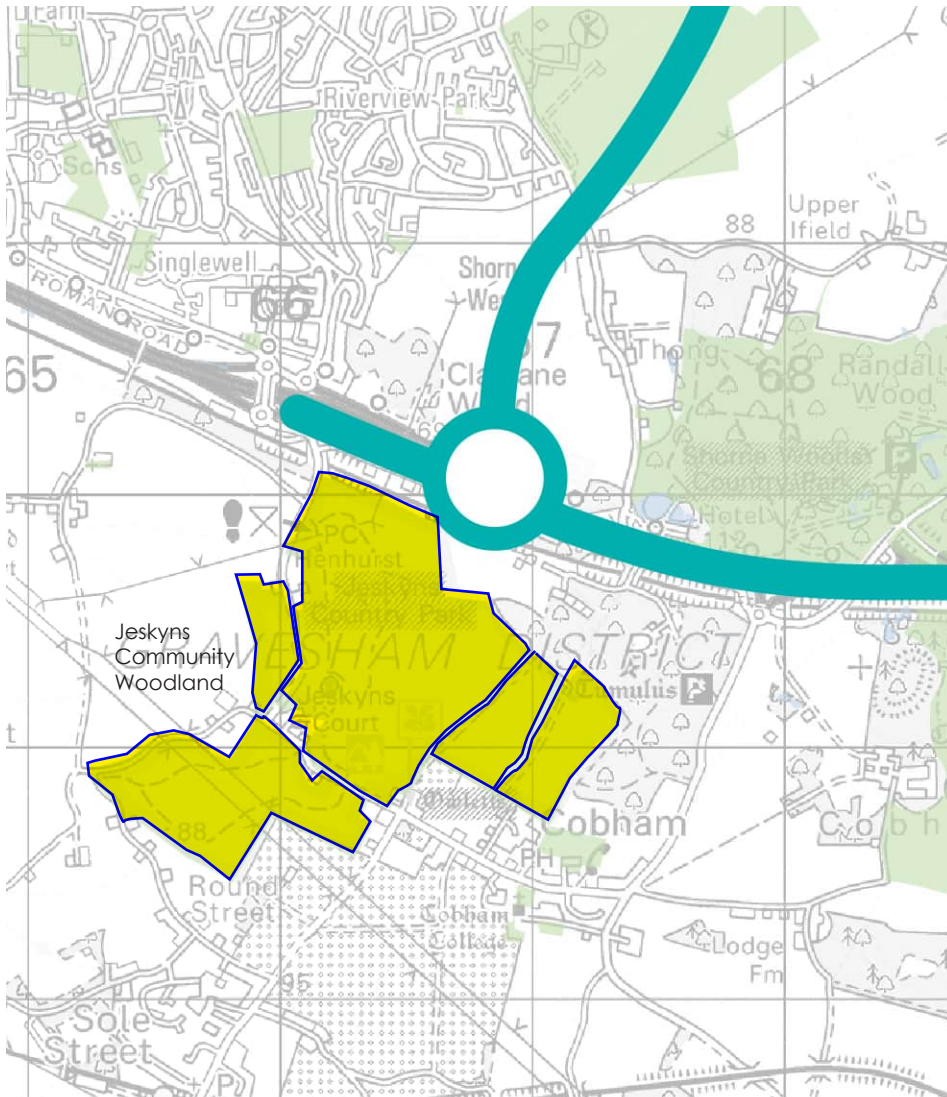
Non Government Organisations

A number of NGOs have had a key role within Thames Chase over the past two decades, in particular:

- **The Woodland Trust:** A national charity committed to woodland conservation and management, and the Trust has acquired a number of sites in the Community Forest.
- **Essex Wildlife Trust and London Wildlife Trust:** Both own nature reserves within
- **The forest Royal Society for the Protection of Birds:** Manage Rainham Marshes and associated visitor centre, which lies to the south-east of the Community Forest, representing a strategic link between Thames Chase and the River Thames.













Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



Key Facts

Scheme:

NA

Location:

Jeskyns Community Forest

Postcode DA12 3AN

OS Grid ref: TQ 660 699

Borough and Designations:

The Site is part of the Green Belt around Gravesend.

The west part of the site is a Special Landscape Area and east part of the site is in the North Downs Area of Outstanding Natural Beauty.

Land Ownership:

Forest Enterprise England (FEE)

FEE manages the nations forests estate providing environmental, social and economic benefits from them.

Deliver for people, nature and the economy. This includes managing sites for environmental benefits, community engagement and volunteer opportunities.

Existing Land Use and GI Function

Community Woodland - publicly accessible green space

Approximate Project Area:

220ha

Project status and Time-line:

Ongoing Project

Project Description:

Jeskyns Community Woodland lies to the south of the A2 in Kent and was established during the growth of the Thames Gateway in 2005 located near Cobham, Kent. The site was once a former farm which was bought by the Forestry Commission to create a community woodland and was opened in July 2007.

Jeskyns is now a 360 acre multi functional community space with woodland, ponds, orchards and wildflower meadows.

Background:

Thames Chase is part of 12 Community Forests in England. With a network of 47 sites, its aim is to help promote the creation and continuing development of greenspace on the edge of East London and South Essex. The Forestry Commission own and manage 10 community woodlands within this area.

Site Access:

330,000 visitors per annum. Numerous PROW. 7km all-ability surfaced paths and 11km grass tracks

Jeskyns offers a variety of trails:

- **Court Wood Trail:** 1/4 mile. Surfaced with gradients of less than 1:20 and plenty of resting points. Within the Dogs on Leads Zone.
- **Henhurst Lake Walk:** 1 + 1/4 miles. Surfaced with gradients of less than 1:20 and plenty of resting points.
- **Broomfield Loop:** 1 + 3/4 miles. Surfaced. Some gradients more than 1:20. Some resting points.
- **Orchard Walk:** 2 miles. Surfaced with gradients of less than 1:20 and some resting points.
- **Children's Trail:** approx 1/4 mile. Themed trail with activity boards along it. Surfaced with gradients of less than 1:20 and plenty of resting points. Within the Dogs on Leads Zone. Accompanying activity packs can be purchased from cafe. The trail theme changes seasonally.
- **Dog Activity Trail:** approx 1/4 mile. Includes a range of activity features for dogs such as a log walk, tunnel and weaves. Grass surfaced. Can be muddy at times.
- **Horse Trail:** 5miles. Grass surfaced.
- **Darnley Trail:** 10km. Links Jeskyns with neighbouring sites and countryside. Permissible to walkers, cyclists and horse riders. Surfaced in some parts but includes rough ground, steep inclines, occasional obstructions and can be very muddy.

Forestry Zones

- **Jeskyns Woods:** 100,000 young trees make up Jeskyns own brand new woodland.
- **Jeskyns Meadows:** 100 acres of meadowland with over 40 species of wildflower provide important habitat for wildlife.
- **Jeskyns Orchards:** 756 different varieties of apple as well as plums, cherries, pears, walnuts and cobnuts grow in this area.
- **Jeskyns Glades:** With a backdrop of ancient woodland, this tranquil area is the perfect place to get away from it all.
- **Jeskyns Grove:** This secluded area, sown with barley and wildflowers provides shelter and winter food for birds.

Description of existing assets: current functions, use and habitats

- 20% mixed conifer/broadleaf woodland- over 130,000 trees/shrubs
- Ponds
- Traditional Orchards- 756 varieties
- 8km of hedgerows
- 50ha wildflower meadows with over 40 species wildflower
- 80ha open space



Identified Green Infrastructure Policy Themes and Compliance

Aligns with local policy including Thames Chase Forest Plan and the All London Green Grid, which includes aims to connect green spaces to provide linkages for people and wildlife. The Project also aligns with key policies including national policy including Forestry and Woodland Policy Statement, DEFRA 25yr Environment Plan and Clean Growth Strategy, Natural Environment White Paper and National Planning Policy Framework.

Other Project Targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

Direct impact - part of the site falls within development boundary

Identified Opportunities

Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.

FEE Targets & The Thames Chase Plan (2014-2024)

The refreshed vision for Thames Chase Community Forest:

'By 2030, Thames Chase Community Forest will be recognised as an inspirational example of landscape regeneration where enhanced, connected woodland and green space has made a clear difference to wildlife and peoples' lives'.

Objectives:

1. To protect, improve and expand the woodland character of the Community Forest
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3. To develop a connected network of links and accessible, vibrant greenspaces throughout the Community Forest.
4. To integrate climate change adaptation and mitigation responses into the developing Community Forest
5. To use the Community Forest to improve local health and well-being, volunteering, learning and employment.
6. To enable effective partnership working from national to local level to maximise impact of available resources.

2022 Validation: No status change

Forest Wide Programmes

The Thames Chase Plan sets out five Forest-wide programmes of delivery that are in alignment with the core aims of the NPPF:

1. [Forestry](#)
2. [Landscape Regeneration](#)
3. [Access](#)
4. [People](#)
5. [Promotion](#)

The aim is for Thames Chase Community Forest to have reached its target of 30% woodland cover by 2030. This will require a combination of large scale woodland planting enabled by the strategic partnership with the Forestry Commission, supplemented by local tree planting initiatives by communities, business Corporate Social Responsibility (CSR) schemes and through development mitigation. Putting into place maintenance regimes so that these gains will be sustainable in the long term is also critical.

Partnerships

Jeskyns works in partnership with five other sites in the local area. These are:

- Shorne Wood Country Park,
- Ranscombe Farm Reserve,
- Cobham Park,
- Ashenbank Wood and
- the Cobham Leisure Plots



| Contribution to Objectives | |
|---|---|
| Objective | Delivery |
| To protect, improve and expand the woodland character of the Community Forest | Ensuring that existing woodlands are protected and improved as priorities, with expansion the final priority in accordance with the Forestry Commission approach. Woodland is an integral part of the landscape character of Thames Chase. Link with Forestry Programme. |
| To sustain the natural integrity of the Community Forest's air, land and water including wildlife. | Increasing woodland will contribute towards improved air, land and water quality as well as providing more woodland habitat. Regenerating and connecting rivers and habitats will contribute towards improved air, land and water quality. |
| To develop a connected network of links and accessible, vibrant greenspaces throughout the Community Forest | Strategic woodland planting will create Greenways that connect wildlife habitats and people throughout the Community Forest. Landscape regeneration will create Greenways that connect wildlife habitats and people throughout the Community Forest. |
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| To use the Community Forest to improve local health and well-being, volunteering, learning and employment | Woodland environments and a connected, restored landscape can support health and well-being, provide natural conservation volunteering opportunities, act as outdoor classrooms and offer green economic opportunities. |

Partners

Since Central Government funding for Community Forests ceased and the Thames Chase Trust was established, continued funding from Essex, Havering and Thurrock has been crucial and without the strong support of these three authorities there would be no Community Forest partnership. The five local authorities also have a pivotal role as landowners and they are responsible for much of the existing woodland and recreational areas in Thames Chase.

Government Organisations

- **Essex County Council:** The largest landowner in Thames Chase, with an estate of farms, country parks and school sites in Brentwood, a small number of which fall within or close to the forest.
- **The London Borough of Havering:** Pioneered urban fringe/countryside management in London's Green Belt during the '80s and '90s, and nearly half of Thames Chase is in Havering. Havering is another large landowner whose estate covers key areas of Thames Chase.
- **Thurrock Council:** Has extensive experience of environmental regeneration and almost a third of Thames Chase falls within Thurrock.
- **The London Borough of Barking and Dagenham:** Regards environmental improvement as vital to the long-term economic prospects of this part of East London. In the borough lies the strategic Dagenham corridor with Eastbrookend Country Park.

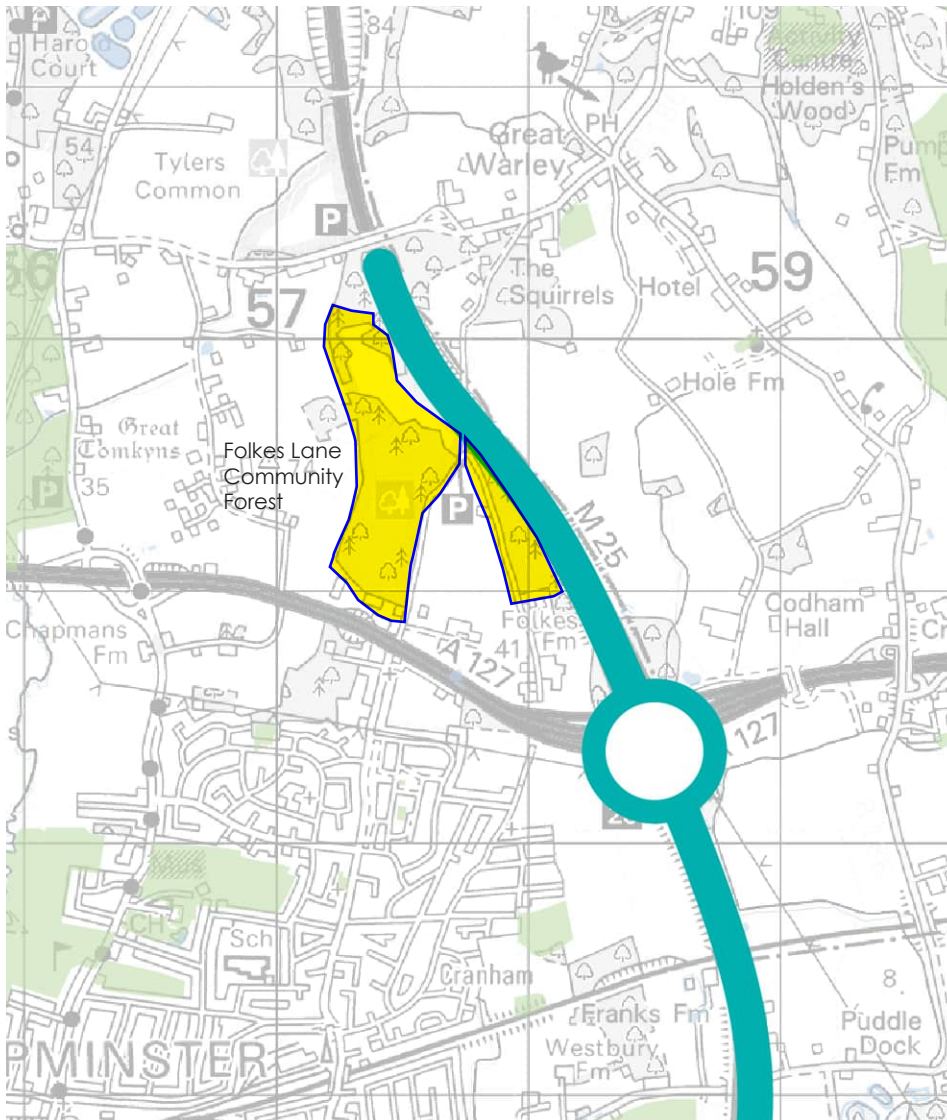
Non Government Organisations

A number of NGOs have had a key role within Thames Chase over the past two decades, in particular:

- **The Woodland Trust:** A national charity committed to woodland conservation and management, and the Trust has acquired a number of sites in the Community Forest.
- **Essex Wildlife Trust and London Wildlife Trust:** Both own nature reserves within
- **The forest Royal Society for the Protection of Birds:** Manage Rainham Marshes and associated visitor centre, which lies to the south-east of the Community Forest, representing a strategic link between Thames Chase and the River Thames.











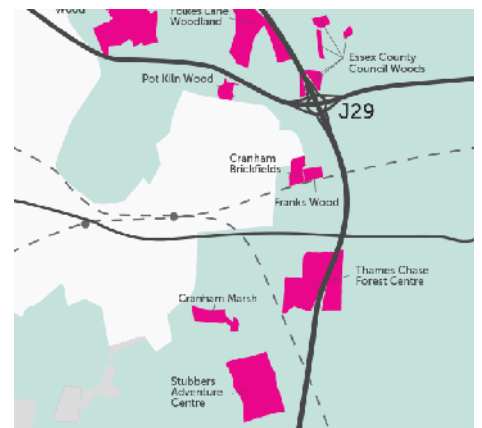
Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



TCCF-03

THAMES CHASE COMMUNITY FOREST - FOLKES LANE COMMUNITY FOREST

Key Facts

Scheme:

NA

Location:

Folkes Lane Community Woodland

Postcode RM14 1TH,

OS Ref: TQ 577 895

Borough:

London Borough of Havering

Land Ownership:

Forest Enterprise England (FEE)

FEE manages the nations forests estate providing environmental, social and economic benefits from them.

Deliver for people, nature and the economy. This includes managing sites for environmental benefits, community engagement and volunteer opportunities.

Existing Land Use and GI Function

Community Woodland - publicly accessible green space

Approximate Project Area

45 ha

Project Status and Time-line:

NA

Project Description:

Folkes Lane Woodland was formed from four fields – Slaughterhouse, 29-acre, Fordhams and Berendens. They were originally part of Berendens Manor, which was first recorded in 1350, when a Peter de Workyden rented it. This manor and its house survived until hit by Luftwaffe bombs in 1940. The site was then divided by the M25 when it was cut into the hill's scarp face in the 1980's. From its top are vistas south over the River Thames to the North Downs and west across London's Docklands with Canary Wharf, then on to the Millennium Dome and as far as the London Eye

The woodland attracts ~ 40,000 visitors per annum.

Background:

Thames Chase is part of 12 Community Forests in England. With a network of 47 sites, its aim is to help promote the creation and continuing development of greenspace on the edge of East London and South Essex. The Forestry Commission own and manage 10 community woodlands within this area.

Site Access:

~ 40,000 visitors per annum. 2.6km all-ability surfaced paths and bridleway, part of which is PROW

- Walks: 3.2km (0.6km is un-surfaced)
- Cycling: 3.2km
- Horses: 1.1km and throughout the site's grassed areas
- Open: 8.00am to dusk
- Parking: Free

Description of existing assets: current functions, use and habitats

- Mixed conifer/broadleaf woodland- 90,000 trees
- Ponds
- Meadow
- Picnic tables

Identified Green Infrastructure Policy Themes, Targets and Compliance

Aligns with local policy including Thames Chase Forest Plan and the All London Green Grid, which includes aims to connect green spaces to provide linkages for people and wildlife. The Project also aligns with key policies including national policy including Forestry and Woodland Policy Statement, DEFRA 25yr Environment Plan and Clean Growth Strategy, Natural Environment White Paper and National Planning Policy Framework.

Folkes Lane is part of Thames Chase Community Forest, established in 1990 as part of the National Community Forest Programme Pilot Project which sought to demonstrate the contribution of environmental improvement to social and economic regeneration. Work here is directed by the Thames Chase Plan.

Other Project Targets

NA

Required to achieve targets

NA



LTC Impacts & Opportunities

Identified Potential Impacts

Direct impact - part of the site falls within development boundary

Identified Opportunities

Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.

Objectives

GI Links

Pot Kiln Wood lies south across the A127. Footpaths and bridleways lead to Pages Wood to the west and Warley, and Codham Hall to the east. Also close by are Tylers Common, Tylers Wood and Harold Court Woods.

FEE Targets & The Thames Chase Plan (2014-2024)

The refreshed vision for Thames Chase Community Forest:

'By 2030, Thames Chase Community Forest will be recognised as an inspirational example of landscape regeneration where enhanced, connected woodland and green space has made a clear difference to wildlife and peoples' lives'.

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Forest Wide Programmes

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1. Forestry
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3. Access
4. People
5. Promotion

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2022 Validation: No status change



| Contribution to Objectives | |
|---|---|
| Objective | Delivery |
| To protect, improve and expand the woodland character of the Community Forest | Ensuring that existing woodlands are protected and improved as priorities, with expansion the final priority in accordance with the Forestry Commission approach. Woodland is an integral part of the landscape character of Thames Chase. Link with Forestry Programme. |
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| To use the Community Forest to improve local health and well-being, volunteering, learning and employment | Woodland environments and a connected, restored landscape can support health and well-being, provide natural conservation volunteering opportunities, act as outdoor classrooms and offer green economic opportunities. |

Partners

Since Central Government funding for Community Forests ceased and the Thames Chase Trust was established, continued funding from Essex, Havering and Thurrock has been crucial and without the strong support of these three authorities there would be no Community Forest partnership. The five local authorities also have a pivotal role as landowners and they are responsible for much of the existing woodland and recreational areas in Thames Chase.

Government Organisations

- **Essex County Council:** The largest landowner in Thames Chase, with an estate of farms, country parks and school sites in Brentwood, a small number of which fall within or close to the forest.
- **The London Borough of Havering:** Pioneered urban fringe/countryside management in London's Green Belt during the '80s and '90s, and nearly half of Thames Chase is in Havering. Havering is another large landowner whose estate covers key areas of Thames Chase.
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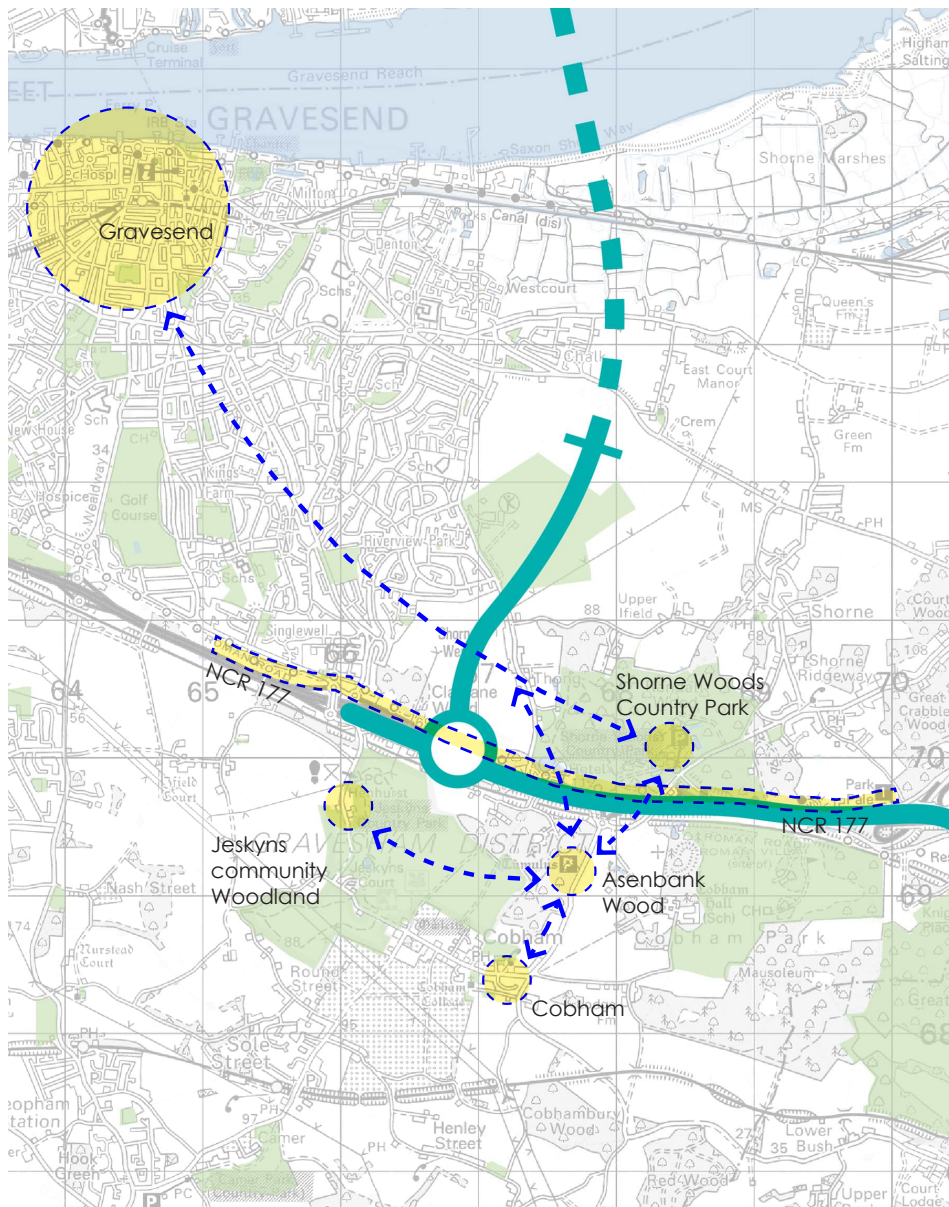
Non Government Organisations




A number of NGOs have had a key role within Thames Chase over the past two decades, in particular:

- **The Woodland Trust:** A national charity committed to woodland conservation and management, and the Trust has acquired a number of sites in the Community Forest.
- **Essex Wildlife Trust and London Wildlife Trust:** Both own nature reserves within
- **The forest Royal Society for the Protection of Birds:** Manage Rainham Marshes and associated visitor centre, which lies to the south-east of the Community Forest, representing a strategic link between Thames Chase and the River Thames.













Indicative Location Plan (not to scale)



- KEY:
-  Development route
 -  Indication of 'Link' project
 -  Indicative project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



KD-01 IMPROVEMENTS TO NMU CONNECTIVITY BETWEEN EXISTING GI NETWORK

Key Facts

Scheme:

NA

Location:

Gravesham

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Varies

Approximate Project Area:

NA

Project Status and Time-line:

Planned

Project Description:

Continuous NMU path link between Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park, which ideally should link to easy off road access to/from Gravesham

Background:

NA

Site Access:

NA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

NA

Other Project Targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

NA

2022 Validation: No status change

KD-02 NATIONAL CYCLE ROUTE 177

Key Facts

Scheme:

NA

Location:

Gravesham

District:

Gravesham

Land Ownership:

Gravesham

Existing Land Use and GI Function:

NA

Approximate Project Area:

NA

Project Status and Time-line:

Planned

Potential Opportunity Description:

Cycle route 177 along the north side of the A2 from the Henhurst roundabout in the west to J1 to be re-provided for as part of the LTC proposals

Background:

NA

Site Access:

NA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

NA

Other Project Targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

NA

2022 Validation: No status change

Other KENT DOWNS projects situated at great distance from LTC route and not mapped

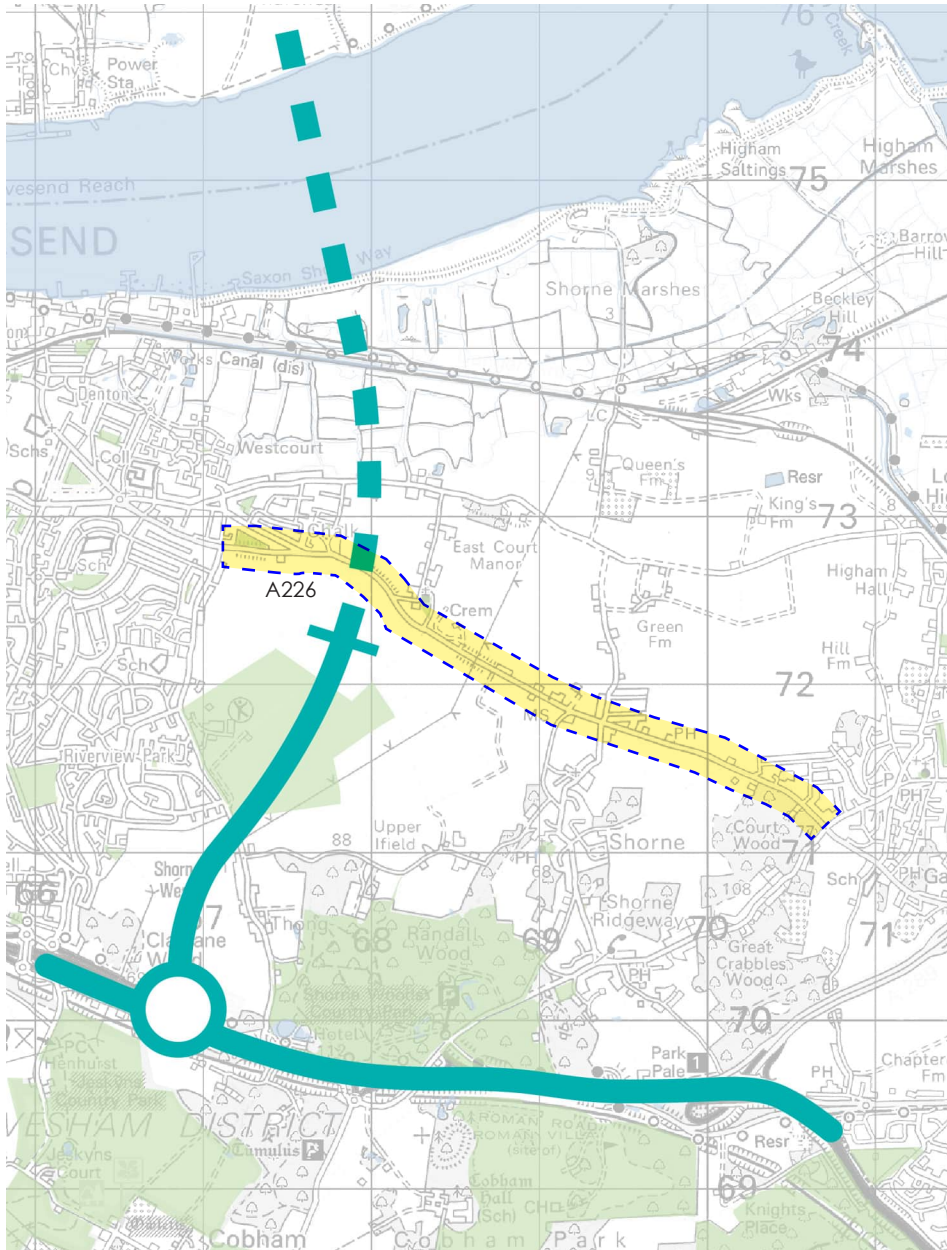
Pedestrian and cycle connection over/ under the A2 near Guston, Dover

Project Description:

The suggested enhancement to the North Downs Way further downstream would involve works on A2 near Guston (TQ 322 443). The situation here means that walkers must make a 1.4 km diversion on this national trail, beside the busy A2 on tracks and paths, which are often muddy and uncomfortable to walk on in places, to cross the A2 (due to previous highway works). We consider every effort should be made to rectify the situation and provide a footbridge or underpass over/under the A2. As discussed, the implications of the LTC are that there will be a modal shift in transport choices with additional traffic using the A2/M2 over the M20 which will result in a deterioration of experience of users of the North Downs Way along this section of the path.

2022 Validation: No status change

Indicative Location Plan (not to scale)













KEY:

 Development route

 Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



KWT-01 ROADSIDE NATURE RESERVES

Key Facts

Scheme:

Roadside Nature Reserves

Location:

A226 by the Church/Kent wide

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Roadside verge

Approximate Project Area:

2 km

Project Status and Time-line:

Active, ongoing

Project Description

A226 Verge Enhancement Project', to be developed further with LTC and Kent Highways.

To improve the habitats alongside the A226 from Higham to Gravesend, link these to what will be extensive areas of HE land alongside the LTC link road, and explore how they could further link to habitats with similar functionality for relevant species (sea walls, bumblebees) further north.

Background:

NA

Site Access:

Adjacent to A226 and associated footways

Description of existing assets: current functions, use and habitats

Calcareous grassland

Identified GI Policy Themes, Targets and Compliance

Various, Kent Biodiversity Strategy and England Biodiversity Strategy

Other Project Targets

NA

Required to achieve targets

Further location-specific project development required to identify specific opportunities and costs

LTC Impacts & Opportunities

Identified Potential Impacts

Loss of habitat/ RNR

Identified Opportunities

Protection and extension

2022 Validation: No status change

Other KENT WILDLIFE TRUST projects and initiatives without specific location (Kent wide)

General work with Kent Highways and Gravesham over the years and road verge management

Scheme: Roadside Nature Reserves

Location: Kent Wide

Approximate size of project area: 2km plus further area dependant upon LTC road and junction design

Existing Land Use and GI Function: Roadside verge

Habitat type: Various

Site Access: Adjacent to public highways

Project Status and Time-line: Active and Ongoing

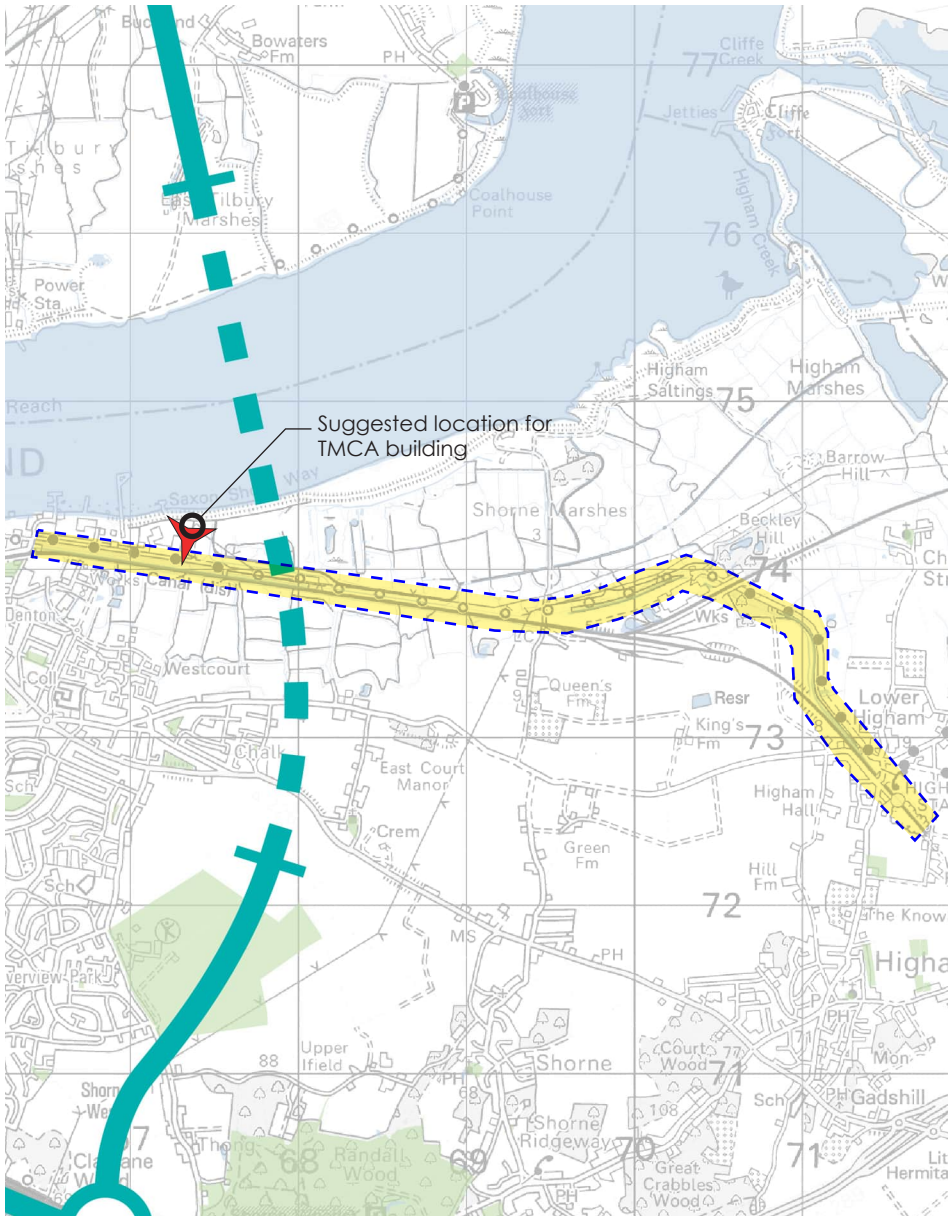
Project Targets: Various, Kent Biodiversity Strategy and England Biodiversity Strategy

Required to achieve targets: Further location-specific project development required to identify specific opportunities and costs.

Potential opportunities from LTC: Extensive network of RNRs connecting up habitats across the area

2022 Validation: No status change















KEY:

 Development route

 Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



Key Facts

Scheme:

NA

Location:

From Mark Lane, Gravesend to Church Street, Higham. Kent.

Eastcourt Marshes is a suggested TMCA building location.

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Disused commercial canal and towpath now used for leisure activities.

Approximate Project Area:

5.5km long x nominally 50m wide (varies).

Project Status and Time-line:

Ongoing. Projects are being continually completed but new ones usually have financial constraints.

Project Description:

To continue to develop and maintain the Gravesend to Higham Canal and Towpath

Dredge canal from Mark Lane to Shorne crossing to allow craft to fully utilise the waterway. Erect notice boards to inform public of history, wildlife, flora and fauna. Open areas currently closed due to shallows or fallen trees.

Investigate short course on identification of plants, trees, etc. within our boundary. Increase knowledge and promote habitat of local species including Water Voles. Run Publicised walks on Biodiversity and History.

Publicise Canal and increase membership.

Background:

NA

Site Access:

The towpath is in constant use by general public with sections used by vehicles, livestock, cyclists and pedestrians. The canal itself is used for varying types of leisure activity such as boating and fishing.

The Canal Towpath forms part of National Cycle Route No.1. It has a number of footpaths and cycleways joining throughout its length.

Description of existing assets: current functions, use and habitats

Primarily bordering marshland which is a SSSI and adjacent to land owned by RSPB.

Identified GI Policy Themes, Targets and Compliance

TMCA tasks in line with Government proposal to set up new charity for drive to improve public awareness of benefits derived from waterways.

Other project targets

More knowledge required to improve wildlife habitats for all local species such as water fowl, water voles and invertebrates living in the canal.

Required to achieve targets

Continual struggle to gain new members as funding is primarily through membership subscription and voluntary donations.

LTC Impacts & Opportunities

Identified Potential Impacts

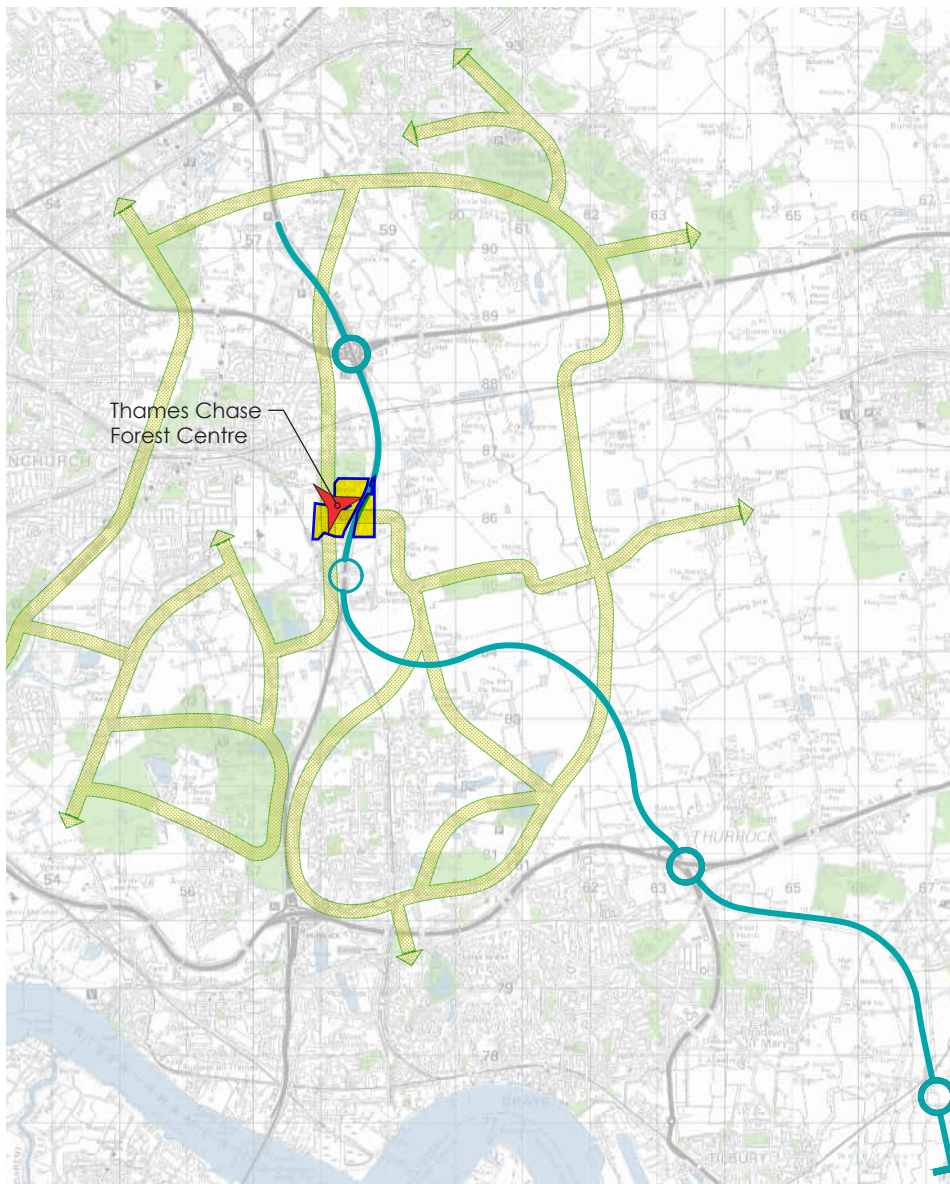
Impact is unknown due to undecided tunnel start position or what tunnel services and infrastructure would be likely to traverse canal route at ground level.

Identified Opportunities




Possibility of short term assistance with diggers and dumpers necessary for clearing canal. Personnel for clearing overgrown areas may be available for general community benefit.

2022 Validation: No status change















KEY:

-  Development route
-  Out and About in Thames Chase and the Green Grid Project location
-  Project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



TCT-01 THAMES CHASE FOREST CENTRE

For project details refer to
Forest Enterprise England project **TCCF-01**: Thames Chase Community Forest

TCT-02 OUT AND ABOUT IN THAMES CHASE AND THE GREEN GRID

Key Facts

Scheme:

Thames Chase Community Forest

Location:

Thurrock and the LB Havering

District:

Thurrock and the LB Havering

Land Ownership:

Varies

Existing Land Use and GI Function:

Public access and connectivity

Approximate Project Area:

NA

Project Status and Time-line:

Planned, ongoing.

Project Description:

NA

Background:

NA

Site Access:

Links to Sustrans NC Route

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

Aligned with the TC Plan

Other project targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

LTC route will cut through this project designed to connect people and landscapes

Identified Opportunities

Landscape-scale mitigation response involving many TCCF partners.

2022 Validation: No status change



TCT-03 THE FOREST CIRCLE

Key Facts

Scheme:

Thames Chase Community Forest

Location:

Thurrock and the LB Havering

District:

Thurrock and the LB Havering

Land Ownership:

NA

Existing Land Use and GI Function:

Public access and connectivity

Approximate Project Area:

NA

Project Status and Time-line:

Planned, ongoing.

Project Description:

NA

Background:

NA

Site Access:

Links to Sustrans NC Route

Description of existing assets: current functions, use and habitats

Forest

Identified GI Policy Themes, Targets and Compliance

Aligned with the TC Plan

Other project targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

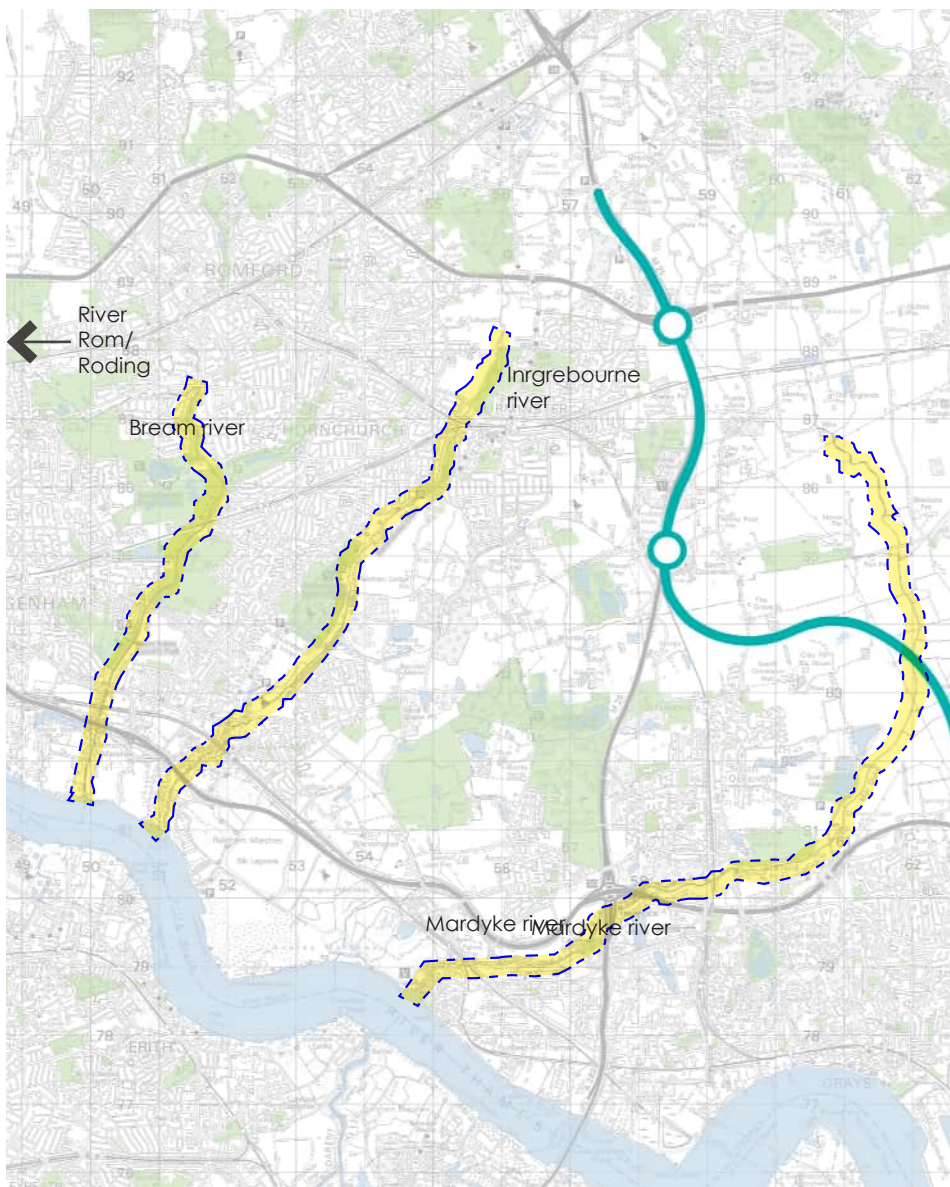
LTC route will cut through this project designed to connect people and landscapes



Identified Opportunities

Landscape-scale mitigation response involving many TCCF partners.










2022 Validation: No status change





KEY:
 Development route
 Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



TCT-04**SOUTH ESSEX CATCHMENT PARTNERSHIP (MARDYKE VALLEY)****Key Facts**

Scheme:
Thames Chase Community Forest

Location:
Mardyke Valley

District:
Thurrock and the LB Havering

Land Ownership:
NA

Existing Land Use and GI Function:
Public access, nature conservation, flood alleviation

Approximate Project Area:
NA

Project Status and Time-line:
Active, ongoing

Project Description:
NA

Background:
NA

Site Access:
Mardyke Valley Way

Description of existing assets: current functions, use and habitats
Valley

Identified GI Policy Themes, Targets and Compliance
Aligned with the TC Plan

Other project targets
NA

Required to achieve targets
NA

LTC Impacts & Opportunities

Identified Potential Impacts
Huge. On the doorstep of South Ockendon and within the Thames area.

Identified Opportunities
Landscape-scale mitigation response involving many TCCF partners.

2022 Validation: No status change

TCT-05**RODING, BREAM & INGREBOURNE CATCHMENT PARTNERSHIP (LB HAVERING & BRENTWOOD)****Key Facts**

Scheme:
Thames Chase Community Forest

Location:
LB Havering

District:
LB Havering

Land Ownership:
NA

Existing Land Use and GI Function:
Public access, nature conservation, flood alleviation

Approximate Project Area:
NA

Project Status and Time-line:
NA

Project Description:
NA

Background:
NA

Site Access:
NA

Description of existing assets: current functions, use and habitats
NA

Identified GI Policy Themes, Targets and Compliance
Aligned with the TC Plan

Other project targets
NA

Required to achieve targets
NA

LTC Impacts & Opportunities



Identified Potential Impacts
NA

Identified Opportunities
Landscape-scale mitigation response involving many TCCF partners.











2022 Validation: No status change

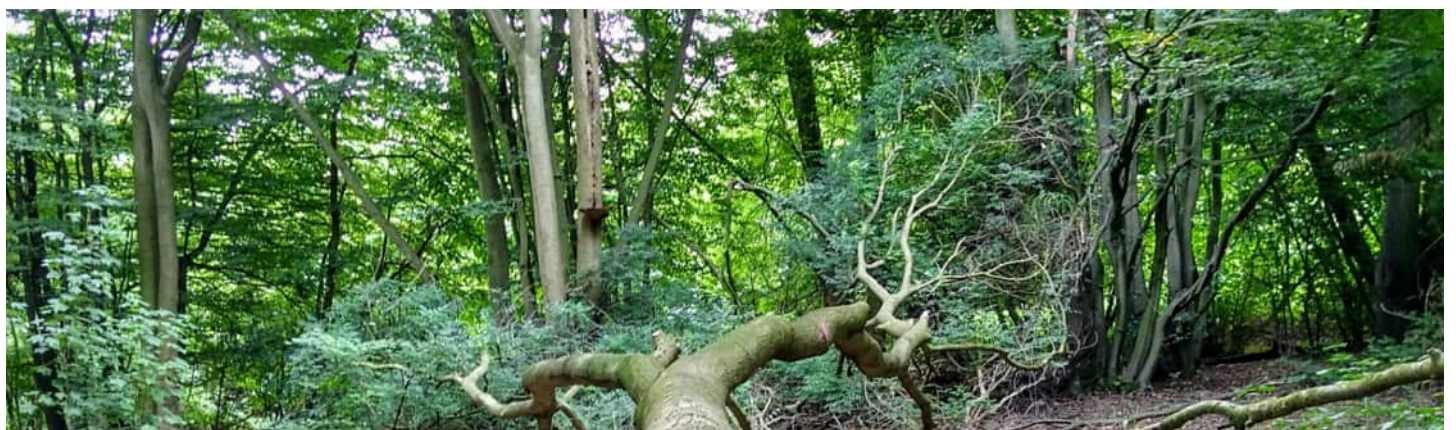


KEY:

-  Development route
-  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



TLotF-01

A1.2-COMMUNITY TREE NURSERY

Key Facts

Scheme:

The Land of the Fanns Landscape Partnership Scheme

Location:

Potentially - Weald Country Park

District:

LB Havering

Land Ownership:

NA

Existing Land Use and GI Function:

Community Tree Nursery

Approximate Project Area:

1250m2

Project Status and Time-line:

In development, present - March 2021

Project Description

To develop a community tree nursery on a not-for-profit commercial basis providing genetically diverse stock for local sale. Using volunteers to help with seed collection, growing on and tending the growing plants as well as marketing, will provide opportunities for acquiring skills, learning about the natural environment and engaging in healthy outdoor activity.

Background:

NA

Site Access:

NA

Description of existing assets: current functions, use and habitats

Community Tree Nursery

Identified GI Policy Themes, Targets and Compliance

Business Plan

Tree Nursery Established

Tree Nursery Supporting Legacy

Other project targets

NA

Required to achieve targets

Match Funding

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Trees produced in the tree nursery could be used within any LTC tree planting areas + this would be a community asset providing opportunities for training and volunteering

2022 Validation: No status change

TLotF-02

A2.2- LOW NUTRIENT HABITATS

Key Facts

Scheme:

The Land of the Fanns Landscape Partnership Scheme

Location:

Tylers Common

District:

LB Havering

Land Ownership:

NA

Existing Land Use and GI Function:

Open Access Common Land

Approximate Project Area:

29.31 ha

Project Status and Time-line:

Active, present - March 2020

Project Description

To restore remnants of low nutrient habitats, which have almost vanished from the landscape.

Background:

NA

Site Access:

Public Rights of Way, Bridleway

Description of existing assets: current functions, use and habitats

Grassland

Pond

Heathland

Trees/Shrubs

Identified GI Policy Themes, Targets and Compliance

10 ha of low nutrient habitat restored/managed

25 days of volunteer time

1 Countryside Stewardship agreement

Other project targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

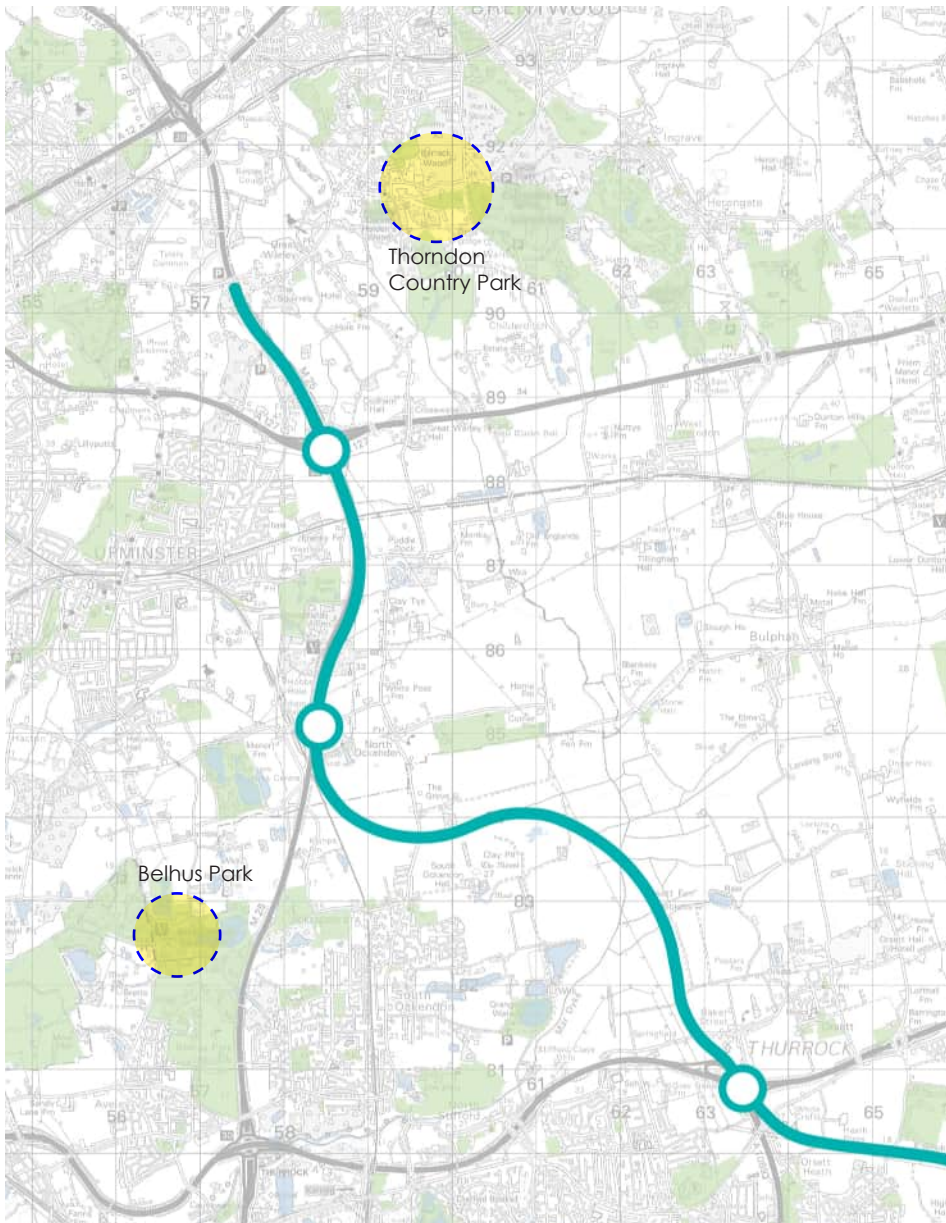
Identified Potential Impacts

LTC could affect reptile population in surrounding green spaces











Identified Opportunities



Reptile and Amphibian surveying in surrounding green spaces, habitat management. Potential for tylers common and other sites based on site surveys to become reception sites for any translocation required as mitigation for the LTC.

2022 Validation: No status change



Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes

- KEY:
-  Development route
 -  Indicative project location



Key Facts

Scheme:

The Land of the Fanns Landscape Partnership Scheme

Location:

Belhus Park
Thorndon Country Park

District:

LB Havering

Land Ownership:

NA

Existing Land Use and GI Function:

NA

Approximate Project Area:

Belhus Park: 55.44 ha
Belhus Woods Country Park: 121 ha
Belhus Chase: 55.44 ha
Oak and Ash Plantation: 21 ha
Little Belhus Country Park:
Thorndon Country Park: 202 ha

Project Status and Time-line:

Active, present - March 2020

Project Description

To improve access and understanding at two strategic historic landscapes within the Land of the Fanns. While the ownership of the woodland, grassland and amenity sites within these landscapes is fragmented, collectively they represent a significant and large scale strategic resource for local communities to access and enjoy. By drawing the governance, management and future planning together under the narrative of Land of the Fanns, access and understanding will become be more joined up.

Background:

NA

Site Access:

Public Rights of Way, Bridleway

Description of existing assets: current functions, use and habitats

Mixed conifer/broadleaf woodland
Lowland Grassland
Hedgerows
Trees/Shrubs

Identified GI Policy Themes, Targets and Compliance

2 Historic Landscape plans
3km of new and upgraded trails and access points
70 days of volunteer time

Other project targets

NA

Required to achieve targets

Match Funding

LTC Impacts & Opportunities

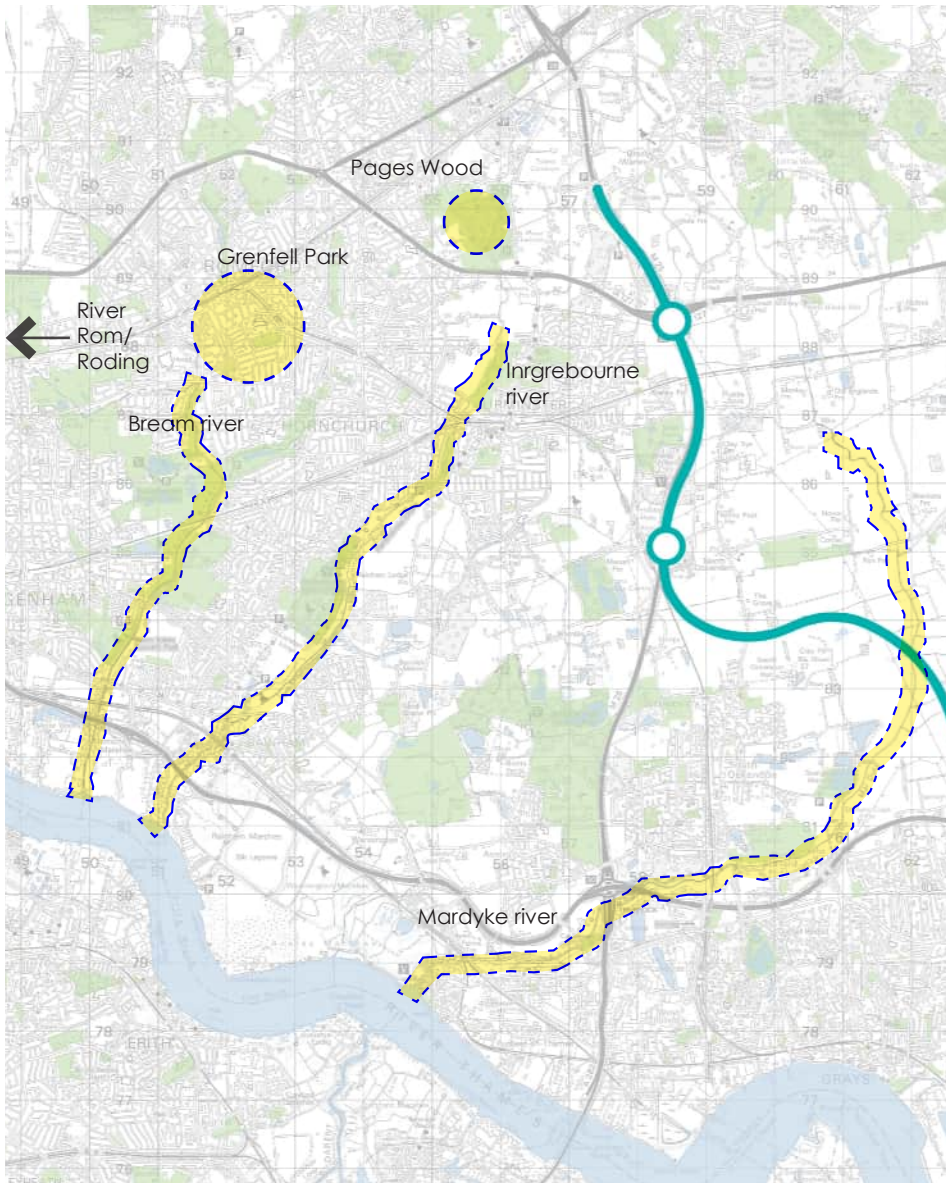
Identified Potential Impacts

NA

Identified Opportunities

Belhus Grade II Registered park & Garden is a valuable asset in terms of green space provision which could compensate for housing and infrastructure projects such as LTC. LoTF can provide the strategic framework to enable better future investment to realise this potential.

2022 Validation: No status change



KEY:

Development route

Indicative project location

Existing GI Asset Typology

- Country Parks
- Valley, Park and Farmland
- Formal Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes



Key Facts

Scheme:

The Land of the Fanns Landscape Partnership Scheme

Location:

River Rom - Grenfell Park
River Ingrebourne - Pages Wood
River Mardyke - TBC

District:

LB Havering

Land Ownership:

NA

Existing Land Use and GI Function:

NA

Approximate Project Area:

NA

Project Status and Time-line:

In development, present - March 2020

Project Description:

The project seeks to provide a significant boost for the Land of the Fanns rivers - the Rom/Beam, Ingrebourne and the Mardyke - by facilitating further river restoration work by the two Catchment Partnerships operating within the landscape. These efforts will be supported by the respective Catchment Partnership Plans: The South Essex Catchment Plan and the Roding, Beam and Ingrebourne Catchment Plan.

Background:

NA

Site Access:

Public Rights of Way

Description of existing assets: current functions, use and habitats

River

Trees/Shrubs

Identified GI Policy Themes, Targets and Compliance

1 strategic intervention per River
6km of river restoration work delivered
115 days of volunteer time
3 Countryside Stewardship agreements

Other project targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

LTC will cross the River Mardyke

Identified Opportunities

Work identified along the Mardyke through South Essex Catchment partnership could provide opportunity for mitigation as part of LTC

2022 Validation: No status change

Other THE LAND OF THE FANNS LANDSCAPE PARTNERSHIP SCHEME projects and initiatives without specific location

A1.1 LANDSCAPE MANAGEMENT PLAN

Project Description: To co-ordinate landscape management efforts across the Land of the Fanns through better partnership working between public and private landowners, uplifting farmland through Countryside Stewardship and supporting landscape-focused social enterprise.

Location: The Land of the Fanns

Approximate size: 70 sq.m

Access: Public Rights of Way, Cycle Routes

Project Status: Active

Time-line: Present - March 2021

Project Targets: 10 Landowners participating in management, 5 Countryside Stewardship agreements, Landscape Management Plan, 20 days of business support, 5 Training and Knowledge sharing events, 3 social enterprises.

Potential Impacts from LTC: LTC will go through LoTF

Potential opportunities from LTC: The Landscape management plan will provide a more strategic, partnership approach to agri-environment scheme delivery. The plan will help focus partnership effort in areas where it is most needed and lay foundations for an operational partnership to continue delivering and maintaining the landscape vision after the scheme. This has potential to influence mitigation for LTC within and beyond redline boundary

A2.1 WOODLAND, GRASSLAND AND HEDGEROWS

Project Description: To restore 60 hectares of woodland, grassland and hedgerows across the Land of the Fanns and link these to Countryside Stewardship

Location: The Land of the Fanns

Approximate size: 70 sq.m

Habitat Type: Mixed conifer/broadleaf woodland, Lowland, Grassland, Hedgerows

Access: Public Rights of Way, Cycle Routes

Project Status: In development

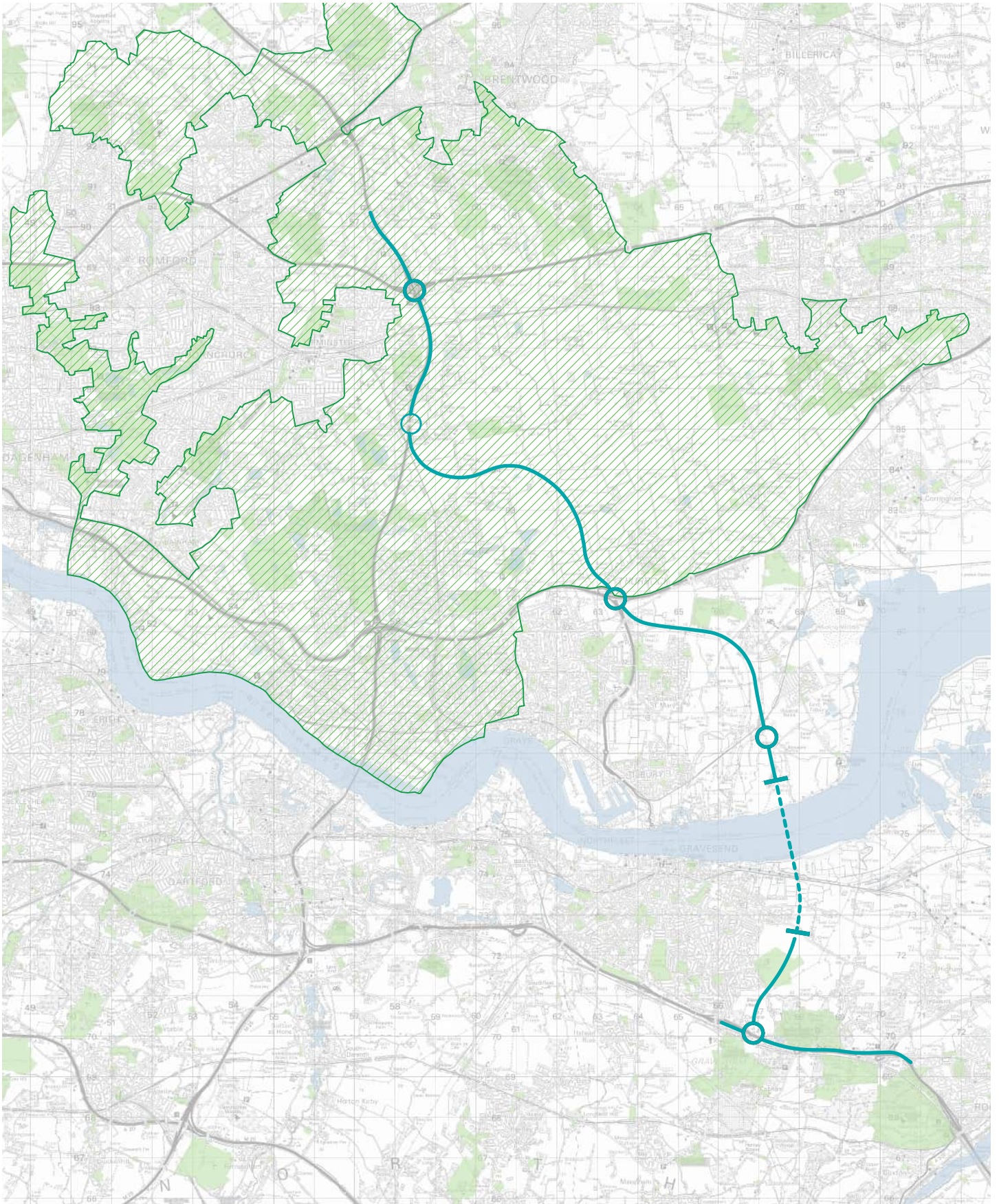
Time-line: Present - March 2021

Project Targets: 20 ha of woodland restored/managed, 40 ha of grassland restored/managed, 10km hedgerow restored/managed, 115 days of volunteer time, 3 Countryside Stewardship agreements

Potential Impacts from LTC: LTC will go through the LoTF Landscape Area. Will cut through hedgerow corridors.

Identified Opportunities: Funding strategically important landscape improvements ensuring better connectivity between wildlife assets





KEY:

 Development route

 The Land of the Fanns

A2.3 REDISCOVERING THE FENS

Project Description: 'Rediscovering the Lost Fens' will focus on the historic Fen landscape at the heart of the Land of the Fens, drawing on the local network of footpaths to develop access and interpretation, whilst working with landowners to deliver restoration work. The project seeks to raise awareness and appreciation of this habitat, helping to demonstrate the case for larger scale fen restoration as part of mitigation associated with large development in the future.

Location: TBC

Approximate size: TBC

Habitat Type: Fens, Arable farmland, Grassland

Access: Public Rights of Way, Cycle Routes

Project Status: In development

Timeline: Present - March 2021

Project Targets: Connections between hubs and Fens identified and made accessible, 1 fen feature restored, 20 days of volunteer time, 1 Countryside Stewardship agreement.

Potential Impacts from LTC: LTC route will cut through historic fenland

Identified Opportunities: Identification of areas of historic fenland with potential for restoration. This could provide opportunity for mitigation work as part of LTC.

D1.1 WALKING THE FANNS (VIA THAMES CHASE WALKING GROUP)

Project Description: The ambition is to connect more people with the history of the built and natural environment throughout the Land of the Fens area and beyond. The project builds on a Thames Chase programme of mapped walks that encourages all ages and abilities to explore the natural environment of East London and South West Essex. This volunteer-led effort has included conservation work to improve access to footpaths.

Location: The Land of the Fens

Approximate size: 70 sq.m

Access: Public Rights of Way, Cycle Routes

Project Status: Active

Time-line: Present - March 2021

Project Targets: 10 walks mapped, 10 walking routes accessible, 10 guided walks per year

Potential Impacts from LTC: LTC route will cut through walking route designed to connect people and landscapes

Identified Opportunities: LTC could provide opportunities to link up the strategic network, filling in gaps to create better opportunities for walking, cycling and horse riding. Create better, off road opportunities for recreation and commuting between strategic locations.

D2.2 ARTS FESTIVAL

Project Description: The project aims to deliver an artist-led celebration of the landscape, drawing on community engagement to create a legacy in the form of an art trail or festival.

Location: The Land of the Fens

Approximate size: 70 sq.m

Access: Public Rights of Way, Cycle Routes

Project Status: In development

Time-line: August 2019 - August 2020

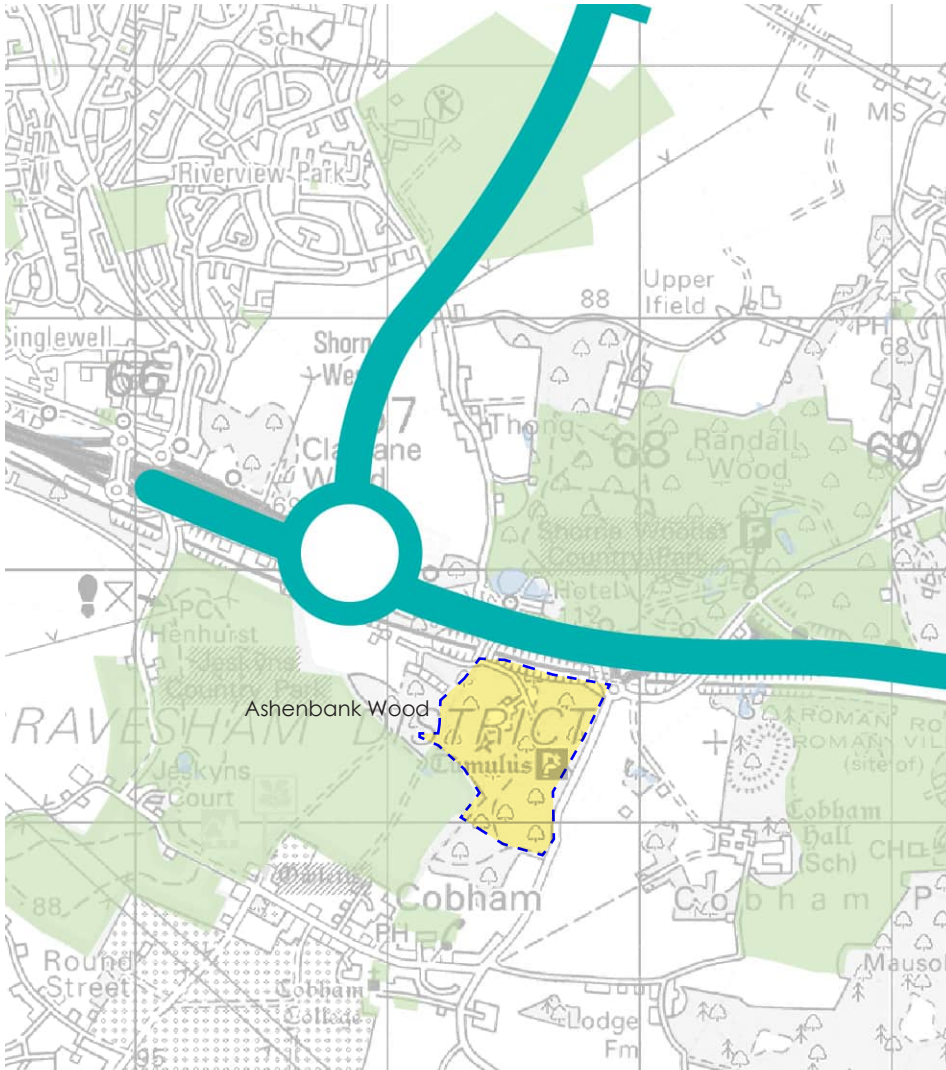
Project Targets: Arts Trail/festival

Required to achieve targets: Match funding











Potential Impacts from LTC: LTC will go through the LotF Landscape Area



Identified Opportunities: Celebrating what is important and special about the landscape through the arts can help foster a better connection between local communities and their local area. This could help mitigate some of the negative impacts associated with development.

2022 Validation: No status change



Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes

KEY:
 Development route
 Indicative project location



WT-01 ASHENBANK WOOD

Key Facts

Scheme:
NA

Location:
Gravesend

District:
Gravesham

Land Ownership:
NA

Existing Land Use and GI Function:
NA

Approximate Project Area:
29.95ha

Project Status and Time-line:
NA

Project Description:
NA

Background:

ANSW/SSSI/Wood Pasture habitat in conservation management. Important collection of veteran trees, high dead wood habitat interest which supports an obligate saproxylic beetle assemblage of national importance. Also high public visitor use with a car park providing the main entrance off Halfpence Lane. Ashenbank Wood was designated as part of the Shorne and Ashenbank Site of Special Scientific Interest (SSSI) in 1968 due to its deadwood habitat, veteran trees and open ground habitat. The whole wood is subject to a Tree Preservation Order (TPO) - Order no.1, 1960.

Site Access:

No official survey data, but estimate 15,000 to 20,000 visits per year. Pedestrian access but also a permissive horse route part of the Darnley Trail passes through Ashenbank Wood.

Public Right of Way NS178 passes through Ashenbank Wood.

Darnley Trail (This is a circular route for pedestrians, cyclists and equestrians that passes through Shorne Woods Country Park, Cobham Park, Ranscombe Farm Reserve, Ashenbank Wood and Jeskyns Community Woodland).

Description of existing assets: current functions, use and habitats

ANSW / SSSI

Identified GI Policy Themes, Targets and Compliance

NA

Other project targets

NA

Required to achieve targets

NA

LTC Impacts & Opportunities

Identified Potential Impacts

Increased noise pollution and vehicle emission pollution.

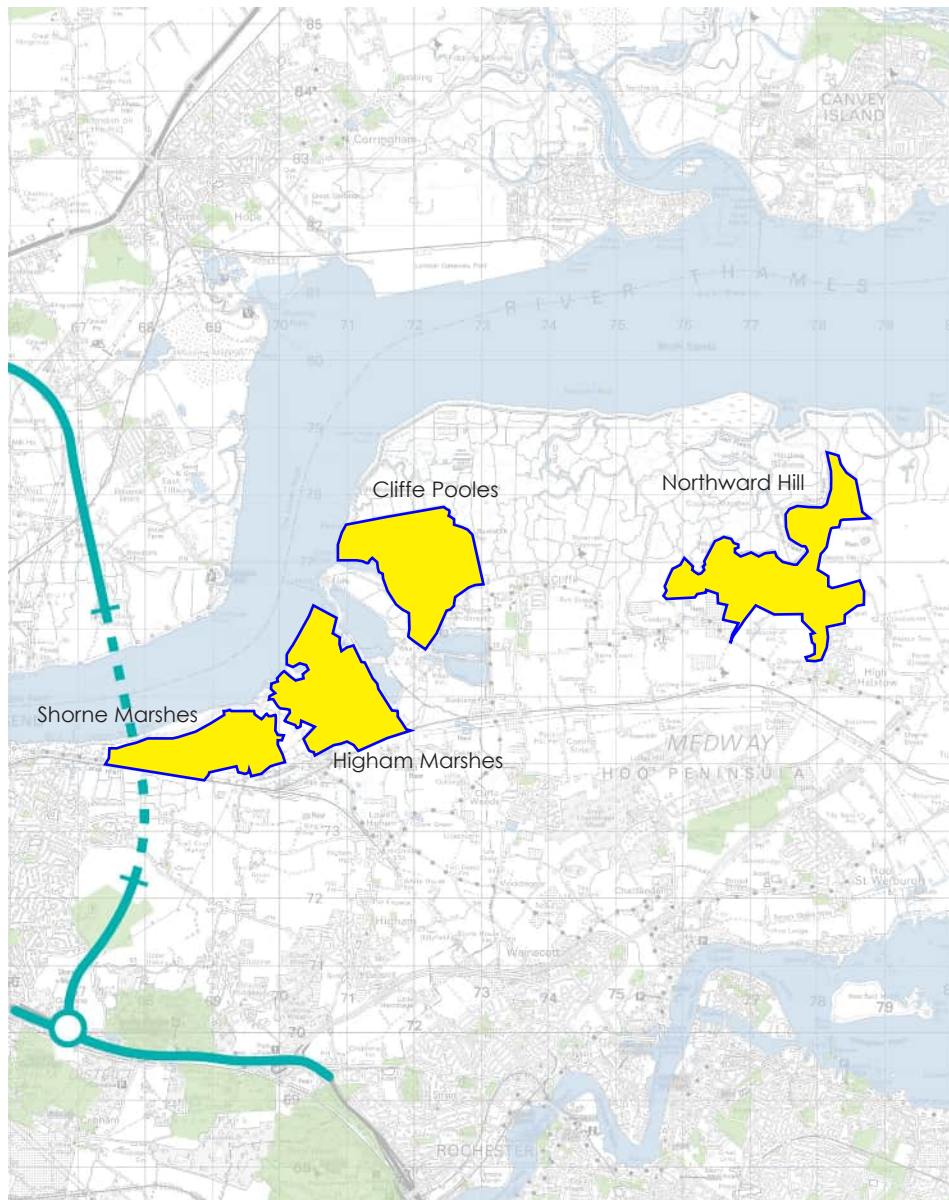
Identified Opportunities

NA

2022 Validation: No status change













Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-01 NORTH KENT MARSHES BREEDING WADER PROJECT

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Shorne Marshes, Higham Marshes, Cliffe Pools, Northward Hill and other sites on the Isle of Sheppey and Seasalter (Whitstable)

District:

Graversham

Land Ownership:

NA

Existing Land Use and GI Function:

nature reserves/low intensity farming via traditional grazing

Approximate Project Area:

Shorne 213ha, Higham 175ha, Cliffe 238ha and Northward Hill 301ha

Project Status and Time-line:

Active, ongoing

Project Description

NA

Background:

NA

Site Access:

Access varies but footpaths and nature trails exist through all sites. Total estimated visits, measured by car counters in reserve car parks, approx. 35000 pa

Good access to the coastal trial Thames path which borders Shorn, Higham and Cliffe Pools.

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. Most of the sites are SSSI and have SPA and Ramsar designations and fall within the Greater Thames Marshes Nature Improvement Area. These sites also have elements of reedbed and open water, both BAP priority habitats in addition to their grassland.

Identified GI Policy Themes, Targets and Compliance

To improve the habitat for breeding waders (lapwing and redshank) through careful hydrological management. To ensure that there is breeding success of the nesting birds through controlling predation. To ensure there is optimum habitat for wintering wildfowl and waders, providing refuge sites.

Other Project Targets

Varies between sites, key non BAP beneficiary are redshanks.

Required to achieve targets

Contractors for landscaping areas with heavy plant, fencing infrastructure, anti predator fencing, ditch management (wet fencing and for rare ditch flora)

LTC Impacts & Opportunities

Identified Potential Impacts

Significant at Shorne Marshes, where the hydrology of the site may be impacted by the development.

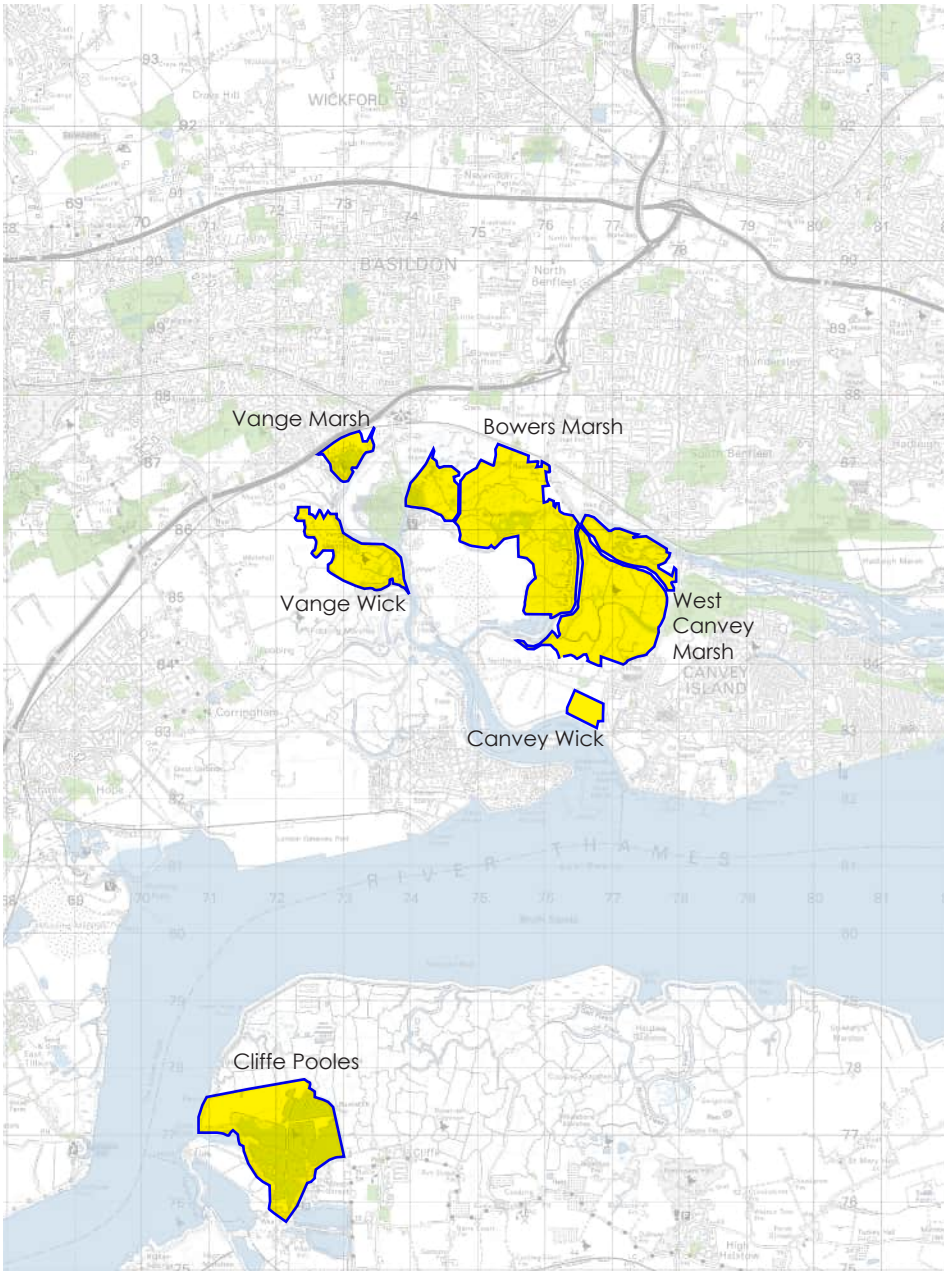
Identified Opportunities

To repair any negative impacts, either at Shorne or other locations with similar habitat as a compensation for loss.

2022 Validation: No status change













Indicative Location Plan (not to scale)



KEY:
 Development route
 Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-02a CLIFFE POOLS ENHANCEMENT

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Near Cliffe, Kent

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature Reserve

Approximate Project Area:

238 ha total site, approximately 37ha is in this project.

Project Status and Time-line:

Planned, depends on aggregate availability

Project Description

<https://www.rspb.org.uk/our-work/conservation/projects/cliffe-pools-habitat-enhancement/>

Background:

NA

Site Access:

14716 visits p/a. Good access to the coastal trial Thames path and a good network of footpaths (circular) are integrated into the site.

Description of existing assets: current functions, use and habitats

saline lagoon/lake

Identified GI Policy Themes, Targets and Compliance

To enhance internationally important habitats for birds and other wildlife.

To improve opportunities for people to experience wildlife.

To promote the "beneficial reuse" of construction arisings and dredgings.

To show that development can help enhance biodiversity.

To contribute to the RSPB Greater Thames Futurescape - managing land for life on a landscape scale.

More at <https://www.rspb.org.uk/our-work/conservation/projects/cliffe-pools-habitat-enhancement/#dOMQeOCFcoCH1u6K.99>

Other Project Targets

NA

Required to achieve targets

Aggregates 5 million tonnes total FOR CLIFFE AND BRETTs

<https://www.rspb.org.uk/globalassets/downloads/about-us/cliffe-pools-leaflet.pdf> for details

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide LTC arisings and bring to the site

2022 Validation: No status change

RSPB-02b BRETTs ALPHA LAKE ENHANCEMENT PROJECT

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Near Cliffe, Kent

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Lake post aggregate extraction

Approximate Project Area:

51 ha

Project Status and Time-line:

Planned, depends on aggregate availability

Project Description

<https://www.rspb.org.uk/our-work/conservation/projects/cliffe-pools-habitat-enhancement/>

Background:

NA

Site Access:

None at present;

Good access to the coastal trial Thames path

Description of existing assets: current functions, use and habitats

lake

Identified GI Policy Themes, Targets and Compliance

- To enhance internationally important habitats for birds and other wildlife.

- To improve opportunities for people to experience wildlife.

- To promote the "beneficial reuse" of construction arisings and dredgings.

- To show that development can help enhance biodiversity.

- To contribute to the RSPB Greater Thames Futurescape - managing land for life on a landscape scale.

Further information <https://www.rspb.org.uk/our-work/conservation/projects/cliffe-pools-habitat-enhancement/#dOMQeOCFcoCH1u6K.99>

Other Project Targets

NA

Required to achieve targets

Aggregates 5 million tonnes total FOR CLIFFE AND BRETTs

<https://www.rspb.org.uk/globalassets/downloads/about-us/cliffe-pools-leaflet.pdf> for details

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide LTC arisings and bring to the site

2022 Validation: No status change

RSPB-02c ISLAND CREATION AT VANGE MARSH FOR NESTING AND WINTERING WADERS AND WILDFOWL

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Vange, Essex

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve and traditional grazing

Approximate Project Area:

Vange Marshes is 24ha, but island creation perhaps 2ha

Project Status and Time-line:

Planned, depends on funding, approx. £20k required

Project Description

NA

Background:

NA

Site Access:

6655 pa, but 400000 adjacent to Watt Tyler Country Park;

Public footpath through site

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. Falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

to provide nesting islands for waders and wildfowl within grazing marsh habitat and winter refuge locations. Islands are relatively safe havens from predation.

Other Project Targets

Provides a wildlife spectacle for walkers

Required to achieve targets

Contractors moving earth

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide funding and acknowledgement at the Watt Tyler country park. The RSPB's visitor experience for Vange is directed from there.

2022 Validation: No status change

RSPB-02d ELECTRICAL SUPPLY AND ELECTRIC PUMPS TO BOWERS MARSH

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Basildon, Essex

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve and traditional grazing

Approximate Project Area:

284ha

Project Status and Time-line:

Planned, depends on funding, approx. £200k-£400k required

Project Description

Electrical supply and electric pumps to Bowers Marsh. This will enable proper hydrological management of the site, particularly in summer, enabling key units to remain wet, through pumping from ditch network and reservoir. This will create better feeding habitat for flightless wader chicks. The source of this power could be renewable, using localised small wind and solar units in discreet locations.

Background:

NA

Site Access:

8447 pa, but 400000 adjacent to Watt Tyler Country Park;

Public footpath through site

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. Falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To improve optimal hydrological management of the site, increase wader nesting numbers, fledging success and numbers of wintering wildfowl.

Other Project Targets

Provides a wildlife spectacle for walkers

Required to achieve targets

funding and equipment

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide funding and acknowledgement at the Watt Tyler country park. The RSPB's visitor experience for Vange is directed from there.

2022 Validation: No status change

RSPB-02e FENCING AT BOWERS MARSH, VANGE MARSH, WEST CANVEY MARSH AND CANVEY WICK

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Basildon, Essex

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve and traditional grazing

Approximate Project Area:

571 ha

Project Status and Time-line:

Planned, depends on funding, approx. £30k required

Project Description

NA

Background:

NA

Site Access:

41675pa plus 400000 to Wat Tyler CP adjacent to sites;

Public footpaths through sites

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. Falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

Cattle are the permanent wardens of these sites. The way they graze in random fashion, hooves poach and the resulting dung creates microhabitats for plants and invertebrates which are the base of the food chain. Cattle need to be contained within units of the site to maintain optimal grazing. This is delivered via an infrastructure of ditches (wet fencing) and post/wire.

Other Project Targets

NA

Required to achieve targets

Funding and equipment

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide funding and acknowledgement at the Watt Tyler country park. The RSPB's visitor experience for Vange is directed from there.

2022 Validation: No status change

RSPB-02f ANTI-PREDATOR FENCING AT BOWERS MARSH AND WEST CANVEY MARSH

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Basildon, Essex

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve and traditional grazing

Approximate Project Area:

529ha

Project Status and Time-line:

Planned, depends on funding, approx. £50k required

Project Description

NA

Background:

NA

Site Access:

35000 visits p/a

Public footpaths through sites

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. Falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To increase the breeding productivity of breeding waders by reducing predation by large mammals (fox/badgers) who take eggs of ground nesting birds. Typically a non Anti Predator fenced area will have a low yield of chicks per pair per annum, 0.1-0.2 chicks. To be sustainable, a pair must reproduce 0.6-0.8 chicks per year to replace adult mortality. This can be achieved and results of 1.0-1.2 are not unusual in specialist mesh and electrical fenced combinations.

Other Project Targets

NA

Required to achieve targets

Funding and equipment

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide funding and acknowledgement at the Watt Tyler country park. The RSPB's visitor experience for Vange is directed from there.

2022 Validation: No status change

RSPB-02g VISITOR INFRASTRUCTURE AT BOWERS MARSH, WEST CANVEY AND CANVEY WICK

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Basildon/Canvey, Essex

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve and traditional grazing

Approximate Project Area:

547 ha

Project Status and Time-line:

Planned, depends on funding, approx. £50k required

Project Description

Visitor infrastructure at Bowers Marsh, West Canvey and Canvey Wick, inc. reception, interpretation, building, hides and family trails.

Background:

NA

Site Access:

35000 visits p/a

Public footpaths through sites

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. Falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To increase visitor footfall and levels of experience through these sites

Other Project Targets

NA

Required to achieve targets

Funding materials, consultation, construction and equipment

LTC Impacts & Opportunities**Identified Potential Impacts**

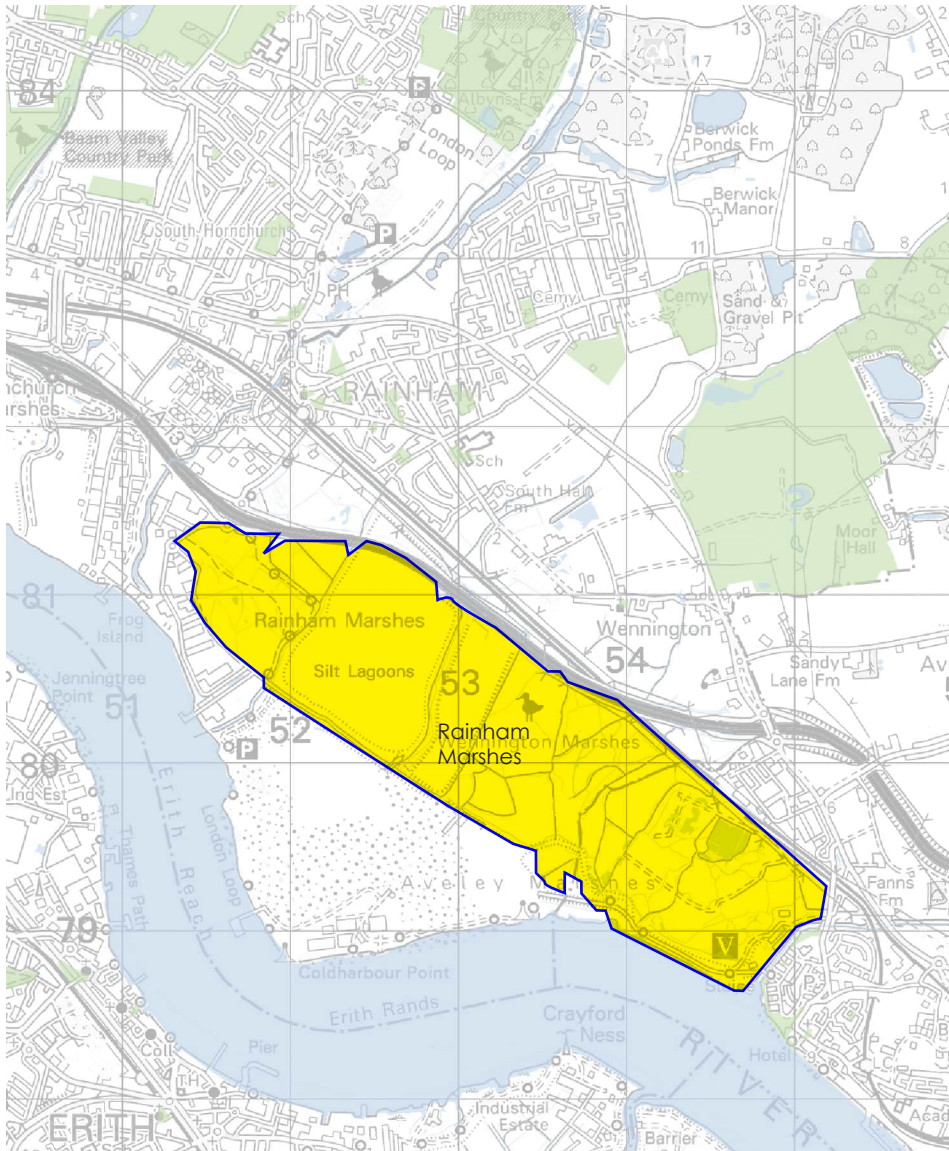
NA

Identified Opportunities

Provide funding and acknowledgement on site











2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-03a RAINHAM MARSHES BREEDING WADER PROJECT

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Between Purfleet and Rainham

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserves/low intensity farming via traditional grazing

Approximate Project Area:

411ha

Project Status and Time-line:

Active, ongoing

Project Description

NA

Background:

NA

Site Access:

162224 visits pa

Good access to the coastal trial Thames and National Cycle Network Route 13

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To improve the habitat for breeding waders (lapwing and redshank) through careful hydrological management. To ensure that there is breeding success of the nesting birds through controlling predation. To ensure there is optimum habitat for wintering wildfowl and waders, providing refuge sites.

Other Project Targets

Varies between sites, key non BAP beneficiary are redshanks.

Required to Achieve Targets

Contractors for landscaping areas with heavy plant, fencing infrastructure, anti predator fencing, ditch management (wet fencing and for rare ditch flora)

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide funding and acknowledgement on site

2022 Validation: No status change

RSPB-03b VISITOR INFRASTRUCTURE AT RAINHAM MARSHES

Key Facts

Scheme:

NA

Partnering Organisation:

NA

Location:

Between Purfleet and Rainham

District:

Gravesham

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserves/low intensity farming via traditional grazing

Approximate Project Area:

411ha

Project Status and Time-line:

Not started, depends on funding, approx. £200k required

Project Description

NA

Background:

NA

Site Access:

Good access to the coastal trial Thames and National Cycle Network Route 14

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area. A NEW COLONISER SPECIES BLACK-WINGED STILTS HAVE NESTED THERE FOR SEVERAL YEARS ... ONE OF THE FIRST PLACES IN THE UK

Identified GI Policy Themes, Targets and Compliance

To improve visitor experience at this busy site

Other Project Targets

NA

Required to Achieve Targets

Funding materials, consultation, construction and equipment

LTC Impacts & Opportunities

Identified Potential Impacts

NA



Identified Opportunities

Provide funding and acknowledgement on site











2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
-  Development route
 -  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-04a SHORNMEADE FORT INTERPRETATION

Key Facts

| | |
|---|-----------------------|
| Scheme: | NA |
| Partnering Organisation: | NA |
| Location: | Shorne Marshes |
| District: | Gravesham |
| Land Ownership: | NA |
| Existing Land Use and GI Function: | Abandoned fort |
| Approximate Project Area: | NA |
| Project Status and Time-line: | Possible, not started |
| Project Description | NA |
| Background: | NA |

Site Access:

5000, on coastal path

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area. A new coloniser species Black-Winged Stilts have nested there for several years and is one of the first places in the UK.

Identified GI Policy Themes, Targets and Compliance

Increase intellectual access to this important structure and in doing so, reduce vandalism

Other Project Targets

NA

Required to Achieve Targets

Experts in fort interpretation and innovative methods of delivery in ways which are not vandalised

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Provide funding and acknowledgement on site

2022 Validation: No status change

RSPB-04b HYDROLOGY AT CLIFFE POOLS (BLACK BARN TO COASTGUARDS)

Key Facts

| | |
|---|--|
| Scheme: | NA |
| Partnering Organisation: | NA |
| Location: | Cliffe |
| District: | Gravesham |
| Land Ownership: | NA |
| Existing Land Use and GI Function: | Nature reserves/low intensity farming via traditional grazing |
| Approximate Project Area: | 34ha |
| Project Status and Time-line: | Not started, depends on funding availability £70k |
| Project Description | Hydrology at Cliffe Pools (Black Barn to Coastguards). Movement and retention of water on a dry part of grazing marsh. |
| Background: | NA |

Site Access:

14716 visits p/a

Viewable from Thames coastal path and from the reserve's extensive nature trail network

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To improve the habitat for breeding waders (lapwing and redshank) through careful hydrological management. To ensure there is optimum habitat for wintering wildfowl and waders, providing refuge sites.

Other Project Targets

NA

Required to Achieve Targets

Funding and specialist contractors with heavy plant.

LTC Impacts & Opportunities

Identified Potential Impacts

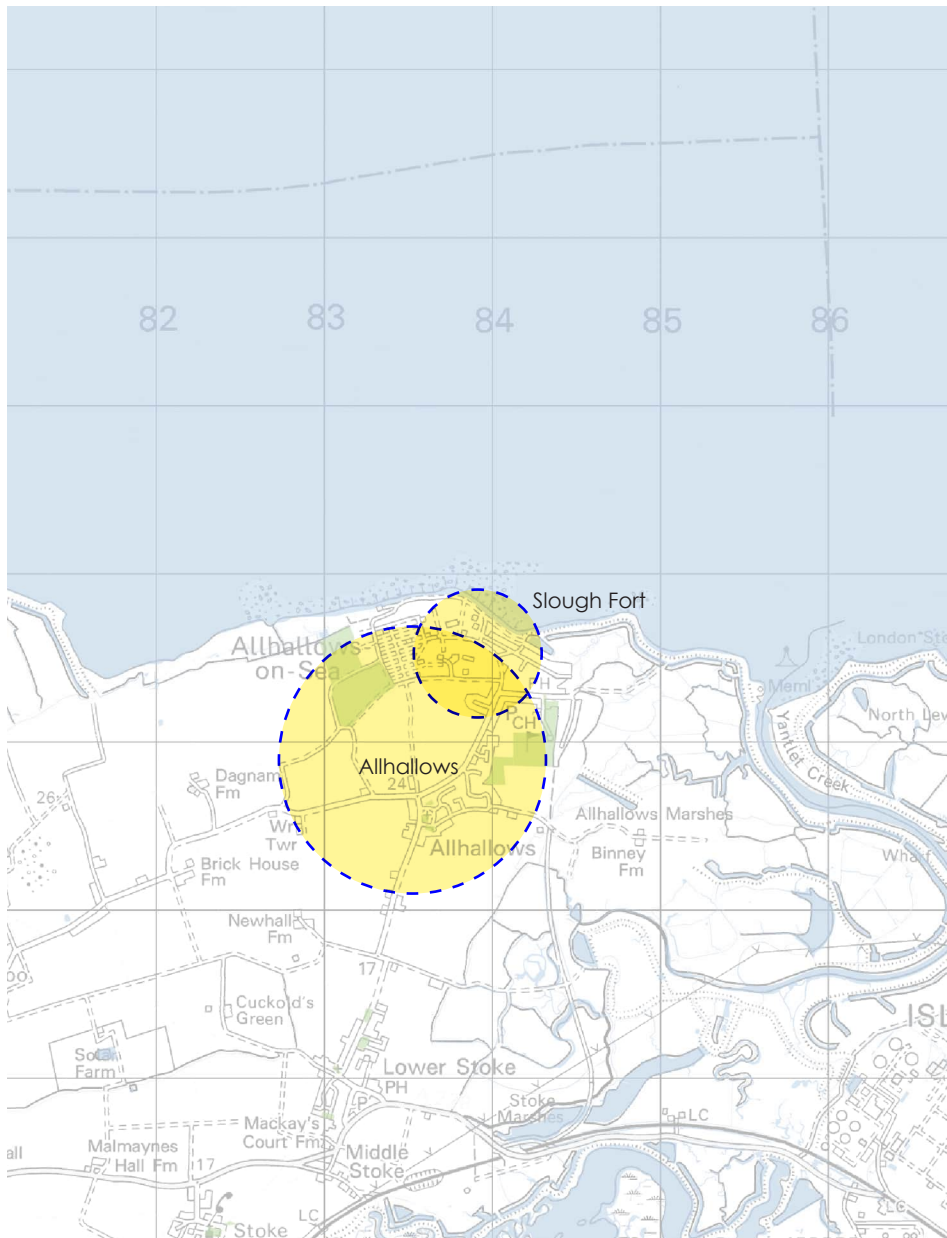
NA

Identified Opportunities



Provide funding and acknowledgement on site

2022 Validation: No status change











Indicative Location Plan (not to scale)



KEY:

-  Development route
-  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-WH-01a CROSS PARK COUNTRY PARK

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

NA

Location:

Allhallows, Hoo Peninsula, Kent

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Low functioning public green space

Approximate Project Area:

4ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

TBA, public footpath

Description of existing assets: current functions, use and habitats

Park

Identified GI Policy Themes, Targets and Compliance

Improve setting and facilities of a public green space and increase volunteering capacity. Currently a single octogenarian volunteer manages the site

Other Project Targets

Increase park use and its biodiversity

Required to Achieve Targets

£72,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-01b BESSIE'S LANE- AN ANCIENT ROYAL THOROUGHFARE

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Medway Council

Location:

Allhallows, Hoo Peninsula, Kent

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Agricultural land

Approximate Project Area:

NA

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

TBA

Description of existing assets: current functions, use and habitats

Agricultural land

Identified GI Policy Themes, Targets and Compliance

People access project for better pathways

Other Project Targets

NA

Required to Achieve Targets

£43,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-01c SLOUGH FORT VISITOR CAFE

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Slough Fort Preservation Trust

Location:

Allhallows, Hoo Peninsula, Kent

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Abandoned fort

Approximate Project Area:

1ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

Slough Fort Visitor Cafe. Installation of Kitchen for a Cafe at Slough Fort

Background:

NA

Site Access:

20000 visits p/a

Close to Thames Coastal Path

Description of existing assets: current functions, use and habitats

Abandoned fort

Identified GI Policy Themes, Targets and Compliance

To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries

Other Project Targets

NA

Required to Achieve Targets

£77,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-01d REFORM AND REMODEL THE GLACIS OF SLOUGH FORT

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Slough Fort Preservation Trust

Location:

Allhallows, Hoo Peninsula, Kent

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Abandoned fort

Approximate Project Area:

1ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

20000 visits p/a

Close to Thames Coastal Path

Description of existing assets: current functions, use and habitats

Abandoned fort

Identified GI Policy Themes, Targets and Compliance

To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries

Other Project Targets

NA

Required to Achieve Targets

£58,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-01e CREATE AN INTERPRETIVE DISPLAY

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Slough Fort Preservation Trust

Location:

Allhallows, Hoo Peninsula, Kent

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Abandoned fort

Approximate Project Area:

1 ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

Create an interpretive display for the Hoo defences in the Slough Fort Wing Battery Magazine.

Background:

NA

Site Access:

20000 visits p/a

Close to Thames Coastal Path

Description of existing assets: current functions, use and habitats

Abandoned fort

Identified GI Policy Themes, Targets and Compliance

To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries

Other Project Targets

NA

Required to Achieve Targets

£181,000

LTC Impacts & Opportunities

Identified Potential Impacts

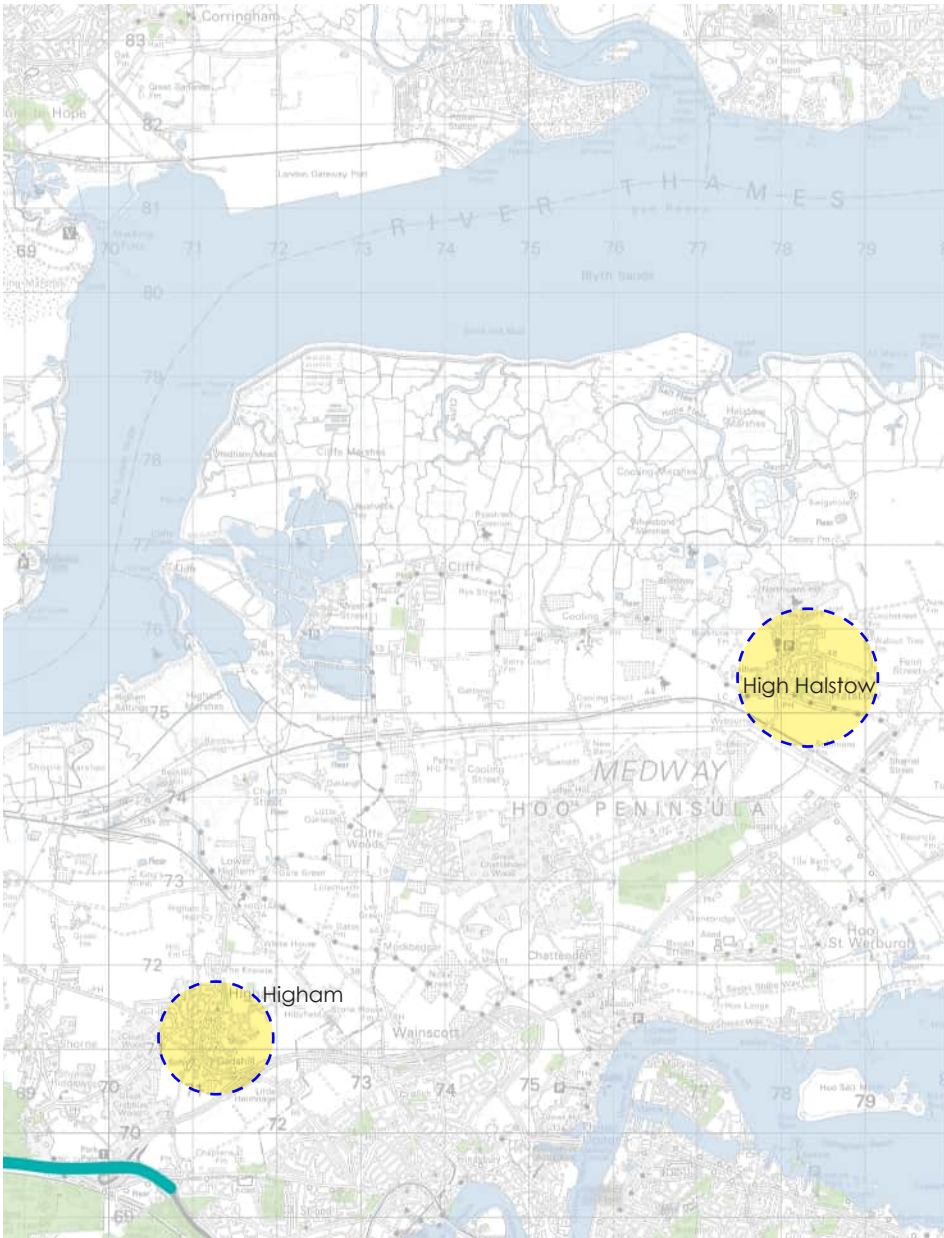
NA

Identified Opportunities



Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change











Indicative Location Plan (not to scale)



KEY:

-  Development route
-  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-WH-02 RESTORATION OF THE LARKIN MONUMENT

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Gravesham Borough Council

Location:

Higham

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Low functioning public green space

Approximate Project Area:

3ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham.

Background:

NA

Site Access:

TBA, public footpath

Description of existing assets: current functions, use and habitats

Park

Identified GI Policy Themes, Targets and Compliance

Open up green space and restore a monument to a politician who championed widening the electorate

Other Project Targets

Increase park use and its biodiversity

Required to Achieve Targets

£130,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-03 TO DEVELOP WILD-FLOWER MEADOW

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

High Halstow Parish Council

Location:

High Halstow

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Low functioning public green space

Approximate Project Area:

1 ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

TBA, public footpath

Description of existing assets: current functions, use and habitats

Park

Identified GI Policy Themes, Targets and Compliance

Improve a public green space

Other Project Targets

NA

Required to Achieve Targets

£26,000

LTC Impacts & Opportunities

Identified Potential Impacts

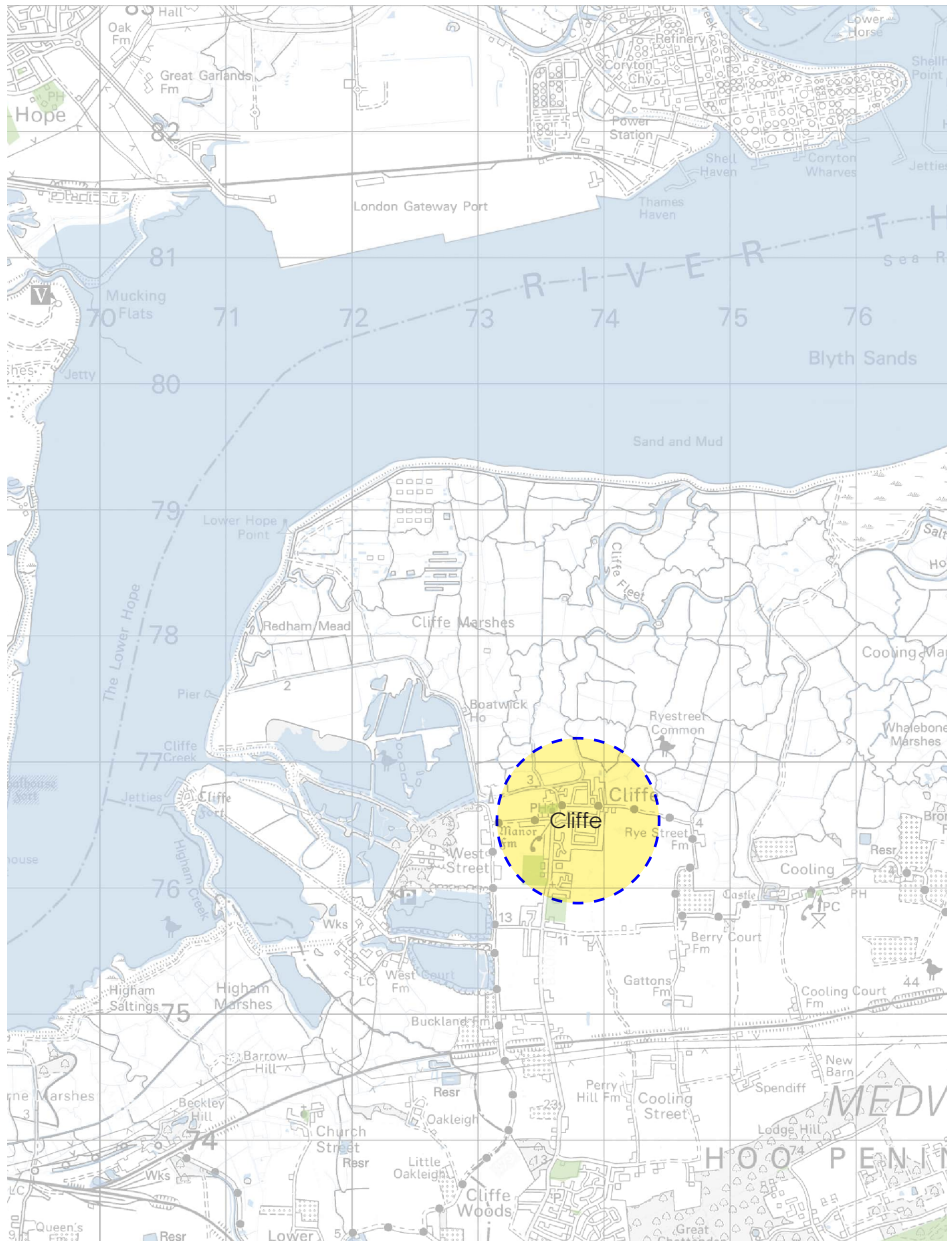
NA

Identified Opportunities



Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change











Indicative Location Plan (not to scale)



KEY:

-  Development route
-  Indicative project location

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-WH-04a CLIFFE VILLAGE AND ITS HINDERLAND

Key Facts

Scheme:
Whose Hoo - HLF Landscape project

Partnering Organisation:
Kent County Council

Location:
Cliffe

Borough:
Medway

Land Ownership:
NA

Existing Land Use and GI Function:
Variable

Approximate Project Area:
N/A

Project Status and Time-line:
Not started, 2020- 2024

Project Description
NA

Background:
NA

Site Access:
TBA

Description of existing assets: current functions, use and habitats
NA

Identified GI Policy Themes, Targets and Compliance

A volunteer based archaeological project involving local people discovering about the past. Great for all ages.

Other Project Targets

Increase park use and its biodiversity

Required to Achieve Targets

£47,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-04b STEPPING STONES: DEAD END PATHS

Key Facts

Scheme:
Whose Hoo - HLF Landscape project

Partnering Organisation:
Medway Council

Location:
Cliffe

Borough:
Medway

Land Ownership:
NA

Existing Land Use and GI Function:
Agricultural land

Approximate Project Area:
N/A

Project Status and Time-line:
Not started, 2020- 2024

Project Description
Steeping Stones: Dead End Paths -
Cliffe cul-de sac paths a destination not a dead end.

Background:
NA

Site Access:
TBA

Description of existing assets: current functions, use and habitats
Agricultural land

Identified GI Policy Themes, Targets and Compliance

People access project for better pathways

Other Project Targets

NA

Required to Achieve Targets

£137,000

LTC Impacts & Opportunities

Identified Potential Impacts

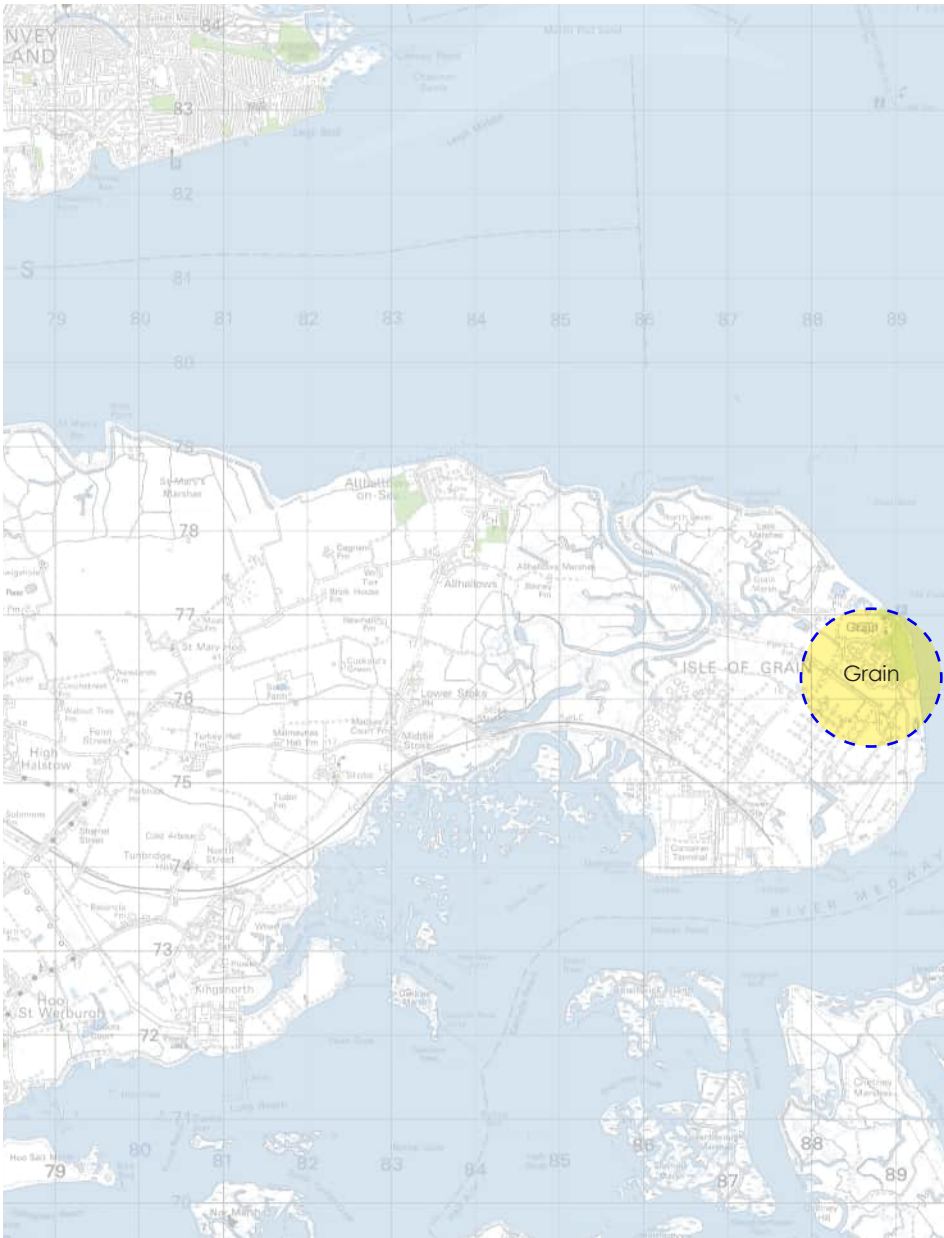
NA

Identified Opportunities











Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change



Indicative Location Plan (not to scale)



Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes

KEY:

-  Development route
-  Indicative project location



RSPB-WH-05

RE-DISCOVERING THE PORT VICTORIA LINE AND THE TOWN THAT NEVER WAS

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Medway Council

Location:

Grain

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Agricultural land

Approximate Project Area:

NA

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

TBA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

People access project for better pathways

Other Project Targets

Increase park use and its biodiversity

Required to Achieve Targets

£50,000

LTC Impacts & Opportunities

Identified Potential Impacts

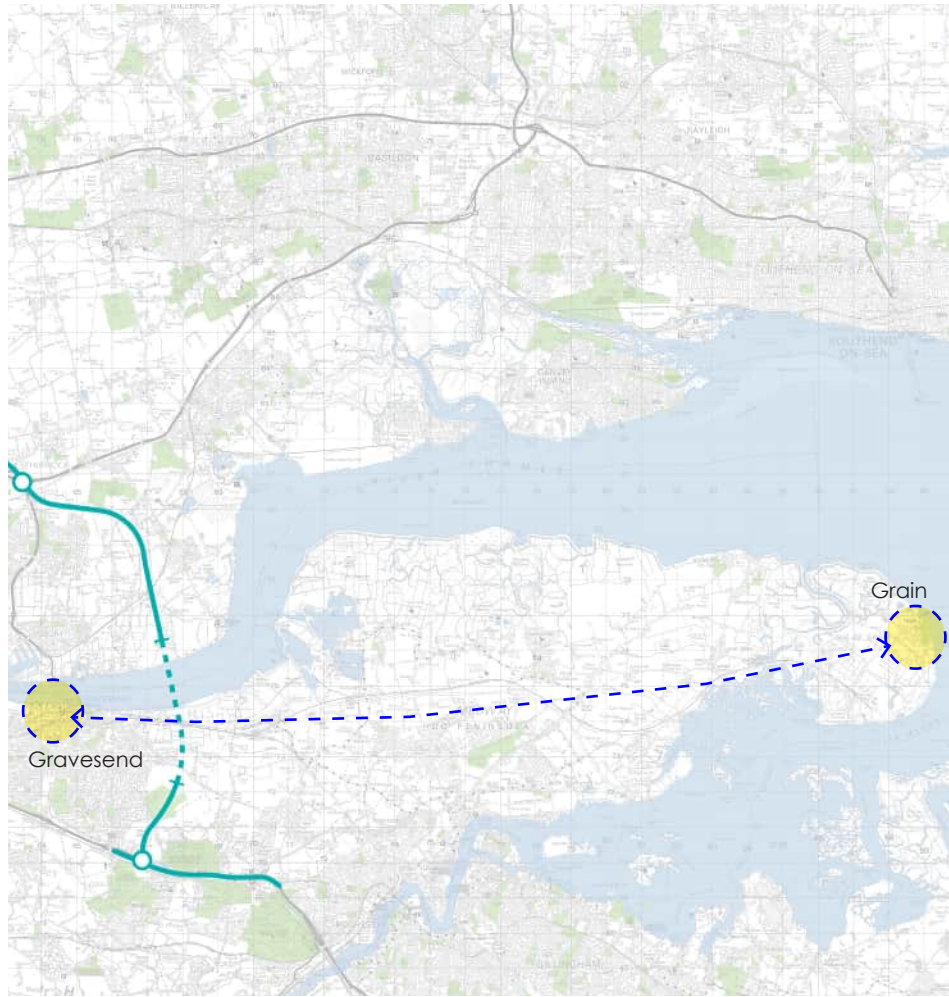
NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change










Indicative Location Plan (not to scale)



KEY:

- Development route
- Indication of 'Link' projects

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-WH-06 WILLIAM HOGARTH WALKING TRAIL

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

Medway Swale Estuary Partnership

Location:

Gravesend to Grain

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Variable

Approximate Project Area:

NA

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

TBA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

People access project for better pathways

Other Project Targets

Increase park use and its biodiversity

Required to Achieve Targets

£18,000

LTC Impacts & Opportunities

Identified Potential Impacts

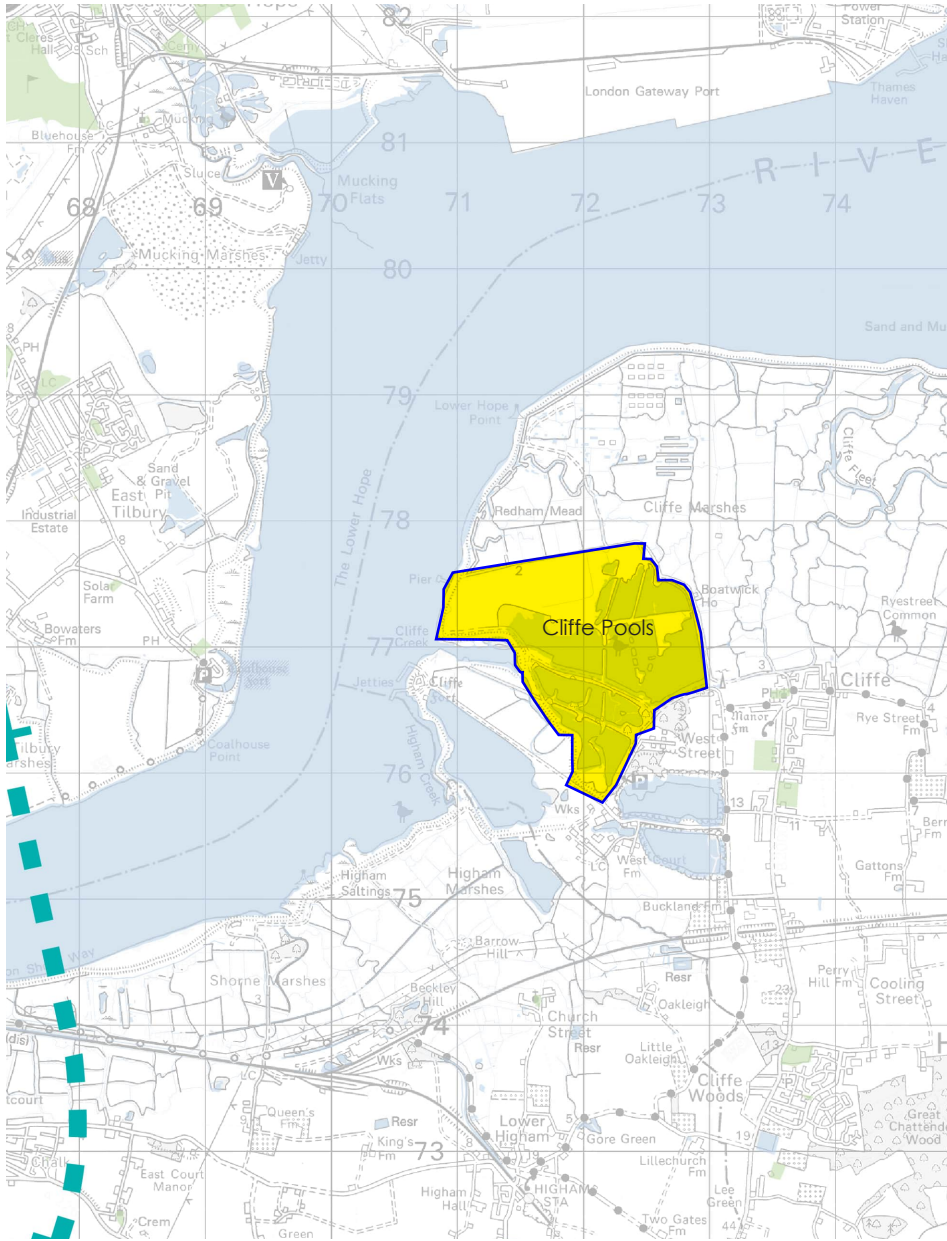
NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

- Country Parks
- Valley, Park and Farmland
- Formal Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes



RSPB-WH-07 LAPWIG LIFELINE AT CLIFFE POOLS

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

NA

Location:

Cliffe Pools

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve

Approximate Project Area:

40 ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:**Site Access:**

14716 visits p/a

Good footpaths and nature trail ...close to Thames coastal path

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh, saline lagoons, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To increase the breeding productivity of breeding waders by reducing predation by large mammals (fox/badgers) who take eggs of ground nesting birds. Typically a non Anti Predator fenced area will have a low yield of chicks per pair per annum, 0.1-0.2 chicks. To be sustainable, a pair must reproduce 0.6-0.8 chicks per year to replace adult mortality. This can be achieved and results of 1.0-1.2 are not unusual in specialist mesh and electrical fenced combinations.

Other Project Targets

NA

Required to Achieve Targets

£136,000

LTC Impacts & Opportunities**Identified Potential Impacts**

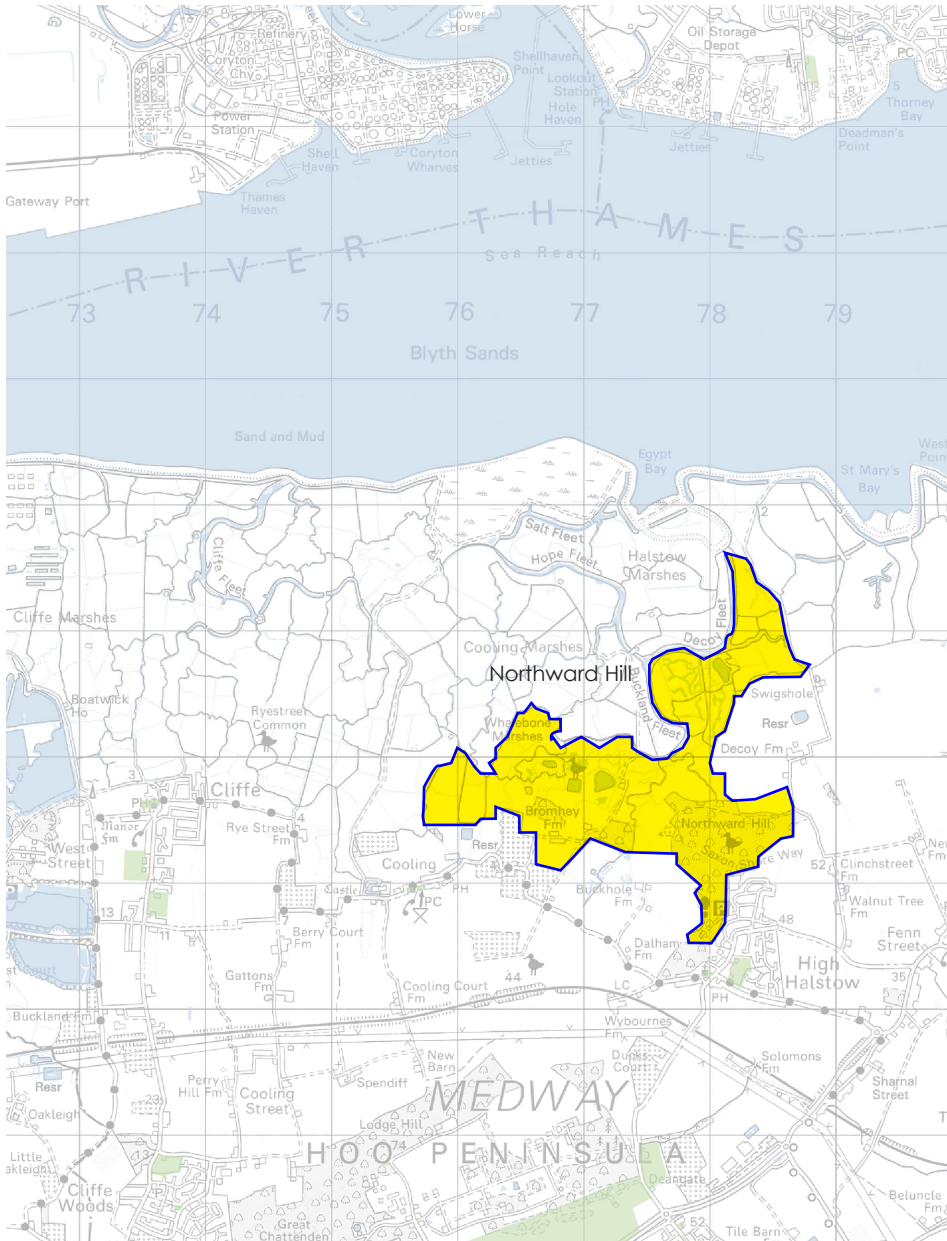
NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.











2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



Key Facts**Scheme:**

Whose Hoo - HLF Landscape project

Partnering Organisation:

NA

Location:

Northward Hill

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve

Approximate Project Area:

200 ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

1500 visits p/a

Good footpaths and nature trail

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

A major sub-soiling project, breaking up a plough pan left through wartime and post war arable activity. This is reducing invertebrate numbers at the site

Other Project Targets

NA

Required to Achieve Targets

£110,000

LTC Impacts & Opportunities**Identified Potential Impacts**

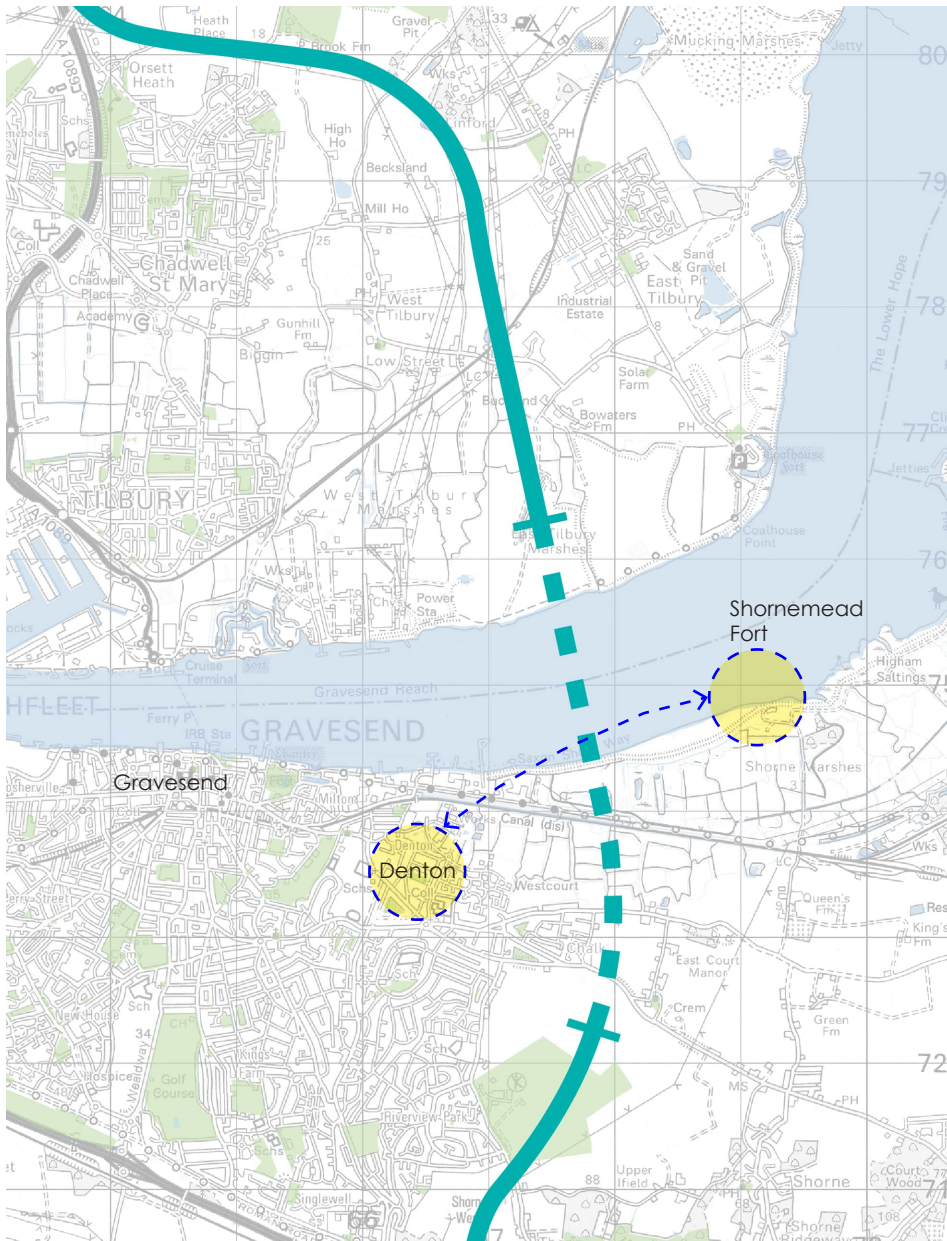
NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

Indicative Location Plan (not to scale)



KEY:

- █ Development route
- ⬅ ➡ Indication of 'Link' projects

Existing GI Asset Typology

- Country Parks
- Valley, Park and Farmland
- Formal Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes



RSPB-WH-09a LINKING DENTON AND SHORNE MEAD FORT

Key Facts

Scheme:
Whose Hoo - HLF Landscape project

Partnering Organisation:
The Gr@nd (Healthy Living Centre)

Location:
Denton to Shorne coastal area

Borough:
Medway

Land Ownership:
NA

Existing Land Use and GI Function:
NA

Approximate Project Area:
NA

Project Status and Time-line:
Not started, 2020- 2024

Project Description
NA

Background:
NA

Site Access:

TBA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

Physical and mental health well-being walks, based from Denton. This community has a number of factors indicating high levels of social deprivation

Other Project Targets

NA

Required to Achieve Targets

£3,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

RSPB-WH-09b WAYS TO WELL-BEING

Key Facts

Scheme:
Whose Hoo - HLF Landscape project

Partnering Organisation:
The Gr@nd (Healthy Living Centre)

Location:
Denton to Shorne costal area

Borough:
Medway

Land Ownership:
NA

Existing Land Use and GI Function:
NA

Approximate Project Area:
NA

Project Status and Time-line:
Not started, 2020- 2024

Project Description
NA

Background:
NA

Site Access:

TBA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

Physical and mental health wellbeing walks, based from Denton. This community has a number of factors indicating high levels of social deprivation

Other Project Targets

NA

Required to Achieve Targets

£4,000

LTC Impacts & Opportunities

Identified Potential Impacts

NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

Key Facts**Scheme:**

Whose Hoo - HLF Landscape project

Partnering Organisation:

The Gr@nd (Healthy Living Centre)

Location:

Denton to Shorne coastal area

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

NA

Approximate Project Area:

NA

Project Status and Time-line:

Not started, 2020- 2024

Project Description

NA

Background:

NA

Site Access:

TBA

Description of existing assets: current functions, use and habitats

NA

Identified GI Policy Themes, Targets and Compliance

Physical and mental health wellbeing walks, based from Denton. This community has a number of factors indicating high levels of social deprivation

Other Project Targets

NA

Required to Achieve Targets

£9,000

LTC Impacts & Opportunities**Identified Potential Impacts**

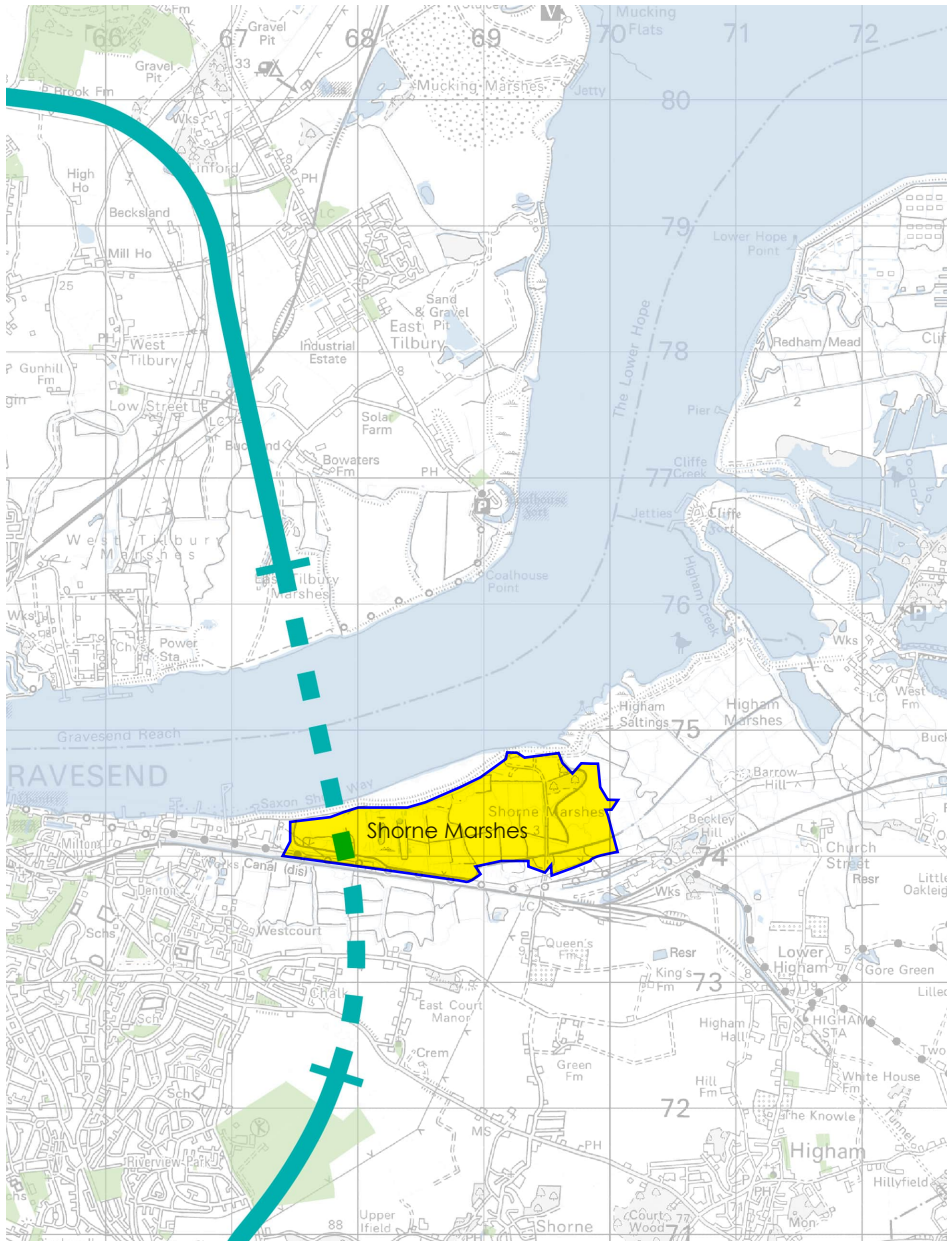
NA

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.











2022 Validation: No status change

Indicative Location Plan (not to scale)



- KEY:
- Development route
 - Project boundary

Existing GI Asset Typology

-  Country Parks
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Lanes



RSPB-WH-10 HYDROLOGY OF SHORNE MARSHES

Key Facts

Scheme:

Whose Hoo - HLF Landscape project

Partnering Organisation:

NA

Location:

Shorne Marshes

Borough:

Medway

Land Ownership:

NA

Existing Land Use and GI Function:

Nature reserve

Approximate Project Area:

c100ha

Project Status and Time-line:

Not started, 2020- 2024

Project Description

Hydrology of Shorne Marshes to establish areas of open water and reedbed

Background:

NA

Site Access:

5000 visits p/a

Thames coastal path runs along the site's boundary which provides good views.

Description of existing assets: current functions, use and habitats

Coastal and Floodplain Grazing Marsh and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area.

Identified GI Policy Themes, Targets and Compliance

To improve habitat for breeding waders and the suite of species associated with wetlands.

Other Project Targets

NA

Required to Achieve Targets

£88,000

LTC Impacts & Opportunities

Identified Potential Impacts

LTC operations may negatively influence the site's hydrology

Identified Opportunities

Match funding with a multiplier effect of lottery funding. LTC £ recognised.

2022 Validation: No status change

Other RSPB projects situated at great distance from LTC route and not mapped

OPERATION TURTLE DOVE

Location: Essex and Kent

Approximate size of project area: n/a Operation Turtle Dove is focused on a number of key cluster areas in the two counties where turtle doves have strongest breeding densities. These are not the only places where they breed, but the areas where the project can make the greatest impact.

Existing land use and function: Agricultural land

Habitat type: Heavy shrub close to fresh water with availability of specialist seed mixes. Turtle doves are BAP priority species

Site Access: Varies enormously

Project Status: Active

Time-line: Ongoing

Project Targets: To stabilise species decline (currently 10% pa) and then increase numbers

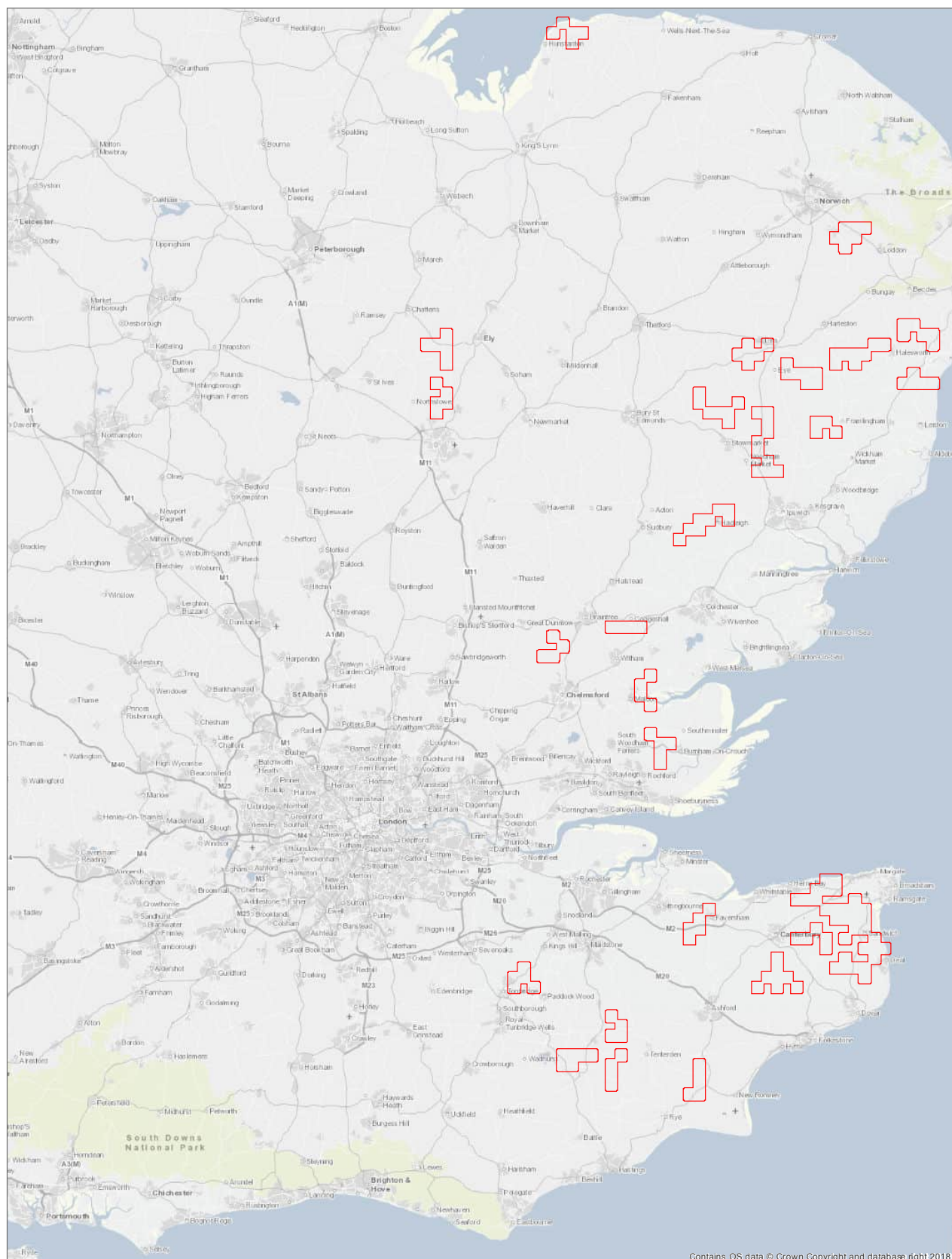
Required to achieve targets: Specialist communications experts to liaise with farming and rural communities, seed mixes and land areas planted as turtle dove feed plots. Also very large areas of rambling hedges and access to fresh water close to those hedges.

Potential impact from LTC: Limited

Potential opportunities from LTC: All the main cluster areas are a considerable distance from LTC. The RSPB would not be prepared to shape the project closer to LTC as the returns would be small compared to the current locations.

2022 Validation: No status change

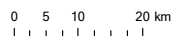
RSPB: OPERATION TURTLE DOVE



Contains OS data © Crown Copyright and database right 2018

Legend:
 Clusters Buffer

Acknowledgements & notes:
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Map scale = 1:688,749 Date printed: 03/09/2018



Other RSPB projects and initiatives within Hoo Peninsula

Information that is applicable to all following projects:

Scheme: Whose Hoo - HLF Landscape project

Location: Hoo Peninsula (unless stated otherwise)

Site access: TBA

Project Status: Not started

Time-line: 2020-2024 (unless stated otherwise)

Potential opportunities from LTC: Match funding with a multiplier effect of lottery funding, LTC £ recognised.

ACTS OF RESISTANCE

Partnering Organisation: Anna Falcini

Project Targets: Arts project to engage locals and visitors with heritage - in this case political. Covering Peasant Revolt, Airport protests, miners strikes etc.

Required to achieve targets: £12,000

ART IN CHURCHES

Partnering Organisation: Anna Falcini

Project Targets: Arts project to engage locals and visitors with heritage

Required to achieve targets: £24,000

LINEAR HABITATS FOR RARE BUMBLEBEES

Partnering Organisation: Bumblebee Conservation Trust

Location: North coastal area of Hoo Peninsula

Existing Land Use and Function: Agricultural land

Habitat Type: Various rare bees, esp. Shrill carder

Project Targets: Increase habitat connectivity and follows on from HLF funded Buzz for the coast

Required to achieve targets: £47,000

MAPPING SKYLARKS

Partnering Organisation: Francis Knight Creative

Project Targets: Arts project to engage locals and visitors with heritage

Required to achieve targets: £15,000

THE SOUND OF HOO

Partnering Organisation: Francis Knight Creative

Project Targets: Arts project to engage locals and visitors with heritage

Required to achieve targets: £14,000

CELEBRATION OF LOCAL HERITAGE BY MUSIC, WRITTEN AND PERFORMED BY THE CHILDREN OF THE HOO

Partnering Organisation: Guildhall Museum

Project Targets: Arts project to engage school children with heritage

Required to achieve targets: £7,000

COMMUNITY VOLUNTEERING - REDUCING RURAL ISOLATION

Partnering Organisation: Hoo Peninsula Cares CIC (wHoo Cares)

Project Targets: Arts project to engage school children with heritage

Time-line: Ongoing but Whose Hoo will upscale

Required to achieve targets: £110,000

PLANTING THE HOO

Partnering Organisation: Community Vols

Project Targets: This project will replant the elms which were lost to Dutch elm disease with a new cultivar which has resistance to the attack. The Hoo Peninsula was famed for its elms and the remnant dwarf elms can still be seen along its lanes.

Required to achieve targets: £79,000

RECORDING AND SHARING SOLDIERS' GRAFFITI AT SHORNEMEAD FORT

Partnering Organisation: Kent Archaeological Society

Existing Land Use: Abandoned fort

Project Targets: A resource of international importance is at Shorne Meade Fort. Graffiti, all name tagged by the authors with their regiment numbers include beautiful poems, feelings of apprehension and where to find horizontal entertainment on a Mediterranean islands (including the ladies' name and address).

Required to achieve targets: £8,000

CHANGING INDUSTRIES OF THE PENINSULA

Partnering Organisation: Kent County Council

Existing Land Use: variable

Project Targets: A volunteer based archaeological project involving local people discovering about the past. Great for all ages.

Required to achieve targets: £47,000

THE CHANGING DEFENCES OF THE HOO PENINSULA

Partnering Organisation: Kent County Council

Existing Land Use: variable

Project Targets: A volunteer based archaeological project involving local people discovering about the past. Great for all ages.

Required to achieve targets: £35,000

THE HOO STOP LINE

Partnering Organisation: Kent County Council

Existing Land Use: variable

Project Targets: A volunteer based archaeological project involving local people discovering about the past. Great for all ages.

Required to achieve targets: £45,000

GREAT EXPECTATIONS - THE ORCHARD LEGACY

Partnering Organisation: Kent Orchards for Everyone Project

Approximate size of project area: 2ha

Project Targets: To establish a traditional orchard with interpretation

Required to achieve targets: £36,000

YELLOW WAGTAIL AND CORN BUNTING SURVEY OF THE HOO PENINSULA

Partnering Organisation: Kent Ornithological Society

Existing land use and function: agricultural land

Project Targets: A survey of the Hoo Peninsula, also training a young person in ID skills of farmland species.

Required to achieve targets: £4,000

FOUGHT TO FORT - PALMERSTON'S FOLLIES

Partnering Organisation: Medway Council

Existing land use and function: agricultural land

Project Targets: People access project interpreting forts from boat trips

Required to achieve targets: £43,000

PROJECT MANAGEMENT

Partnering Organisation: Medway Council

Project Targets: Managing Whose Hoo will take staff time, resources and effort

Required to achieve targets: £757,000

BROWN HARES ON THE HOO PENINSULA

Partnering Organisation: Medway Swale Estuary Partnership

Existing land use and function: agricultural land

Project Targets: Studying brown hares UK BAP species and how it is faring on the Hoo Peninsula

Required to achieve targets: £14,000

CONSERVING NIGHTINGALES ON THE HOO

Partnering Organisation: RSPB

Approximate size of project area: 5ha

Existing land use and function: agricultural land and public green space

Project Targets: Community based project to get more nesting habitat for this local specialist

Required to achieve targets: £8,000

FARMLAND ADVISORY WORK

Partnering Organisation: RSPB

Existing land use and function: agricultural land

Project Targets: Advising farmers on better management and grant availability for better land stewardship

Required to achieve targets: £27,000

WET GRASSLAND HABITAT RESTORATION 1 NOT ON RSPB LAND

Partnering Organisation: RSPB

Approximate size of project area: 50ha

Existing land use and function: agricultural land

Habitat Type: Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl.

Project Targets: A number of key landowners/managers are keen to increase the biodiversity value of their land in a significant step change of hydrological management and creating structures to facilitate this. This project will help facilitate this

Required to achieve targets: £93,000

WET GRASSLAND HABITAT RESTORATION 2 NOT ON RSPB LAND

Partnering Organisation: RSPB

Approximate size of project area: 100ha

Existing land use and function: agricultural land

Habitat Type: Coastal and Floodplain Grazing Marsh UK BAP Habitat, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl.

Project Targets: A number of key landowners/managers are keen to increase the biodiversity value of their land in a significant step change of hydrological management and creating structures to facilitate this. This project will help facilitate this

Required to achieve targets: £156,000


2022 Validation: No status change

IDENTIFYING THEMES AND OBJECTIVES NORTH OF THE RIVER THAMES



6.2 IDENTIFYING THEMES AND OBJECTIVES NORTH OF THE RIVER THAMES

6 Identifying Themes and Objectives North of the River Thames

| IDENTIFIED GI THEMES AND OPPORTUNITIES IDENTIFIED THROUGH STAKEHOLDER ENGAGEMENT | KEY IDENTIFIED IMPACTED PROJECTS & GI ASSETS <i>[With reference to Appendix I: GI Typologies Plan & Appendix II Stakeholder Project Identification Mapping]</i> | KEY POLICY REFERENCES |
|---|--|--|
| <p>LANDSCAPE, HERITAGE AND SENSE OF PLACE & LOCAL AWARENESS AND COMMUNITY INVOLVEMENT</p>  <ul style="list-style-type: none"> • Landscape scale approach to mitigation and enhancement opportunities • Delivery of Thames Chase/Land of the Fanns objectives • Improve the historic landscape associated with Belhus Park and Country Park • Improve access, interpretation, setting and landscape enhancement associated with Tilbury and Coalhouse Fort • Enhancement of the riverscape between Tilbury and Coalhouse Fort • Restoring working area at East Tilbury | <ul style="list-style-type: none"> • South Essex Marshes Regional Park • Mardyke Country Park • East Tilbury Country Park • Tilbury Fort Park • Two Forts Way • Enhance riverscape between Tilbury and Coalhouse Fort • DFP-05 • TCT-03 • TLoF-03 • DFP-05 • EWT-01a&01b • TLoF-01 • TLoF-02 • SM4 • B12 • SM1 • SM2 • SM3 | <p>NPSNN Paragraphs 5.157, 5.160, 5.161, 5.162, 5.164</p> <p>NPPF Chapter 2 – Achieving Sustainable Development Chapter 8 – Promoting healthy and safe communities Chapter 11 Making effective use of land Chapter 14 Meeting the Challenge of climate change, flooding and coastal change Chapter 15 Conserving and enhancing the natural environment</p> <p>The Natural Choice: Securing the value of Nature Reconnecting people and nature</p> <p>Protecting and Improving our Natural Environment Restoring Nature in our towns, cities and villages</p> <p>Biodiversity 2020</p> <p>Draft London Plan 2018 Policy G1 Green Infrastructure Policy G4 Local Green and Open Space Policy G5 Urban Greening Policy G6 Biodiversity and access to nature Policy G7 Trees and Woodlands</p> <p>The All London Green Grid SPG ALGG Functions Increase Access to Open Space Conserve and Enhance biodiversity and increase access to nature Conserve and enhance heritage features, geodiversity and landscape character Promote sustainable design, management and maintenance Conserve and enhance Thames riverside spaces GGA3 Thames Chase, Beam and Ingrebourne</p> |

HABITAT CREATION AND ENHANCEMENT



- Improvement of Important Invertebrate Areas
- Thames Chase Community Forest Centre – improving site connectivity, acquiring site for translocation of protected species.
- Folkes Lane Community Forest – creation of new habitat and receptor site for translocation of protected species.
- Thames Chase and Green Grid – reconnect The Forest Circle and Mardyke River
- Management of capped and restored landfill to deliver biodiversity and public access objectives
- The Land of the Fanns: Develop a community tree nursery for LTC mitigation planting
- South Essex Marshes – Potential Regional Park integral to the GreenGrid Strategy for South Essex.

- DFP-03
- DFP-04
- BL-04
- BL-02
- BL-05
- TCCF-01
- TCT-01
- TCCF-03
- EWT-02
- EWT-03
- TLoTF-01
- TLoTF-02
- B20
- CF2
- B17
- B18
- B19
- B1

Brentwood Adopted Local Plan Saved Policies & Draft Local Plan

Policy 9.1 Historic and Natural Environment Landscape Character
 Policy 9.2 Wildlife and Nature Conservation
 Policy 9.3 Landscape Protection and Woodland Management
 Policy 9.4 Thames Chase Community Forest
 Policy 10.10 Quality of Life and Community Infrastructure
 Conservation and the Protection of the Environment
 Policy C4 Management of Woodlands
 Policy C5 Retention and Provision of Landscaping and Natural Features in Development
 Policy C7 Development affecting preserved trees, ancient woodland
 Policy C8 Ancient Landscapes and Special Landscape Areas
 Policy C9 Historic Parks and Gardens
 Policy C10 Protected Lanes
 Policy C11 Thames Chase Community Forest
 Policy C12 Landscape Improvements
 London Borough of Havering – Core Strategy and DPD
 Policy 29 Green Infrastructure
 Policy 30 Nature Conservation
 Policy 31 Rivers and river corridors
 Policy DC22 Countryside recreation
 Policy DC60 Trees and Woodlands

Thurrock Core Strategy

Policy CSTP18 Green Infrastructure
 Policy CSTP19 Biodiversity
 Policy PMD7 Biodiversity geological conservation and development
 CCSP5 – Sustainable Greengrid

Identifying Themes and Objectives NORTH of the River Thames

| | | |
|---|--|--|
| <p>WATER RESOURCES</p>  <ul style="list-style-type: none"> • Opportunity to view the Mardyke Valley comprehensively looking at • Flood management and water quality • Landscape restoration – fenland features, historic hedges, woods • Biodiversity restoration associated with recreation of landscape features, opportunities to provide habitat links to connect important wildlife sites • Public access along and across the valley • The Lost Fens: Restore area as an extensive wetland habitat and SUDs scheme | <ul style="list-style-type: none"> • TCT-04 • EWT-01a & 01b • TlotF-04 • B1 | |
| <p>ACCESS AND RECREATION</p>  <ul style="list-style-type: none"> • Existing GI is under-used, potentially an indicator of poor access to GI, lack of awareness of local GI and opportunities for GI to be made more welcoming, attractive and diverse. • A growing population will need an increased provision of open space. • Improvements to public rights of way and other routes for Non Motorised Users. • Improving access and understanding of historic landscapes • Improvements to Thames Estuary Path – connections to South Essex Marshes • Enhanced link between Tilbury Fort and Coalhouse Fort | <ul style="list-style-type: none"> • Enhancement of the Thames Estuary Path • TCCF-01 • TCT-01 • TCCF-03 • TCT-02 • EWT-03 • LCR1 • PL2 • SWR2 • SCR2 • South Essex Marshes Regional Park • Mardyke Country Park • East Tilbury Country park • Tilbury Fort Park • Two Forts Way • Enhance riverscape between Tilbury and Coalhouse Fort • DFP-05 • TCT-02 | |

Identifying Themes and Objectives NORTH of the River Thames**HEALTH AND WELLBEING**

- Improving the quality of place to motivate people to enjoy and exercise in their local area
- GI enhancement can contribute to improved air quality
- United Nations Sustainability Goal 3: Good Health and Wellbeing

SUSTAINABILITY AND RESILIENCE TO CLIMATE CHANGE

- Interconnected GI is vital for managing a range of climatic changes
- Using GI for flood alleviation and management has as economic value
- United Nations Sustainability Goal 13: Climate Action

- BL-02
- TCCF-03
- TLoF-01
- TLoF-02
- TLoF-04


IDENTIFYING THEMES AND OBJECTIVES SOUTH OF THE RIVER THAMES



6.3 IDENTIFYING THEMES AND OBJECTIVES SOUTH OF THE RIVER THAMES



Identifying Themes and Objectives SOUTH of the River Thames

6 Identifying Themes and Objectives South of the River Thames

| IDENTIFIED GI THEMES AND OPPORTUNITIES IDENTIFIED THROUGH STAKEHOLDER ENGAGEMENT | KEY IDENTIFIED IMPACTED PROJECTS & GI ASSETS <i>[With reference to Appendix I: GI Typologies Plan & Appendix II Stakeholder Project Identification Mapping]</i> | KEY POLICY REFERENCES |
|--|---|--|
| <p>LANDSCAPE, HERITAGE AND SENSE OF PLACE & LOCAL AWARENESS AND COMMUNITY INVOLVEMENT</p>  <ul style="list-style-type: none"> Maintenance of openness and separation between settlements and Green Belt. Protection and enhancement of Special Landscape Areas, Ashenbank Wood; semi-natural ancient woodland Shorne Woods Country Park. Innovative approach to engaging with farmers and landowners to deliver environmental improvements and a step change in the way countryside access is promoted to urban communities. Landmark art projects to engage communities, promote gateway and create a sense of place. Whose Hoo – HLF Landscape Project. | <ul style="list-style-type: none"> Shorne to Shore Green Cluster Ebbsfleet Valley and A2 Corridor Green Cluster Thames and Medway Canal Green Cluster DFD-10 RSPB-WH9a,b,c PL-01 RSPB-04a DFD-11 DFD-12 DFD-16 RSPB-WH9a,b,c RSPB-WH-06 TMCA-01 KD-01 KD-02 WT-01 CA2 B21 P1 CP1 CF4 RPG1 KD1 CP5 | <p>NPSNN Paragraph 5.147: Duties in Section 11A of the National Parks and Access to the Countryside Act 1949 and Section 85 of the Countryside and Rights of Way Act 2000</p> <p>Paragraph 5.148: DEFRA's English National Parks and the Broads: UK Government Vision and circular document</p> <p>Paragraphs 5.150 – 5.155: Development within nationally designated areas</p> <p>Paragraphs 5.157, 5.160, 5.161, 5.162, 5.164</p> <p>NPPF Chapter 2 – Achieving Sustainable Development Chapter 8 – Promoting healthy and safe communities Chapter 11 Making effective use of land Chapter 13 Protecting Green Belt Land Chapter 14 Meeting the Challenge of climate change, flooding and coastal change Chapter 15 Conserving and enhancing the natural environment</p> <p>The Natural Choice: Securing the value of Nature Reconnecting people and nature</p> <p>Protecting and Improving our Natural Environment Restoring Nature in our towns, cities and villages</p> <p>Biodiversity 2020</p> |

| | | |
|---|---|---|
| | | <p>Draft London Plan 2018 Policy G1 Green Infrastructure Policy G4 Local Green and Open Space Policy G5 Urban Greening Policy G6 Biodiversity and access to nature Policy G7 Trees and Woodlands Gravesham Borough Council Local Plan Core Strategy Policy CS12 Green Infrastructure, Paras 5.7.20, 5.7.21 Policy CS20 Heritage</p> <p>Medway Local Plan Policy BNe7 Access for All Policy BNE22 Environmental Enhancement Policy BNE32: Area of Outstanding Natural Beauty Policy BNe33: Special Landscape Areas Policy BNE38: Wildlife Corridors and Stepping Stones</p> |
| <p>HABITAT CREATION AND ENHANCEMENT</p>  <ul style="list-style-type: none"> • Deliver net gain for biodiversity and protected landscapes. • Living bridges and wildlife corridors to facilitate movement of wildlife and people to future proof LTC. • Pollinator corridors using species rich grassland mixes. • Landscape scale approach to mitigation and enhancement opportunities along the A2 corridor. • Significant habitat buffering and creation and provision of new multi-functional accessible green space for residents of east Gravesend. • Living Bridge – Claylane Wood and Shorne Woods, Shorne and Cobham/Jeskyns. • Central reserve woodland planting for connectivity for mobile species. • 'Making a buzz for the coast'. • Improve habitat for breeding waders. | <ul style="list-style-type: none"> • Shorne to Shore Green Cluster • Ebbsfleet Valley and A2 Corridor Green Cluster • Thames and Medway Canal Green Cluster • DFD-08 • DFD-09 • DFD-10 • DFD-13 • DFD-14 • DFD-15 • DFD-16 • BL-05 • BBC-01 • RSPB-01 • KWT-01 • TCCF-02 • WT-01 • PL-02 • R3 • B21 • B7 • CF4 • B3 • B9 • F1 | <p>Kent Downs AONB Management Plan Policies 5.5 Biodiversity Policies 8.5 Historic and cultural heritage Policies 12.5 Access, enjoyment and understanding</p> |

Identifying Themes and Objectives SOUTH of the River Thames

| | |
|--|---|
| <p>WATER RESOURCES</p>  <ul style="list-style-type: none"> • Restoration of Gravesend Riverside Leisure Area. • Shorne and Cliffe Marshes within Thames Estuary and Marshes Ramsar/SPA site and South Thames SSSI. • Hydrological management. • Greater Thames Marshes Nature Improvement Area. | <ul style="list-style-type: none"> • Shorne to Shore Green Cluster • Ebbsfleet Valley and A2 Corridor Green Cluster • Thames and Medway Canal Green Cluster • RSPB-WH-10 • TMCA-01 • DFD-07 • B2 • B10 |
| <p>ACCESS AND RECREATION HEALTH AND WELLBEING</p>  <ul style="list-style-type: none"> • Continuous NMU path link between Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park. • Promote strategic routes connecting Shorne Ridge and adjacent urban areas to the Thames Estuary Marshes and the Kent Downs – improving access along this corridor (underpasses and footbridges). • Gravesend to Higham Canal and Towpath – forms part of NCR No.1 • Increase provision for horse riders. • Reduce sense of severance by A2/rail corridor. | <ul style="list-style-type: none"> • Shorne to Shore Green Cluster • Ebbsfleet Valley and A2 Corridor Green Cluster • Thames and Medway Canal Green Cluster • DFD-11 • DFD-12 • DFD-16 • RSPB-WH9a,b,c • RSPB-WH-06 • TMCA-01 • KD-01 • KD-02 • WT-01 |

Identifying Themes and Objectives SOUTH of the River Thames

- Provide safe off-road cycleways which encourage direct access to Shorne Woods Country Park.
 - Shorne to Shore has a strong focus on promoting and enhancing countryside access and on improvements to key rights of way networks.
 - Promote recreational trails which connect Gravesend and Strood with the farmland, woods and marshes and connect with long distance routes – The North Downs Wat, Weald Way and Thames Estuary Path.
 - Enhancement of existing freshwater and grazing marsh habitats as potential compensation for loss of designated habitat.
 - Reconnect fragmented rights of way to north of Shorne Ridge.
 - Links to urban areas. Links to North Kent Marshes and River Thames, Agricultural Land to A2 and Kent Downs AONB.
 - Improving the quality of place to motivate people to enjoy and exercise in their local area.
 - GI enhancement can contribute to improved air quality.
 - United Nations Sustainability Goal 3: Good Health and Wellbeing.
- TCCF-02
 - SWR1
 - SWR3
 - KD1
 - SWR6
 - SWR5
 - SCR1
 - LCR2

SUSTAINABILITY AND RESILIENCE TO CLIMATE CHANGE

- Interconnected GI is vital for managing a range of climatic changes.
 - Using GI for flood alleviation and management has as economic value.
 - United Nations Sustainability Goal 13: Climate Action.
- Shorne to Shore Green Cluster
 - Ebbsfleet Valley and A2 Corridor Green Cluster
 - Thames and Medway Canal Green Cluster
 - DFD-08
 - DFD-11
 - DFD-12
 - DFD-13
 - DFD-06
 - DFD-07

SECTION 7: STAKEHOLDER ENGAGEMENT



7 STAKEHOLDER ENGAGEMENT



7.1 BRENTWOOD BOROUGH COUNCIL

TIER 1

Local Authority Engagement Responses

Brentwood Borough Council

Date received: 30.10.2018
 From: Phil Drane
 philip.drane@brentwood.gov.uk
 For further information refer to:
 Appendix II: Section 2, Tier 1 Local Authority Responses

Brentwood Borough
 Council

Identified Impacts and Pressures

LTC proposals only impact the area around M25 junction 29 within Brentwood Borough. This area has been identified for the delivery of employment land through the Brentwood Local Plan (Brentwood Enterprise Park and Codham Hall). There will be implications for GI from this development as well as proposals to improve M25 junction 29, and so both need to be considered together to improve GI wherever possible. Current GI policy is limited. Emerging policy through the Brentwood Local Plan can be viewed via www.brentwood.gov.uk/localplan as well as development allocations in the M25 J29 area

Key Opportunities and Identification of Priorities

No particular opportunities that LTC can deliver, beyond wider redevelopment work taking place at M25 junction 29 that when reinstated could provide opportunities for improvements to landscape quality / GI etc. Delivery of Brentwood Enterprise Park project through the Brentwood Local Plan will include provision for improved landscaping and provision of open space. Proposals for M25 junction 29 improvements may be able to assist with this, depending on where development takes place etc.

Delivery of Brentwood Enterprise Park, and regularisation of land north east of M25 junction 29, provide key employment opportunities through the Brentwood Local Plan. As part of these developments, we have outlined opportunities for landscape improvements and provision of green space in and around the employment land that will link to surrounding countryside and existing rights of way etc.

Timescales for delivery of employment land in the M25 junction 29 area are set out in the emerging Brentwood Local Plan. Once adopted (late 2019) we anticipate employment land can be brought forward and delivered within the first five years of the plan period, i.e. by 2024. This will be dependent on adoption of the Local Plan following an examination in public process, to take place in mid 2019.

Key Contacts and Studies

Emerging green and blue infrastructure policy through the Brentwood Local Plan. Evidence base on these issues. All can be found via www.brentwood.gov.uk/localplan

Essex County Council



7.2 THE LONDON BOROUGH OF HAVERING

TIER 1

Local Authority Engagement Responses

The London Borough of Havering

Date received: 23.10.2019

From: Daniel Douglas, Team Leader Transport Planning
Daniel.Douglas@havering.gov.uk

For further information refer to:
Appendix II: Section 2, Tier 1 Local Authority Responses

The London Borough of Havering

Identified Impacts and Pressures

The project has significant potential to impact on the Thames Chase Forest particularly where the route is proposed to be built through the centre of the site, and therefore disrupting and adversely impacting upon the Green Belt Land. It Also has a major and direct impact on the Thames Chase Forest Centre and adjacent Broadfields site, which receives in excess of 120,000 visitors per year and accommodates staff, volunteers and Community Forest partner organisations. The Thames Chase Trust responded to the LTC consultation in December 2018, stating that they are extremely concerned at the detrimental impact of the scheme on the Community Forest and associated landscape, with the key issues outlined below:

- The Thames Chase Trust is extremely concerned about the landscape impact of the tunnel and the increased pollution levels for south-west Essex. This area feeds into the Community Forest landscape. The Trust is also extremely concerned at the prospect of notable loss of habitat; loss of access routes; and adverse impact on heritage assets;
- The Thames Chase Trust is extremely concerned that the construction phase will have a much wider detrimental impact on landscape, people and wildlife.
- The Thames Chase Trust is extremely concerned at the amount of land-take and its impact, particularly in relation to the landscape, disruption, pollution and heritage loss;
- The Thames Chase Trust is extremely concerned at the potential for air quality degradation, loss of cultural heritage, adverse landscape impact, adverse biodiversity impact, increased noise and vibration, adverse impact on people and communities, and on road drainage and the water environment and climate;
- The Thames Chase Trust is extremely concerned at the disruption that will be caused during the build and which will affect the lanes and quiet roads within the Forest. This concern includes the impact of increased construction traffic in and around the area; and
- The Thames Chase Trust is extremely concerned that access to the utilities infrastructure may have detrimental impacts on the landscape, communities and biodiversity.

Policy 29 of Havering's emerging Local Plan seeks to maintain and enhance Havering's position as one of London's greenest boroughs, and to ensure that development proposals are realising opportunities to integrate green infrastructure on site. Green infrastructure may include public rights of way in the form of bridleways and footpaths and provides an opportunity for informal recreation such as horse-riding and walking and may provide scope for longer routes where they link up with similar features in adjoining areas.

Given a range of developments have the potential to incorporate elements of green infrastructure, it is important that policy 29 links with other policies in the Local Plan, which set out requirements on the integration of different types of green infrastructure into development. This includes policies on residential design and amenity, Open space, sports and recreation, Nature conservation, Landscaping, Rivers and river corridors, Heritage assets and Air quality (Policies 7, 18, 30, 27, 31, 28 and 33 respectively).

Existing partnerships with Havering include The All London Green Grid, Thames Chase Community Forest, Rainham Wildspace, Land of the Fanns Landscape Partnership (focusing on key heritage components), and Roding, Beam and Ingrebourne Catchment Partnership (to improve the rivers within the catchment). Developers are expected to work with these existing partnerships to support and enhance green infrastructure provision in the borough.

In particular, policy 7 supports developments that incorporate an appropriate level of high quality, usable green infrastructure and amenity space that is designed to be multi-functional and offer a range of environmental benefits and leisure and recreation opportunities. This also supports both policy 12 and 33 in the Local Plan, optimizing the use of green infrastructure to promote health and well being, and reduce pollution concentrations and exposure in the borough. Furthermore, policy 31 acknowledges that Havering's rivers and river corridors are important elements of the green infrastructure network, providing multiple benefits for the community, environment and economy.

Key Opportunities and Identification of Priorities

With the Thames Chase forest classified as 'open space' any reduction of this space as a result of the schemes will need to be offset elsewhere.

The Thames Chase, Beam and Ingrebourne Area Framework identifies the need to provide environments accessible for both the elderly and those with young children, specifically for the expected future demographic of the borough. Much of the borough is bordered by Green Belt and there are three SSSI's within the borough boundary including the Inner Thames Marshes which the Core Strategy has identified as of importance for improving informal recreation opportunities in open space and countryside.

Additionally the Havering & Essex Fringe which is encapsulated by the M25 is the boundary landscape between Greater London and south Essex. The projects in this cluster primarily concern connectivity between disparate local open spaces with the strategic intention of creating a continuous green corridor along the length of the River Ingrebourne. There are also a number of Victorian Parks that are in need of enhancement and improved access.

The creation of Greenway to connect the landscapes of Thames Chase with the South Essex Green Grid will provide potential new open spaces around the M25, and methods of crossing the motorway should be explored.

The Thames Chase Plan also explores priorities and projects with regards to the following key areas:

- Forestry;
- Landscape regeneration;
- Access;
- People; and
- Promotion

Key projects as outlined in Table 7.2 of the Havering Infrastructure Delivery Plan (IDP) include the 'Greenways and All London Green Grid' project, focusing on green space borough wide, alongside the 'Improvements to Thames Chase Community Forest' project.

Furthermore, the document states that a number of partnerships are also engaged in green space projects in the borough, including:

- Land of the Fanns Partnership - A stage 1 Heritage Lottery Fund (HLF) Landscape Partnership scheme led by Thames Chase Trust and LB Havering, with a programme of access and conservation projects;
- All London Green Grid (ALGG) - established to provide a pan-London strategy for Green Infrastructure (GI) and to deliver a rolling programme of GI projects; and
- Roding, Beam and Ingrebourne Catchment Partnership - works to improve the water environment of the river basin. Managed jointly by Thames 21 and the Thames Chase Trust

Key Contacts and Studies

As mentioned above, Policy 29 of Havering's emerging Local Plan 'Green Infrastructure' includes the key policies and strategies in place, while the Infrastructure Delivery Plan includes the proposed schemes with regards to GI in the borough. The Landscape Conservation Action Plan (LCAP) also provides an outline of the Land of the Fanns scheme, alongside details of the projects the Land of the Fanns delivers.

The key contact is Daniel Douglas, Transport Planning Team Leader, located in Mercury House, Romford (RM1 3SL), with contact details shown below:

t 01708 433220
e daniel.douglas@haverling.gov.uk

Stakeholder Engagement- The London Borough of Havering

Collation of data, mapping, size of areas and projects.

- The All London Green Grid website provides details of the policy framework, partner policies and programmes and the supplementary planning guidance (SPG) document for GI and Open Environments. This sets out the following:
- Guidance on the implementation of all the relevant policies in the London Plan to local neighborhoods, boroughs, developers and other delivery partners;
- A vision and spatial framework for London-wide green infrastructure;
- Promotes partnership working across the 11 Green Grid Areas within London and beyond via the Green Arc Partnerships; and
- Identifies strategic green infrastructure opportunities.

Within this document, chapter 5 defines the Green Grid Areas, with associated mapping and site details (as sourced from the link below).

<https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/all-london-green-grid>

Chris Smart the Programmes & Projects Manager is also available to provide further details on the Land of the Fanns project, with contact details shown below:

† 01708 432 150

e chris.smart@haverling.gov.uk

Identification of timescales and what is required to achieve targets.

As identified in aim 4 – the projects detailed in the IDP are scheduled to take place in the short term (2016-2021) and the medium term (2016-2026) respectively. While the 'Greenways and All London Green Grid' project will be delivered by LBH, the Improvements to Thames Chase Community Forest' project is dependent upon the Thames Chase Trust and Forestry Commission for funding and delivery



7.3 ESSEX COUNTY COUNCIL

TIER 1 Local Authority Engagement Responses

Essex County Council

Date received: 01.11.2018

From: Gary Macdonnell, Project Manager Commissioning Delivery
Gary.Macdonnell@essex.gov.uk

For further information refer to:
Appendix II: Section 2, Tier 1 Local Authority Responses

Identified Impacts and Pressures

1. **West Tilbury Marshes** will be split north South and their sense of isolation and wilderness lost. The road will fragment the marsh prevent migration of species. It is possible because of the central nature of the road line and the small size of the marsh that the marshes will be obliterated by the development
2. **The Thames Estuary Path** broken by the LTC which at this point is on the River and will need to be connected, presumably further north away from the River thus devaluing the experience. In addition the major site adjacent to Coal House Fort will be also impact the adjacent Thames Estuary Path.
3. **The Mardyke Way** and the wider Mardyke valley is effected visually and in noise terms, The Mardyke Way and River are crossed by the M25 Link road. Visually the flat valley will be dominated by the motorway construction and the present sense of wilderness and isolation will be lost.
4. The M25 link road enters the **Thames Chase Forest** north of the A13 as the forest area cover 40 sq miles. The Mardyke valley as a landscape area of Thames Chase is adversely affected as stated above. As the M25 link road sweeps west it passes a number of brownfield sites which have potential for Thames Chase to plant, eg Grangewaters, the Grange Hill Veolia site and the brownfield west of Ockendon Rd. As the road joins the M25 the land-take removes the first plantings of Thames Chase which date from 1990 to 2000. These are highly visible from the M25 going south as they sit upon high land called Clay Tye Hill. They are symbolic of Thames Chases's environmental regeneration of Thurrock and Havering and their removal will require sensitive restoration. Further north the land-take impacts on Codham Hall wood (ancient woodland owned by ECC), land north of Cranham which has block TPOs because of the regenerating woodland and land owned by the Forestry Commission (also planted in the late 1990s as part of the Thames Chase FC estate).

| | |
|---|--|
| | <p>5. The South Essex Marshes has been the focus of local partnerships as a potential Regional park spreading from West Thurrock Marshes to the mudflats of Leigh on Sea. The area has been subject to an unsuccessful HLF bid. ECC hold a full HLF report and map information. South Essex Marshes include 2 historic forts, the Thurrock Wildlife Centre, Wat Tyler Country Park and the Hadleigh Mountain Bike Centre. In addition, a large extent of marshes owned by the RSPB, Essex Wildlife Trust, ECC and other local authorities. This is a more recent idea but the concept is integral to the Greengrid strategy for South Essex</p> |
| <p>Key Opportunities and Identification of Priorities</p> | <p>Opportunities are difficult as connectivity is a key element of GI and a road scheme will be a barrier to species and people.</p> <p>However an advantage could be that the transport corridor could act as an access and habitat corridor. An example could be taking a spur of the Mardyke Way and head south and connect with the Thames Estuary Path. In this way Thames Chase could be connected to the South Essex Marshes. The HLF project called Land of the Fanns, managed by Thames Chase already manages a live project covering this area. LTC could support Thames Chase and Thurrock through this project.</p> <p>LTC could support the Thames Estuary Path by providing the path diversions necessary for the LTC and providing further development investment for Mobile Apps, website, signage etc.</p> <p>The LTC could support the wider South Essex Marshes project across South Essex to Leigh on Sea. LTC could help support a central managing body to develop the project and create the wider landscape improvements</p> <p>Feasibility of England Coastal Path is currently underway. It will review the line of the Thames Estuary Path from Tilbury to Wallasea Island</p> <p>The redevelopment of the Coal House Fort and Tilbury Fort</p> <p>Supporting Davy Down Centre on the Mardyke Valley run by the Land Trust</p> <p>Support the Thames Chase Forest Centre effected by the M25 widening</p> <p>The Stubbers/Baldwins Farm/ Belhus Wood Country park wooded complex could be reinforced after being set up by Thames Chase and could act as anorthern extension of Belhus Woods Country Park</p> |
| <p>Key Contacts and Studies</p> | <p>Dave Bigden – Thames Chase Forest Development Manager 07746 593527 Dave Bigden <david.bigden@thameschase.org.uk> Steve Plumb – Thurrock Council 07919053423 steve@plumb-associates.com STUDIES Thames Gateway Greengrid Strategy 20015 Thurrock GI Review 2018 run by LUC presently on behalf of Thurrock Council</p> |

7.4 THURROCK BOROUGH COUNCIL

TIER 1

Local Authority Engagement Responses

Thurrock Borough Council

Date received: 26.10.2018

From: Eastgate Anna
AEastgate@thurrock.gov.uk

For further information refer to:
Appendix II: Section 2, Tier 1 Local Authority Responses

Thurrock Borough Council

Identified Impacts and Pressures

The LTC would divide the borough in two. This would result in significant loss of connectivity for people and wildlife unless properly mitigated.

Direct effects e.g. air pollution and noise on people (health and well-being); direct loss of GI; loss of connectivity between GI assets and severance of sustainable transport links; habitat fragmentation; air and water pollution and noise on wildlife; increased risk of flooding; degradation of water quality due to contaminated runoff and dust during construction; degradation of quality of intact landscapes.

Indirect effects – e.g. reduced likelihood of people walking or cycling and use of existing and proposed recreation sites with knock-on effects on health and well-being, air pollution, greenhouse gas emissions; reduction of ecosystem services associated with degraded habitats and biodiversity; reduced quality of life for existing residents of borough due to degraded natural environment and reduced attractiveness to potential future employers and employees.

Growing demand for housing and infrastructure will result in loss of existing greenspace and GI, which could result in loss of recreational opportunities, biodiversity and visual amenity. Development of housing and infrastructure is also likely to alter the local landscape and riverscape character. This proposed scheme will exacerbate these issues.

Proposed route can harm the settings of historic assets and their settings. The development can also increase risk to heritage assets, for example through increasing the area of impermeable surfaces, which in turn could increase the risk of heritage assets being subject to flooding.

We draw your attention to Natural England's Site Improvement Plan for the Greater Thames Complex of European sites, one of which (Thames Estuary & Marshes SPA) lies within Thurrock, which recognizes a number of threats and pressures facing the ecology of this site. The SPA is particularly sensitive to pressure from development and recreation.

There are areas of fragmented habitat across the borough, particularly with regards to deciduous woodland.

There are water quality issues within the lower stretches of the River Mardyke, largely due to poorly managed surface water runoff from development. The LTC is likely to worsen these issues.

Climate change is likely to lead to changes in habitat distribution and resultant changes to the character of existing GI.

Existing GI may be under-used, as only 59.5% adults in Thurrock are physically active, which is less than the national average of 66%. This could be an indicator of poor access to GI, lack of awareness of local GI and opportunities for GI to be made more welcoming, attractive and diverse. Development could further separate residents from opportunities to access the countryside. A growing population will also need increased provision of open space.

The active transport network could be disrupted by development, including severance of existing routes.

There is likely to be increasing demand for transportation along the Thames, resulting in a busier waterway.

Key Opportunities and Identification of Priorities

Improvements to public rights of way and other routes for Non Motorised Users.
Improvements to existing and proposed recreation sites to increase the amount of use.

Opportunity to view the Mardyke Valley comprehensively. Looking at:

- Flood management and water quality. Including measures to integrate with landscape and biodiversity recreation works.
- Landscape restoration – particularly of fenland features, historic hedges and woods etc.
- Biodiversity restoration associated with recreation of landscape features. Opportunities to provide habitat links to connect important wildlife sites.
- Public access along and across the valley.

Restoration of historic landfill and mineral extraction sites to create new habitat or recreation opportunities.

Delivery of Thames Chase/ Land of the Fanns objectives e.g. creation of woods and landscape restoration as part of the LTC mitigation. There are opportunities to improve the historic landscape associated with Belhus Park and Country Park and to improve public access.

Enhancement of the riverscape between Tilbury and Coalhouse Fort.

See attached document outlining GI work underway in Thurrock, which outlines relevant, emerging green and blue infrastructure proposals for Thurrock. Note that the GI strategy is still being developed, therefore these proposals have not been finalised.

Thames Chase

- Aveley Forest Park
- Wider landscape, biodiversity and access enhancements in accordance with the Thames Chase Plan.

Land of the Fanns

- Improved access to and management of Belhus Park historic landscape
- Support for community based projects

South Essex Catchment Partnership (Mar Dyke)

- Channel enhancement
- Wetland creation
- Improved management of floodplain grassland
- Improved public access including missing links in rights of way network

East Tilbury – Thameside Nature Park, East Tilbury Quarry and Coalhouse Fort

- Completion of the restoration of the former quarries and habitat creation and enhancement.
- Improved public access

Rewetting of arable land west of Coalhouse Fort

- Little Belhus Country Park – site restoration nearing completion enabling opportunities to enhance public access.

Active Place and Travel

- The council is embarking on a programme of enhancing its parks and open spaces as resources permit. These include sites in South Ockendon, Tilbury and East Tilbury
- Plans are being developed to achieve improved safe routes on foot and cycle to these parks.
- Improvements to cycle network

Public Rights of Way Improvement Plan**Land Use Consultants Green and Blue Infrastructure Assessment – (As at October 2018)****Identified Opportunities:**

- Mardyke Valley Country Park
- East Tilbury Country Park
- Fobbing Marshes
- Tilbury Fort Park
- Grays–Tilbury Station–Tilbury Fort
- Two Forts Way
- Coalhouse Fort-London Gateway
- Grays–Chadwell St Mary–Stanford-le-Hope
- Corringham to Langdon Hills Country Park

Key Contacts and Studies

- Sean Nethercott – Local Plan and Strategic Growth snethercott@thurrock.gov.uk
- Benjamin Sanderson – Land of the Fanns - <http://www.landofthefanns.org/>
- Dave Bigden – Thames Chase and South Essex Catchment Partnership <http://www.thameschase.org.uk/>



7.5 GRAVESHAM BOROUGH COUNCIL

TIER 1 Local Authority Engagement Responses

Gravesham Borough Council

Date received: 01.10.2018

From: Tony Chadwick
tony.chadwick@gravesham.gov.uk

For further information refer to:
Appendix II: Section 2, Tier 1 Local Authority Responses

Gravesham Borough Council

Identified Impacts and Pressures

Significant – during Construction and Completion.

The broad area concerned has some of the highest national (and international) designations for nature conservation and landscape. It contains a number of listed buildings, conservation areas and areas of archaeological potential. It is crossed by a number of PROW's, cycle routes and informal paths within places such as Shorne Woods and Cobham Woods which make up a comprehensive network. It has sub-regional role as a set of open spaces which serve Kent Thameside (especially Gravesend) and Medway Towns (especially Strood) and wider. Visitor pressure (and more specifically their dogs) is a major concern on the North Kent Marshes due to bird disturbance. The area is also Green Belt which, whilst not an environmental designation, does require the maintenance of openness and separation between settlements which is also relevant to the proposals.

Designations

- Ramsar
- SPA (Thames Estuary and Marshes)
- SAC (North Downs Woodland)
- SSSI's
- Kent Downs Area of Outstanding Natural Beauty
- Ancient Woodland
- Conservation Areas
- Listed Buildings
- Areas of archaeological search
- PROW (and informal routes within areas like Jeskyns and Shorne Woods Country Park)

All the land to the south of the A2 is Metropolitan Green Belt in Gravesham Borough Council and Dartford Borough Council - Ebbsfleet Valley is a major development node in regional policy - The wooded countryside at Jeskyns and in the vicinity of Ashenbank Woods is designated as a Special Landscape Area in the Gravesham Borough Council Local Plan. Many of the woodlands at Shorne Woods Country Park and in the Cobham/Ashenbank area are semi-natural ancient woodlands

Lower Thames Crossing is aligned across the Shorne to Shore Cluster Study area and the Forces for Change map shows the indicative alignment (for Option C) that is mapped in the Department of Transport's report. This would be a major new piece of infrastructure in the national highway network which could have very significant impacts on character.

Key Policy and
Background Studies**Greening the Gateway – Green Clusters Study**

The nine North Kent Green Cluster Studies set out ambitious visions for environmental enhancements that will improve people's quality of life as well as boost biodiversity and protect wildlife habitats. These visions have been formed through a series of workshops with key stakeholders in each area, including representatives of local residents, community groups, charities and the public sector.

Directly Impacted – Thames and Medway Canal. Ebbsfleet and A2 Corridor

Indirect Impacts - Hoo Peninsula. Darent Valley

Beyond Study Area – Capstone Valley, Milton Creek, Faversham Creek

Shorne to Shore Technical Report – January 2011

The Green Cluster Studies' vision for Shorne to Shore draws together and expresses a common vision for the Cluster. It is an ambitious vision, which focuses on new greenway connections, an innovative approach to engaging with farmers and landowners to deliver environmental improvements and a step change in the way countryside access is promoted to urban communities. The vision complements existing projects and activities. Key stakeholders responsible for leading and influencing the ongoing projects and activities in the Shorne to Shore Cluster include Gravesham Borough Council, Medway Council, Kent County Council, local parish councils, Natural England, Kent Downs AONB, Kent Wildlife Trust, the RSPB, Sustrans, Woodland Trust, Forestry Commission and Plantlife.

Protected Landscapes where there is ongoing investment and active management:

- RSPB Shorne Marshes & Higham Bight Reserve
- Shorne Woods Country Park
- Jeskyns
- Ashenbank Wood
- Cobham Park
- Ranscombe Farm
- RSPB Cliffe Pool

Thames and Medway Canal Technical Report – March 2008

The Green Cluster Studies' vision for the Thames & Medway Canal draws together and expresses a common vision for the Cluster as a whole. It is an ambitious vision, which will lead to the restoration of Gravesend's Riverside Leisure Area, a sequence of distinctive urban spaces, a restored canal, a 8km greenway extending right from Gravesend town centre to Higham Station and a new public open space with car park picnic area and wetland habitats at a natural hub in the network of public rights of way which links the Canal to the Thames shoreline and Cliffe Pools. Key stakeholders responsible for leading and influencing the ongoing projects and activities in the Thames & Medway Canal Cluster include Gravesham Borough Council, Kent Thameside Delivery Board, the Environment Agency, the RSPB, Natural England, Sustrans, the Inland Waterways Association, the Thames & Medway Canal Association and local landowners.

Statutory designations - Shorne Marshes and Cliffe Marshes are within the Thames Estuary & Marshes Ramsar/SPA site and the South Thames SSSI

Policy context - Shorne Marshes is the first point beyond the London conurbation where the Gravesham Borough Council Metropolitan Green Belt meets the Thames Estuary - All of the rural landscapes (within the Thames & Medway Canal cluster) and the Hoo Junction industrial sites lie within the Gravesham Borough Council Metropolitan Green Belt - Shorne Marshes and the Cliffe Pools area are within Areas of Local Landscape Importance (in both Gravesham Borough Council and Medway Council's Local Plans) - The Cliffe Marshes are within a Special Landscape Area (Medway Council's Local Plan)

Access - The Saxon Shore Way follows the Thames shoreline along Gravesend's historic Promenade and out along the shoreline of the Shorne Marshes. The route turns inland across the centre of the Cliffe Pools RSPB Nature Reserve and into Cliffe village - Sustrans' National Cycle Route 1 runs along the northern towpath of the Thames & Medway Canal, linking Gravesend station and Higham station - The railway and the firing range (for police training on Shorne Marshes) are major barriers to the accessibility of North East Gravesend and the wider Shorne Marshes.

Ebbsfleet Valley and A2 Corridor Technical Report – March 2008

The Green Cluster Studies' vision for Ebbsfleet Valley and the A2 Corridor draws together and expresses a common vision for the Cluster as a whole. The area is a centre for regeneration, with urban development projects in Ebbsfleet Valley, Swanscombe Peninsula and the Northfleet Embankment.. The Green Clusters Vision will forge strong, long lasting connections between existing and new communities in Ebbsfleet Valley, Northfleet, Greenhithe and Swanscombe through programmes of proactive community participation and awareness, new and enhanced greenspace links and an innovative land art and design theme that reveals local character and re-connects communities and places. Key stakeholders responsible for leading and influencing the ongoing projects in the Ebbsfleet Valley & A2 Corridor Cluster include Gravesham Borough Council, Dartford Borough Council, Kent County Council, Kent Thameside Delivery Board, SEEDA, the Environment Agency, Natural England, Sustrans, Groundwork Kent & Medway and the major private sector developers, including Land Securities and LaFarge.

Proposals:

Jeskyns, Ashenbank Wood, Cobham Park & Shorne Woods Country Park - the complex of ancient woodlands and historic parkland at Ashenbank Wood, Cobham Park and Shorne Woods has been extended and enhanced with the addition of Jeskyns, a new Forestry Commission owned community woodland and public greenspace which includes areas for children's play and picnicking, as well as footpaths and cycleways through woodlands, meadows and orchards. Extensive areas of woodland are newly planted, so parts of the site are quite open but it is already a popular family destination for informal recreation. • A2 Linear Park - a 24ha multi-functional outdoor activity park. This project is the subject of a feasibility study, but preliminary ideas include a dedicated venue for local, national and international running and cycling events, a park and ride site at the Tollgate junction and multi-use cycle networks which link Gravesend to the Cobham-Ashenbank area.

Gravesham Local Plan Core Strategy – Examination Documents

Part 1 Site Allocations: Issues and Options – Regulation 18 Consultation [Including Gravesham Landscape Sensitivity and Capacity Study. Gravesham Green Belt Study. Open Space, Sport and Recreation Assessment.]
Gravesham Local Plan Core Strategy Adopted September 2014

Thames Gateway Spatial framework - the Shorne to Shore Cluster is part of the Thames Gateway and therefore of the Thames Gateway Parklands Programme, which aims to provide a network of accessible, high quality and sustainable landscapes and waterways, which capitalise on existing natural, built, historic and cultural assets. It supports their conservation, enhancement and ongoing use. Paragraph 141 on the new NPPF, since the area in question is mainly Green Belt: Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land.

Destinations and connections

- The Thames Estuary Path is a newly proposed promoted cycle route, which will be adopted as part of Sustrans' National Cycleway Network. This project is planned but not yet implemented.
- National Cycle Route 1 runs along the towpath of the Thames and Medway Canal while the Heron Trail (a Regional Cycle Route) provides loops leading off NCR 1 onto the Hoo Peninsula. Other promoted routes, The Weald Way and the North Downs Way are on the slopes of the North Kent Downs in the southern part of the cluster. This map also shows public greenspaces, destinations (including railway stations, rural pubs and schools) and places of interest.
- There are several significant destinations just outside the Cluster, including the Cyclopark (to the south of Gravesend), RSPB Cliffe Pools and Shornemead Fort to the north and Great Lines City Park in Chatham to the east.
- The Shorne to Shore Cluster functions as a gateway to these sites and will receive additional visitors because of them. But destinations within the cluster are also well used and there is an increasing need for co-ordinated visitor management to tackle the associated access and environmental issues.

Kent Downs AONB Management Plan 2014-2019

The Kent Downs AONB, probably more than any other protected landscape, is under pressure from growth, demographic change, development and infrastructure. The management plan policy framework needs to support the principles of sustainable development and reflect these challenges so that decisions (both within and outside the Kent Downs) have regard to the AONB and the benefits it offers. Significant urban areas adjoin the AONB boundary, or lie within close proximity, and most of these areas will expand in the coming twenty years.

Consideration of Sustainable Development, Landsford and landscape character, Biodiversity, Farmed Landscape, Woodland and Trees, Historic and cultural heritage, Heritage Coasts, Vibrant Communities, Access enjoyment and understanding, Implementation, monitoring and review.

Key Opportunities and Identification of Priorities

There is a brief history of CAMS and the Green Grid both of which have relevance to the sorts of approaches that might be taken in the future to environmental projects.

Links into the urban areas are important part of access. The wider area which can be split into three broad areas:

North Kent Marshes & River Thames

Agricultural land leading up to A2

Kent Downs Area of Outstanding Natural Beauty

CAMS

There is a major precedent for a major comprehensive environmental scheme in this area. It provides a useful model to set any proposals against, which is not to say that it is a model to be necessarily followed.

CAMS (Cobham Ashenbank Management Scheme) was set up in response to the implications on Cobham Park wider area of what is now called HS1. It was made up of (using current names) GBC, KCC, Union Railways (as promoter of HS1 then called CTRL), Natural England, Historic England, National Trust, Woodlands Trust and Cobham Hall School). This was part of an overall package of mitigation (for the railway and A2/M2 widening) and compensation agreed as an undertaking with the Promoters at the House of Lords Committee stage of the Channel Tunnel Rail Link Bill, which became an Act in 1996.

It took an endowment of £750,000 (1996 prices) and turned it into about £7.25m worth of projects – covering nature conservation, landscape, access as well as buildings (the Darnley Mausoleum restoration) over the area. A key component of this was the employment of a scheme manager to act as a focus for both bids to funding bodies (HLF, Lottery, Government etc.) but also in building relationships between organisations and land owners.

It was hosted and managed by Gravesham BC but run by a steering group of the above organisations. Geographically it covered the historic Cobham Park plus Shorne Woods – but had links to projects like Ranscombe Farm (Plantlife) in Medway as well as the wider Green Grid. As currently understood the LTC scheme will potentially damage some of this mitigation and compensation, as well as its impact on other areas.

Green Grid

In the context of Kent Thameside (Dartford and Gravesham north of the A2), and derived from RPG9a: Thames Gateway Planning Guidance (1995) a key policy objective was the creation of what was called the Green Grid. This was the network of open spaces across the area (urban and rural) and the links between them (both physical and in nature conservation terms). A large amount of work was done on this and the outworking can be found in the relevant Local Plans. It also had links to the archaeology, listed buildings, conservation areas which are part of the character of the area as well as the natural environment.

There were a series of cluster studies across North Kent which are now potentially out of date which provide a wealth of thoughts and information from mid 2000's (see attached map). Shorne to Shore can be found at <http://www.tgkp.org/content/Reports/shorne-to-shore-tech-report-1297187371.pdf>

Shorne to Shore Opportunities

- The Greening the Gateway Kent & Medway initiative - potential for Thames Gateway Parklands funding
- Enhancement of existing freshwater and grazing marsh habitats as potential compensation for loss of designated habitat
- Re-connect the rather fragmented rights of way network to the north of Shorne Ridge
- Promote strategic routes connecting Shorne Ridge and adjacent urban areas to the Thames Estuary Marshes to the north and the Kent Downs AONB to the south (for pedestrians, cyclists and horse riders)
- Increase provision for horse riders, since there are exceptionally large numbers of horses in the cluster
- Reduce the sense of severance caused by the M2/rail corridor by improving access across this corridor (particularly underpasses and footbridges)
- Provide safe off-road cycleways which encourage direct access to Shorne Woods Country Park from adjacent urban areas
- There is scope to transform the Gravesham Borough Council owned Cascades Leisure Centre with multiuser greenway links to Shorne Woods Country Park

- Build a programme of positive, proactive dialogue with local farmers, agents and landowners so that opportunities for landscape, access and habitat improvements can be developed and delivered in conjunction with financed agri-environmental schemes (HLS)
- There are specific opportunities to encourage HLS on the Thames Marshes when the existing Environmentally Sensitive Area scheme comes to an end (in 2012)
- Off-road 'behind the hedge' permissive recreational routes might offer alternative safe, attractive routes for pedestrians and horse riders who cannot safely use the busy rural lanes
- Shorne Woods Country Park has the potential to be considered a Site of Special Archaeological Interest for the variety and condition of its archaeological sites.

Strategic Green Grid connections - The Cluster area has a potentially important role within the overall North Kent Green Grid simply because of its location. This stretch of countryside between the urban areas of Gravesend and Rochester functions as a link between town and countryside, fulfilling a basic need for access to nature and an opportunity to enhance quality of life for many thousands of people. So the Shorne to Shore vision has a strong focus on promoting and enhancing countryside access and on improvements to some key connections within the network of rights of way. The main long distance routes (Thames Estuary Path, North Downs Way, Weald Way National Cycle Route 1) are already well known and circular routes are promoted around the key landscape destinations (the country park, nature reserves, Woodland Trust site and Jeskyns) and locally around some villages, but some key connections are underused or missing and there is generally a lack of provision for horse riders and cyclists.

The focus is on providing: - off-road multi-user routes between Gravesend and Shorne Woods Country Park, between National Cycle Route 1 (along the Thames Medway Canal) and the Thames Estuary Path and along both banks of the River Medway, linking Maidstone with Rochester. These routes will be specified to a high quality and will be suitable for family cycling - improved provision for horse riders on new bridleway loops (some of which could be Toll Ride routes) - high quality, promoted recreational trails which connect Gravesend and Strood with the farmland, woods and marshes on their doorstep and which connect to long distance routes - the North Downs Way, Weald Way and Thames Estuary Path. - new pedestrian footbridges over the railway line to ensure safe access and maintain key connections within the rights of way network. Local rural communities will reap the economic benefits of increased visitor interest and access, but it is essential that they are fully engaged in shaping enhancements to landscapes which form the setting and approach to villages and in drawing on their heritage to strengthen local identity.

Thames and Medway Canal Clusters Opportunities

Sustainable transport links to new RSPB flagship reserve at Cliffe Pools and Higham Station • New canalside districts will provide critical mass of people - enhanced property values and economic benefits provided by Canal public realm • Navigable canal - will provide major destination for recreation and boats (of regional significance) • Promoted rights of way (national, footpath & cycleway routes

Ebbsfleet Valley and A2 Corridor Clusters Opportunities

Innovative interpretation, linked to local art and community engagement projects to raise awareness of the exceptional heritage of the area

Improved and extended network of footpaths and cycleways to link urban communities to the River Thames shoreline to the north, the countryside/AONB to the south, the Darenth Woods Country Park (to the west) and the complex of woodlands and parklands at Jeskyns/Ashenbank/Cobham to the east

Landmark art projects to engage communities, promote the gateway and create a sense of place

Organisations and Landowners

- Kent Downs AoNB JAC
- Old Chalk New Downs Project (KCC based)
- Hoo Peninsula Project
- North Kent Environmental Planning Group (hosted by Medway)
- North Kent SAMS (hosted by Medway)
- RSPB (North Kent marshes)
- KCC (Shorne Woods CP)
- Woodlands Trust (Ashenbank Wood)
- Forest England (Jeskyns)
- Gravesham BC (West Park & Cascades)
- National Trust (Cobham Woods and Mausoleum)

Related to Cobham Park

- Cobham Hall School (School and surrounding grounds) – Educational Trust so primary purpose is not environmental
- Rochester and Cobham Golf Club – East Park

There are a number of other land owners in the area. Some of these have promoted sites to the Local Plan process as part of the SLAA (Strategic Land Availability Assessment) call for sites.



7.6 MEDWAY BOROUGH COUNCIL

Medway Borough Council

| | |
|--|--------------|
| Identified Impacts and Pressures | Not received |
| Key Policy and Background Studies | Not received |
| Key Opportunities and Identification of Priorities | Not received |
| Organisations and Landowners | Not received |

7.7 DEFRA

DEFRA Family Projects

Overarching principles:

- As a flagship Highways England scheme, this project should showcase sustainable development and deliver net gain for biodiversity and protected landscapes.
- Habitat connectivity along the route will be maintained wherever possible recognising the significant ecological impacts that a linear scheme has in severing the ecological networks. Living bridges and wildlife corridors should be installed at key locations to facilitate movement of wildlife and people helping the future proof the scheme.
- Pollinator corridors using species rich grassland mixes along the verges should be sown on subsoil (the topsoil will be too fertile to establish species rich grasslands)
- Where possible, enhancements should extend or buffer existing habitats to maximize their wildlife value
- Opportunities for recreational activities should be incorporated wherever possible

DIRECTLY IMPACTED – PROJECT ID

DFP-03: East Tilbury brown-field

Potential for restoring the working area at East Tilbury to a brownfield invertebrate site

DFP-04: Landscape mitigation in partnership with other major developments Working in partnership (e.g. Tilbury 2) to deliver a joined up, landscape scale approach to mitigation and enhancement opportunities

DFP-05: Enhancements at Tilbury Fort

Joined opportunities with Historic England to deliver ecological (invertebrate), access (England coast path) and historic monument enhancements at Tilbury Fort.

DFP-08: ECOLOGICAL ENHANCEMENTS TO FLOOD DEFENCES

Ecological enhancements to flood defences and concrete structures within the Thames

DFP-09: A2 CORRIDOR ENHANCEMENTS

Working in with other developments (e.g. Ebbsfleet Garden City, A2 Bean to Ebbsfleet, London Resort) to deliver a landscape scale approach to mitigation and enhancement opportunities along the A2 corridor

DFP-10: MULTI-FUNCTIONAL ACCESSIBLE GREEN SPACE

Opportunities for significant habitat buffering and creation and provision of new multi-functional accessible green space for residents of east Gravesend on the farmland that will be isolated by the link road. Jeskyns approach of a multiplicity of complementary land uses

DFP-11: LIVING BRIDGE TO LINK CLAYLANE WOOD TO SHORNE WOODS

Living bridge across the dial carriageway to link Claylane Wood and Shorne Woods with would also ensure the public right of way is maintained and help with landscape mitigation

DFP-12: REMOVE THE BARRIER OF THE WIDENED A2 FOR NON MOTORISED USERS

Opportunities to remove the 'barrier' of the widened A2 for non-motorised users between Shorne and Cobham/ Jeskyns (ideally with a living bridge) to help reconnect the landscape for people and wildlife along with the health and well-being benefits that will deliver.

DEFRA Family Projects

DFP-13: WOODLAND PLANTING

New central reserve woodland planting to help with connectivity for mobile species and mitigate impacts to the Kent Downs AONB

DFP-14: A2/ M2 WIDENING

Bolstering the mitigation installed for the A2/M2 widening and CTRL by delivering landscape enhancements in the AONB

DFP-15: WOODLAND CREATION

Woodland creation linking Great Crabbles and Randall Woods

DFP-16: MAKING A BUZZ FOR THE COAST

Opportunities to link with initiatives like 'Making the buzz for the coast'. Access opportunities into the Kent Downs.

INDIRECTLY IMPACTED – PROJECT ID

DFP-06: Clay Spoil in Higham Creek











Opportunities to use clay spoil (if the soil is compatible) to recharge areas of intertidal habitat e.g. Higham Creek















DFP-07: Management of water levels at SSSI

Significant opportunities to use treated surface water to help manage water levels within the SSSI helping mitigate the impacts of climate change

7.8 ENVIRONMENTAL STAKEHOLDER PROJECTS

Environmental Stakeholder Projects

| Directly Impacted – Project ID | DESCRIPTION AND OBJECTIVES | CONTRIBUTION TO GI THEMES | TIMESCALES |
|--|--|--|---|
| <p>BL-04 Important Invertebrate Areas</p> | <p>Thames Gateway Important Invertebrate Area There are a series of restored landfill sites in the Ockendon area which [Buglife] have never really had access to that may have significant interest/Open mosaic habitat dependent on the nature of their restoration. It is essential to look at landscape scale issues, especially the potential impact on Shrilc carder bee as the work is likely to lead to significant fragmentation of nationally important populations.</p> <p>Goshems Farm Local Wildlife Site (LoWS)- largely currently being [destroyed], but any remnant PFA areas here should be retained wherever possible as this resource is dwindling and it is a very high value invertebrate habitat when at depth and with diverse topography, hydrology, etc.</p> <p>Low Street Pit LoWS Low profile site but very significant as minimal management and diverse topography has maintained a rich mosaic of habitats. Includes the declining Hornet robberfly (<i>Asilus crabroniformis</i>)</p> <p>Tilbury Power Station (and relevant LoWS sites in footprint) refer to: BL-01 Tilbury Power Station</p> <p>Mucking Heath LoWS/Orsett Golf Course Remnant heathland in edges of golf course is an extremely restricted habitat in the area and the site has a very strong invertebrate fauna</p> <p>Blackshot Nature Area LoWS A valuable site for rough grassland species requiring less management, which is surprisingly rare as a feature in the landscape- used by the Phoenix fly (<i>Dorycera graminum</i>)</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Parks  Valley Park and Farmland <input checked="" type="checkbox"/>  Formal Recreation <input checked="" type="checkbox"/>  Community Forest  A-Civil  Strategic Walking Routes  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Lanes | <p>Planned- broad-scale national hectad map produced, no funds currently for fine-scale mapping</p> |

| | | | |
|---|--|---|---|
| <p>BL-02 Orsett Camp Quarry/Orsett East Quarry</p> | <p>Acid grassland/scrub/open mosaic habitat Potential nitrogen deposition impacts leading to succession Funding management of site/purchase as mitigation</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Parks  Valley, Park and Farmland  Formal Recreation  Community Forest  AONB  Strategic Walking Routes <input checked="" type="checkbox"/>  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Lanes | <p>Currently trying to protect from planning impacts. Previous discussions with land owner directly.</p> |
| <p>BL-05 B-Lines</p> | <p>B-Lines are an imaginative and beautiful solution to the problem of the loss of flowers and pollinators. The B-Lines are a series of 'insect pathways' running through our countryside and towns, along which we are restoring and creating a series of wildflower-rich habitat stepping stones. They link existing wildlife areas together, creating a network, like a railway, that will weave across the British landscape. This will provide large areas of brand new habitat benefiting bees and butterflies– but also a host of other wildlife. Improving national and regional wildflower resources to allow pollinators to move across the landscape. Targeted wildflower enhancement within the B-Lines network to contribute to the national scheme</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Parks  Valley, Park and Farmland <input checked="" type="checkbox"/>  Formal Recreation  Community Forest  AONB <input checked="" type="checkbox"/>  Strategic Walking Routes <input checked="" type="checkbox"/>  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Lanes | <p>Active- map produced, awaiting development of partnership projects to deliver wildflower enhancements throughout the network</p> |

TCCF-01
TCT-01
 Thames Chase
 Community Forest
 Centre
 Broadfields

Broadfields is a community woodland surrounding the Thames Chase Forest Centre which attracts 110,000 visitors per annum. Formerly called Broadfields Farm, the Forestry Commission site is now home to a variety of surfaced trails, ponds, meadows and even an orchard planted with traditional Essex apple and pear varieties.

Direct impact - part of the site falls within development boundary

Opportunities to improve site connectivity as the site becomes more fragmented- includes within site (as site is split in half with M25) and connections from site to wider recreation network.

Explore opportunities to at least maintain the current size of Broadfields- the FC could potentially manage land adjacent to Broadfields that HE are required to purchase as part of the LTC works.

Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.

- Existing GI Asset Typology**
-  Country Parks
 -  Valley, Park and Farmland
 -  Formal Recreation
 -  Community Forest
 -  AONB
 -  Strategic Walking Routes
 -  Heritage
 -  Biodiversity & Habitats
 -  Strategic Cycling Routes
 -  Protected Lanes

Ongoing

TCCF-03
 Folkes Lane
 Community Forest

Folkes Lane Woodland was formed from four fields – Slaughterhouse, 29-acre, Fordhams and Berendens. They were originally part of Berendens Manor, which was first recorded in 1350, when a Peter de Workyden rented it. This manor and its house survived until hit by Luftwaffe bombs in 1940. The site was then divided by the M25 when it was cut into the hill's scarp face in the 1980's. From its top are vistas south over the River Thames to the North Downs and west across London's Docklands with Canary Wharf, then on to the Millennium Dome and as far as the London Eye





















The woodland attracts ~ 40,000 visitors per annum.











Direct impact - part of the site falls within development boundary

Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.

- Existing GI Asset Typology**
-  Country Parks
 -  Valley, Park and Farmland
 -  Formal Recreation
 -  Community Forest
 -  AONB
 -  Strategic Walking Routes
 -  Heritage
 -  Biodiversity & Habitats
 -  Strategic Cycling Routes
 -  Protected Lanes

Ongoing

| | | | |
|---|--|---|-------------------------------|
| <p>TCT-02 Out and About in Thames Chase and the Green Grid and TCT-03 The Forest Circle TCT-04 Mardyke River</p> | <p>LTC Landscape-scale mitigation response involving many TCCF partners. route will cut through this project designed to connect people and landscapes</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Park  Valley, Park and Farmland <input checked="" type="checkbox"/>  Formal Recreation  Community Forest  AONB  Strategic Walking Routes <input checked="" type="checkbox"/>  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes <input checked="" type="checkbox"/>  Protected Lanes | <p>Planned, ongoing</p> |
| <p>EWT-01a & 01b The Lost Fens: Bulphan Fen (a) and Orsett Fen (b)</p> | <p>Potential to restore area as an extensive wetland landscape. As this is the lowest point the area could act as a large scale SUDS scheme to take water from the road corridor creating significant flood storage and areas of habitat reconnecting the Mardyke to its natural floodplain Direct impact - both sites fall within development boundary Targets: Potential fen, wet grassland and wet woodland Other Project Targets: Supported by South Essex Catchment Partnership and Land of the Fanns partnership</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Park  Valley, Park and Farmland <input checked="" type="checkbox"/>  Formal Recreation  Community Forest  AONB  Strategic Walking Routes  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Lanes | <p>Aspiration Project</p> |

| INDIRECTLY IMPACTED – PROJECT ID | DESCRIPTION AND OBJECTIVES | CONTRIBUTION TO GI THEMES | TIMESCALES |
|---|--|--|----------------------------|
| <p>EWT-02 Thurrock Thameside Nature Park</p> | <p>Potential site to receive excavated materials by barge to create grassland/ invertebrate habitat. Essex Wildlife Trust takes on the management of the completed landfill site form Enovert in phases as they are completed Other projects -Thames terrace grassland invertebrate assemblages Shrill Carder bee etc.</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Parks  Valley, Park and Farmland <input checked="" type="checkbox"/>  Formal Recreation <input checked="" type="checkbox"/>  Community Forest  AONB  Strategic Walking Routes <input checked="" type="checkbox"/>  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Lanes | <p>Active, Ongoing</p> |
| <p>EWT-03 Oakington Landfill Cap</p> | <p>Potential to take on management of capped and restored landfill to deliver biodiversity and public access objectives Direct impact - sites lies on the side of LTC development boundary</p> | | <p>Aspiration</p> |
| <p>TLoF-01 A1.2 Community tree nursery</p> | <p>To develop a community tree nursery on a not-for-profit commercial basis providing genetically diverse stock for local sale. Using volunteers to help with seed collection, growing on and tending the growing plants as well as marketing, will provide opportunities for acquiring skills, learning about the natural environment and engaging in healthy outdoor activity. Trees produced in the tree nursery could be used within any LTC tree planting areas + this would be a community asset providing opportunities for training and volunteering</p> | | <p>Ongoing</p> |
| <p>TLoF-02 A2.2 Low nutrient habitats</p> | <p>To restore remnants of low nutrient habitats, which have almost vanished from the landscape. LTC could affect reptile population in surrounding green spaces Reptile and Amphibian surveying in surrounding green spaces, habitat management. Potential for tylers common and other sites based on site surveys to become reception sites for any translocation required as mitigation for the LTC.</p> | | |

| | | | |
|---|---|--|----------------|
| <p>Tlof-03 A3.2 Connecting historic landscapes</p> | <p>To improve access and understanding at two strategic historic landscapes within the Land of the Fanns. While the ownership of the woodland, grassland and amenity sites within these landscapes is fragmented, collectively they represent a significant and large scale strategic resource for local communities to access and enjoy. By drawing the governance, management and future planning together under the narrative of Land of the Fanns, access and understanding will become be more joined up.</p> <p>Belhus Grade II Registered park & Garden is a valuable asset in terms of green space provision which could compensate for housing and infrastructure projects such as LTC. LoTF can provide the strategic framework to enable better future investment to realise this potential.</p> | <p>Existing Of Asset Typology</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Country Parks <input type="checkbox"/> Valley, Park and Farmland <input type="checkbox"/> Formal Recreation <input type="checkbox"/> Community Forest <input type="checkbox"/> AONB <input checked="" type="checkbox"/> Strategic Walking Routes <input checked="" type="checkbox"/> Heritage <input checked="" type="checkbox"/> Biodiversity & Habitats <input type="checkbox"/> Strategic Cycling Routes <input type="checkbox"/> Protected Sites | <p>Ongoing</p> |
| <p>Tlof-04 A3.1 River catchments</p> | <p>The project seeks to provide a significant boost for the Land of the Fanns rivers - the Rom/Beam, Ingrebourne and the Mardyke - by facilitating further river restoration work by the two Catchment Partnerships operating within the landscape. These efforts will be supported by the respective Catchment Partnership Plans: The South Essex Catchment Plan and the Roding, Beam and Ingrebourne Catchment Plan. LTC will cross the River Mardyke Work identified along the Mardyke through South Essex Catchment partnership could provide opportunity for mitigation as part of LTC</p> | | <p>Ongoing</p> |

BL-04

Important Invertebrate Areas

Tilbury Marshes LoWS

although degraded there are still many recent invertebrate records and the recent Tilbury 2 surveys highlighted this. Historically much ditch interest but has been impacted by illegal grazing.

Broom Hill LoWS

An absolutely key Thames Terrace Grassland site. One of the last sites for this grassland type and filled with rare species including Hornet robberfly, Brown-banded carder bee (*Bombus humilis*), Five-banded weevil-wasp (*Cerceris quinquefasciata*), etc. Very notably nesting aggregates on bare sand and gravel faces.

Hob Hill Pit

Not surveyed but casual visits have show very impressive habitat and range of ground nesting Hymenoptera

Orsett Camp Quarry LoWS, refer to:

BL-02 ORSETT CAMP QUARRY/ ORSETT EAST QUARRY

Existing GI Asset Typology

-  Country Park
-  Valley, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AGIS
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Protected Zones

Possible, not started

Environmental Stakeholder Projects

| INDIRECTLY IMPACTED – PROJECT ID | DESCRIPTION AND OBJECTIVES | CONTRIBUTION TO GI THEMES | POLICY OBJECTIVES |
|----------------------------------|---|--|---------------------------|
| | | | CS12 Green Infrastructure |
| <p>BL-05 B-Lines</p> | <p>The B-Lines are a series of ‘insect pathways’ running through our countryside and towns, along which we are restoring and creating a series of wildflower-rich habitat stepping stones. They link existing wildlife areas together, creating a network, like a railway, that will weave across the British landscape. This will provide large areas of brand new habitat benefiting bees and butterflies– but also a host of other wildlife.</p> <p>Improving national and regional wildflower resources to allow pollinators to move across the landscape.</p> <p>Targeted wildflower enhancement within the B-Lines network to contribute to the national scheme</p> <p>TIMESCALES Active- map produced, awaiting development of partnership projects to deliver wildflower enhancements throughout the network</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none">  Country Parks  Vales, Park and Farmland <input checked="" type="checkbox"/>  Formal Recreation  Community Forest  AGIS <input checked="" type="checkbox"/>  Strategic Walking Routes <input checked="" type="checkbox"/>  Heritage  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Lanes | |

BBC-01

Making a buzz for the coast

One of the primary aims of Making a Buzz for the Coast will be to safeguard rare bee populations by creating and restoring habitat and linking isolated populations together through the creation of flower-rich 'stepping stones' and habitat along the coast. Habitat and bee surveys will be an essential part of the project to help us build better data, evaluate our activities and monitor bee populations around the coast

Habitat loss for priority bumblebee & solitary bee species. Thames estuary is last remaining stronghold for Shrill carder bee. Further fragmentation of habitats. Opportunities include Windflower habitat creation & connectivity – mitigation Linked Projects – Shrill Carder Bee Recovery Project, Bee Walk

TIMESCALES

Active, 3 year delivery phase to Oct 2020

Enabling Of Asset Typology

-  Country Park
-  Village, Park and Farmland
-  Formal Recreation
-  Community Forest
-  AONB
-  Strategic Walking Routes
-  Heritage
-  Biodiversity & Habitats
-  Strategic Cycling Routes
-  Approved Lanes

wildlife stepping stones and corridors will be created, protected, enhanced and maintained.

RSPB-01
North Kent
Marshes Breeding
Wader Project

RSPB-WH-10
Hydrology of
Shorne Marshes

To improve the habitat for breeding waders (lapwing and redshank) through careful hydrological management. To ensure that there is breeding success of the nesting birds through controlling predation. To ensure there is optimum habitat for wintering wildfowl and waders, providing refuge sites. Significant impacts at Shorne Marshes, where the hydrology of the site may be impacted by the development Opportunities to repair any negative impacts, either at Shorne or other locations with similar habitat as a compensation for loss.

Coastal and Floodplain Grazing Marsh and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area. Opportunities for match funding with a multiplier effect of lottery funding.

TIMESCALES
Not started, 2020- 2024

Existing GI Asset Typology

- Country Parks
- Valley, Park and Farmland
- Formal Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes

RSPB-WH9a,b,c

- a. Linking Denton and Shorne Mead Fort
- b. Ways to Wellbeing
- c. Young Persons Interpretation of Military Heritage and Connecting Denton

Whose Hoo - HLF Landscape project

Denton to Shorne coastal area

Physical and mental health well-being walks, based from Denton. This community has a number of factors indicating high levels of social deprivation.

TIMESCALES
Not started, 2020- 2024

Existing GI Asset Typology

- Country Parks
- Valley, Park and Farmland
- Formal Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes

A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.

RSPB-WH-06
William Hogarth
Walking Trail

Whose Hoo - HLF Landscape project
Medway Swale Estuary Partnership
Gravesend to Grain
People access project for better pathways
- Increase park use and its biodiversity.
Match funding with a multiplier effect of
lottery funding.
TIMESCALES
Not started, 2020-2024

- Existing GI Asset Typology**
-  Country Parks
 -  Valeys, AONBs and Farmland
 -  Formal Recreation
 -  Community Forest
 -  AONB
 -  Strategic Walking Routes
 -  Heritage
 -  Biodiversity & Habitats
 -  Strategic Cycling Routes
 -  Protected Lanes

A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.

TMCA-01
Dredge Canal
from Mark Lane
to Shore

From Mark Lane, Gravesend to Church Street, Higham. Kent.
Eastcourt Marshes is a suggested TMCA building location.
To continue to develop and maintain the Gravesend to Higham Canal and Towpath
The Canal Towpath forms part of National Cycle Route No.1. It has a number of footpaths and cycleways joining throughout its length.
Dredge canal from Mark Lane to Shorne crossing to allow craft to fully utilise the waterway. Erect notice boards to inform public of history, wildlife, flora and fauna.
Open areas currently closed due to shallows or fallen trees.
Investigate short course on identification of plants, trees, etc. within our boundary.
Increase knowledge and promote habitat of local species including Water Voles. Run Publicised walks on Biodiversity and History.
Publicise Canal and increase membership.
Possibility of short term assistance with diggers and dumpers necessary for clearing canal. Personnel for clearing overgrown areas may be available for general community benefit.

TIMESCALES
Ongoing. Projects are being continually completed but new ones usually have financial constraints.

| | | | |
|--|--|---|--|
| <p>KWT-01 Roadside Nature Reserves</p> | <p>A226 Verge Enhancement Project', to be developed further with LTC and Kent Highways. To improve the habitats alongside the A226 from Higham to Gravesend, link these to what will be extensive areas of HE land alongside the LTC link road, and explore how they could further link to habitats with similar functionality for relevant species (sea walls, bumblebees) further north. Protection and extension.</p> <p>TIMESCALES Active, ongoing</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none"> Country Parks Valeys, Park and Farmland Formal Recreation Community Forest AONB Strategic Walking Routes Heritage Biodiversity & Habitats <input checked="" type="checkbox"/> Strategic Cycling Routes <input checked="" type="checkbox"/> Protected Zones | <p>A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.</p> |
| <p>KD-01 Improvements to NMU Connectivity between existing GI Network</p> | <p>Continuous NMU path link between Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park, which ideally should link to easy off road access to/ from Gravesham Deterioration of experience of users of the North Downs Way along pedestrian and cycle connection over/under the A2 near Guston, Dover.</p> <p>TIMESCALES Planned</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none"> Country Parks Valeys, Park and Farmland Formal Recreation Community Forest AONB <input checked="" type="checkbox"/> Strategic Walking Routes <input checked="" type="checkbox"/> Heritage Biodiversity & Habitats <input checked="" type="checkbox"/> Strategic Cycling Routes <input checked="" type="checkbox"/> Protected Zones | <p>A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.</p> |
| <p>KD-02 National Cycle Route</p> | <p>Cycle route 177 along the north side of the A2 from the Henhurst roundabout in the west to J1 to be re-provided for as part of the LTC proposals.</p> <p>TIMESCALES Planned</p> | <p>Existing GI Asset Typology</p> <ul style="list-style-type: none"> Country Parks Valeys, Park and Farmland Formal Recreation Community Forest AONB <input checked="" type="checkbox"/> Strategic Walking Routes <input checked="" type="checkbox"/> Heritage Biodiversity & Habitats <input checked="" type="checkbox"/> Strategic Cycling Routes <input checked="" type="checkbox"/> Protected Zones | <p>A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.</p> |

TCCF-02

Thames Chase Community Forest – Jeskyns Community Woodland

Jeskyns Community Woodland lies to the south of the A2 in Kent and was established during the growth of the Thames Gateway in 2005 located near Cobham, Kent. The site was once a former farm which was bought by the Forestry Commission to create a community woodland and was opened in July 2007. Jeskyns is now a 360 acre multi functional community space with woodland, ponds, orchards and wildflower meadows. Direct impact - part of the site falls within development boundary Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.

TIMESCALES
Ongoing

Existing Of Asset Typology

- Country Parks
- Valley, Park and Farmland
- Farm Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes

A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.

The strategic green infrastructure network for the Borough is identified on Figure 19. This shows: existing and proposed long distance walking and cycling routes; movement corridors; and Biodiversity Opportunity Areas. The latter includes: major green spaces, e.g. Shorne Wood Country Park, Jeskyns; strategic green corridors,

WT-01

Ashenbank Wood

ANSW/SSSI/Wood Pasture habitat in conservation management. Important collection of veteran trees, high dead wood habitat interest which supports an obligate saproxylic beetle assemblage of national importance. Also high public visitor use with a car park providing the main entrance off Halfpence Lane. Ashenbank Wood was designated as part of the Shorne and Ashenbank Site of Special Scientific Interest (SSSI) in 1968 due to its deadwood habitat, veteran trees and open ground habitat. The whole wood is subject to a Tree Preservation Order (TPO) - Order no.1, 1960.

Existing Of Asset Typology

- Country Parks
- Valley, Park and Farmland
- Farm Recreation
- Community Forest
- AONB
- Strategic Walking Routes
- Heritage
- Biodiversity & Habitats
- Strategic Cycling Routes
- Protected Lanes

A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.

Sites designated for their biodiversity value will be protected, with the highest level of protection given

Public Right of Way NS178 passes through Ashenbank Wood.

Darnley Trail (This is a circular route for pedestrians, cyclists and equestrians that passes through Shorne Woods Country Park, Cobham Park, Ranscombe Farm Reserve, Ashenbank Wood and Jeskyns Community Woodland).

TIMESCALES

to internationally designated Special Protection Areas, Special Areas of Conservation and RAMSAR sites, followed by nationally designated sites of Special scientific interest, followed by Local wildlife sites and then by other areas of more local importance for biodiversity. Where a negative impact on protected or priority habitats/species cannot be avoided on development sites and where the importance of the development is considered to outweigh the biodiversity impact, compensatory provision will be required either elsewhere on the site or off-site, including measures for ongoing maintenance.

| INDIRECTLY IMPACTED – PROJECT ID | DESCRIPTION AND OBJECTIVES | CONTRIBUTION TO GI THEMES | POLICY OBJECTIVES |
|--|--|---------------------------|--|
| <p>PL-01 Cobham Park Registered Park and Garden</p> | <p>Significant belt of land south of the M2 between Gravesend and the Medway which is in public or NGO ownership and where sensitive public access is welcome</p> | | <p>A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained.</p> |
| <p>PL-02 Ranscombe Farm</p> | <p>Ranscombe Farm Reserve is one of the most important places in Britain for rare wild flowers. But there is also plenty of other wildlife to be found in the reserve's 620 acres (250 hectares) of woodland, farmland and grassland.</p> <ul style="list-style-type: none"> • Conserve, enhance and restore populations of nationally and locally rare plants. • Create the best arable plant site in Britain in terms of the diversity of species present and the size of their populations. • Develop the largest UK populations of eight key plant species: corncockle, hairy mallow, broad-leaved cudweed, fly orchid, man orchid, lady orchid, meadow clary, and narrow-fruited consalad. | | |

RSPB-04a
Shornmeade Fort Interpretation

Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area. A new coloniser species Black- Winged Stilts have nested there for several years and is one of the first places in the UK.

Increase intellectual access to this important structure and in doing so, reduce vandalism.

Provide funding and acknowledgement on site.











TIMESCALES
Possible, not started



A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained. Sites designated for their biodiversity value will be protected, with the highest level of protection given to internationally designated Special Protection Areas, Special Areas of Conservation and RAMSAR sites, followed by nationally designated sites of Special scientific interest, followed by Local wildlife sites and then by other areas of more local importance for biodiversity. Where a negative impact on protected or priority habitats/species cannot be avoided on development sites and where the importance of the development is considered to outweigh the biodiversity impact, compensatory provision will be required either elsewhere on the site or off-site, including measures for ongoing maintenance.

| NON DIRECT IMPACTED PROJECTS Considered potential wider connections and contributions to GI, falling beyond LTC GI Study Area. | DESCRIPTION AND OBJECTIVES |
|--|--|
| RSPB-02a Cliffe Pools Enhancement | Requirement for 5 mill tonnes of aggregates Provide LTC arisings and bring to the site |
| RSPB-WH-02 Restoration of the Larkin Monument | Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham. Increase park use and its biodiversity Match funding with a multiplier effect of lottery funding |
| RSPB-WH-4a&b CLIFFE VILLAGE AND ITS HINDERLAND STEPPING STONES: DEAD END PATHS | A volunteer based archaeological project involving local people discovering about the past People access project for better pathways |
| RSPB-04b Hydrology at Cliffe Pools | To improve the habitat for breeding waders (lapwing and redshank) through careful hydrological management. To ensure there is optimum habitat for wintering wildfowl and waders, providing refuge sites. |

Environmental Stakeholder Projects

| INDIRECTLY IMPACTED – PROJECT ID | DESCRIPTION AND OBJECTIVES | CONTRIBUTION TO GI THEMES |
|---|---|--|
| <p>RSPB-WH-02 Restoration of the Larkin Monument</p> | <p>Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham. Open up green space and restore a monument to a politician who championed widening the electorate. Match funding with a multiplier effect of lottery funding.</p> <p>TIMESCALES Not started, 2020- 2024</p> | <p>Linking GI Asset Typology</p> <ul style="list-style-type: none">  County Parks  Valley, Park and Farmland  Formal Recreation  Community Forest  AONB  Strategic Walking Routes <input checked="" type="checkbox"/>  Heritage <input checked="" type="checkbox"/>  Biodiversity & Habitats <input checked="" type="checkbox"/>  Strategic Cycling Routes  Protected Areas |

NON DIRECT IMPACTED PROJECTS

Considered potential wider connections and contributions to GI, falling beyond LTC GI Study Area.

| | |
|--|--|
| <p>RSPB-WH-01b Bessie's Lane – An ancient Royal Throughfare</p> | <p>People access project for better pathways</p> |
| <p>RSPB-WH-01a Cross Park Country Park</p> | <p>Improve setting and facilities of a public green space and increase volunteering capacity. Currently a single octogenarian volunteer manages the site</p> |
| <p>RSPB-WH-01c Slough Fort Visitor Cafe</p> | <p>To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries</p> |
| <p>RSPB-WH-01d Reform and Remodel the Glacis of Slough Fort</p> | <p>To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries</p> |
| <p>RSPB-WH-01e Create and interpretive display</p> | <p>To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries</p> |
| <p>RSPB-WH-03 To develop a Wildflower Meadow</p> | <p>Improve a public green space</p> |
| <p>RSPB-WH-04b Steeping Stones: Dead End Paths</p> | <p>Steeping Stones: Dead End Paths - Cliffe cul-de sac paths a destination not a dead end.</p> |
| <p>RSPB-WH-04a Cliffe Village and its Hinderland</p> | <p>A volunteer based archaeological project involving local people discovering about the past</p> |

| | |
|---|--|
| <p>RSPB-WH-05 Re-discovering the Port Victoria Line and the town that never was</p> | <p>People access project for better pathways</p> |
| <p>RSPB-WH-06 William Hogarth Walking Trail</p> | <p>People access project for better pathways</p> |
| <p>RSPB-WH-07 Lapwig Lifeline at Cliffe Pools</p> | <p>To increase the breeding productivity of breeding waders by reducing predation by large mammals (fox/badgers) who take eggs of ground nesting birds. Typically a non Anti Predator fenced area will have a low yield of chicks per pair per annum, 0.1-0.2 chicks. To be sustainable, a pair must reproduce 0.6-0.8 chicks per year to replace adult mortality. This can be achieved and results of 1.0-1.2 are not unusual in specialist mesh and electrical fenced combinations</p> |
| <p>RSPB-WH-08 Increasing invertebrate food sources for Lapwing Chicks</p> | <p>Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area.</p> |
| <p>RSPB-WH-09 Ways to Well Being</p> <p>RSPB-WH-09a Linking Denton and Shorne Mead Fort</p> <p>RSPB-WH-09c Young Persons Interpretation of Military Heritage and connecting Denton</p> | <p>Physical and mental health wellbeing walks, based from Denton. This community has a number of factors indicating high levels of social deprivation</p> |
| <p>RSPB-WH-10 Hydrology of Shorne Marshes</p> | <p>To improve habitat for breeding waders and the suite of species associated with wetlands.</p> |

SECTION 8: RATIONALE AND SUMMARY METHOD



8 RATIONALE AND SUMMARY METHOD

8.1 INTRODUCTION

This methodology describes the approach for identifying projects and key GI assets to mitigate through the iterative design process which are directly and indirectly affected by LTC.

The methodology is to be read in conjunction with the Glossary as this provides further definitions and explanations of terminology used throughout the Methodology.

This methodology provides the process for: a high level appraisal and sifting of existing projects and GI assets, identified in current policy documents; the identification of GI assets considered as part of the high level appraisal in Stage 1; the identification of issues, opportunities and projects (active and aspirational) identified through stakeholder consultation; and, the approach for proposing ranking of recommendations.

8.1.1 SITE SURVEY

Initial field work has been carried out in summer, 2018, to undertake a high level appraisal of identified GI assets.

8.1.2 STAKEHOLDER ENGAGEMENT

Active engagement has been carried out with the following stakeholders throughout the process of GI and Project identification:

- Historic England HE
- Environment Agency EA
- Natural England NE
- Marine Management Organisation MMO
- Forestry Commission FC
- Kent Downs AONB KD AONB
- Bumblebee Conservation Trust BBCT
- Buglife BL
- Essex Wildlife Trust EWT
- Forestry Enterprise England FEE
- Kent Wildlife Trust KWT
- Royal Society for the Protection of Birds RSPB
- Woodland Trust WT
- Land of the Fanns LotF
- Thames Chase Trust TCT
- Thames and Medway Canal Association TMCA
- Brentwood Borough Council BBC
- Medway Council MC
- Kent County Council KCC
- Essex County Council ECC
- Thurrock Council TC
- Dartford Council DC

Limitations of the GI Study

GI results from the interplay between the natural, physical and cultural components of the environment and as such the study is a process closely linked with other topics, notably ecology and the historic environment. Whilst each of these topics can influence and contribute to the sensitivity and value of GI resources, the assessment of effects on historical assets and ecological designations is not part of the scope of the GI Study.

8.2 ESTABLISHING VALUE

GI Value

Landscape value describes the relative level of value or importance attached to a GI Asset or Project (that would potentially be affected by the proposed development) by the different stakeholders and parts of society that use or experience that landscape resource.

Factors that have been considered in the determination of value include landscape designations and the level of importance that they signify (i.e. whether international, national or local), relevant local planning policy and guidance, the status of individual areas or features, the quality, condition and rarity of individual features or elements within the landscape and any verifiable local community interest.

The value of GI receptors are determined against the criteria set out in Table GI.01 in order to establish a consistent and objective baseline against which the potential effects arising as a result of LTC can be assessed.

Table GI.01 Criteria considered when determining GI value.

| VALUE | CRITERIA |
|------------|--|
| Very High | <p>International, European and National level designated areas (e.g. World Heritage Sites, National Parks, AONBs, Registered Parks and Gardens, Scheduled Monuments, Grade I or II* Listed Buildings) are present within the receptor.</p> <p>The GI asset is considered to be an important component of the country's character and is experienced by a high number of tourists and wide range user group.</p> <p>The condition of the GI Asset and its individual elements is good and is generally maintained to a high standard.</p> <p>Rare or distinctive elements and / or features are key components that contribute to the character of the area / quality of the GI resource.</p> |
| High | <p>Regional or County level designated areas (e.g. Areas of Great Landscape Value (AGLV), Green Belt, Country Parks, Grade II Listed Buildings, Conservation Areas, Local Wildlife Sites) are present within the receptor.</p> <p>The GI is considered to be an important component of the region or county's character and is experienced by a reasonable proportion of its population.</p> <p>The condition of the GI and its individual elements is good and is generally well maintained.</p> <p>Rare or distinctive elements and / or features may be present and would contribute to the character of the area / quality of the landscape resource.</p> |
| Medium | <p>GI may be valued locally (e.g. village greens, allotments or public open spaces).</p> <p>Use of the GI is likely to be limited to the local community with informal recreational use / greenspace. Local ecological importance.</p> <p>The condition of the GI and its individual elements are good to fair, but has good potential for flora and fauna.</p> <p>If present, rare or distinctive elements and / or features are not notable components that contribute to the character of the area.</p> |
| Low | <p>GI of low importance, of low quality and in fair to poor condition, with few features of value or interest. Of Site ecological importance.</p> <p>The GI has little or no amenity value.</p> <p>Rare or distinctive elements and / or features are not present.</p> |
| Negligible | <p>The GI has no amenity value.</p> <p>A landscape of very low quality and in poor condition, with very low potential for biodiversity. A site or species assemblage of limited importance to nature conservation.</p> |

Biodiversity has been considered broadly in accordance with the 2016 Guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM 2016)¹. Within this document, where possible, impacts to Important Ecological Features (IEFs) have been identified as being either significant or not significant.

8.2.1 EVALUATION

Habitats and plant communities have been evaluated against existing selection criteria, wherever possible (such as those developed to aid the designation of SSSIs or non-statutory designated sites). Only those features that it was considered could experience significant effects (i.e. impacts that could adversely affect the integrity of the habitat or the favourable conservation status of a species' local population) have been classified as being 'IEF' and will be considered in this GI Study.

Table GI.02 Determining the importance of an 'IEF'

| IMPORTANCE OF IEF | CRITERIA |
|--------------------------|--|
| International / European | A statutory designated site of International or European importance for nature conservation: for example, a Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar site. Or a site that supports a population of a mobile species that, whilst not designated, is deemed to be functionally-linked to a statutory designated site of International or European importance. Or a species population or assemblage that is of International or European importance. |
| National | A statutory designated site of National importance for nature conservation such as a SSSI. Or a species population or assemblage of National importance (i.e. value to England). |
| Regional | A statutory designated site of Regional importance to nature conservation such as a National Park. It would also include species populations and assemblages of Regional importance, (i.e. value at the South West of England level). |
| County | A non-statutory designated site of County importance to nature conservation. This would include Sites of Importance for Nature Conservation (SINCs) and Local Wildlife Sites (LWSs). It would also include species populations and assemblages of County, District or Metropolitan importance (i.e. value at the Borough level). |
| Local | A habitat or species assemblage of Local importance. |
| Site | A site or species assemblage of Site importance. Whilst such features are not are not considered sufficiently important to be material in decision-making, they do contribute to the biodiversity value of a site. |
| Negligible | A site or species assemblage of limited importance to nature conservation. |

8.2.2 APPRAISAL

Having determined the baseline conditions for the GI, the appraisal process then proceeds with the following stages:

Evaluate the sensitivity of GI Assets and Projects in relation to LTC;

Assess the magnitude of change arising as a result of LTC on the GI Assets and Projects;

Combine judgements on the nature of receptor (sensitivity) with the nature of change to arrive at a clear and reasoned professional judgement to identify the most sensitive GI Assets in policy terms to determine priority recommendations to take forward for mitigation and design.

8.2.3 GI SENSITIVITY

The sensitivity of GI receptors are assessed by combining judgements on the value attached to the GI asset and its susceptibility to the type of change proposed, i.e. a judgement about the nature of the proposed development in relation to the baseline ability of the landscape to accept that type of change. The sensitivity of landscape receptors will vary therefore depending on the type and nature of development proposed.

8.2.4 GI SUSCEPTIBILITY

Susceptibility describes the ability of a GI receptor to accommodate change (i.e. the proposed development) without undue consequences for the maintenance of the baseline situation and / or the achievement of landscape planning policies or strategies.

Table GI.03 sets out the criteria that have been considered when determining GI susceptibility.

Table GI.03 Criteria for determining susceptibility

| SUSCEPTIBILITY | CRITERIA |
|----------------|---|
| Very High | <p>There would be conflict with NPSNN and relevant national, regional and local planning policies or GI strategies.</p> <p>The majority of existing element(s) would not be easy to replace (e.g. ancient woodland, mature trees etc).</p> <p>Detracting features or major infrastructure are not present in the area.</p> <p>The GI receptor has a very low level of ability to accept the type of development proposed without designed mitigation.</p> |
| High | <p>There would be conflict with objectives of the NPSNN and specific local planning policies or GI strategies.</p> <p>There is little or no existing reference or context within the receptor to the type of development proposed.</p> <p>The majority of existing element(s) would not be easy to replace. The receptor has a low level of ability to accept the type of development proposed without designed mitigation.</p> |
| Medium | <p>There is some existing reference or context within the receptor to the type of development proposed.</p> <p>There are limited opportunities for replacement of existing elements.</p> <p>Detracting features or major infrastructure are present in the area and these have a noticeable influence on the character or experience of the landscape.</p> <p>The GI receptor has a medium level of ability to accept the type of development proposed with mitigation.</p> |
| Low | <p>Some existing features are detracting and / or major infrastructure is present which has an obvious influence on the character or experience of the GI Asset. LTC will have a future indirect influence on GI Asset.</p> |
| VERY LOW | <p>Existing features are detracting and / or major infrastructure is present which heavily influences the character or experience of the GI asset.</p> <p>LTC will have a limited indirect influence on GI Asset.</p> |

8.2.5 SENSITIVITY OF GI RECEPTORS

Sensitivity is specific to each landscape receptor and reflects a balanced judgement on the value attached to the receptor and its susceptibility to the type of change proposed. The matrix in Table GI.04 illustrates how sensitivity is determined by a combination of value and susceptibility of the landscape receptor.

Table GI.04 Matrix for determining GI sensitivity

| | | VALUE | | | | |
|----------------|-----------|------------|--------|--------|-----------|-----------|
| | | Very Low | Low | Medium | High | Very High |
| SUSCEPTIBILITY | Very Low | Negligible | Low | Low | Medium | Medium |
| | Low | Low | Low | Medium | Medium | High |
| | Moderate | Low | Medium | Medium | High | High |
| | High | Medium | Medium | High | High | Very High |
| | Very High | Medium | High | High | Very High | Very High |

8.2.6 MAGNITUDE OF LANDSCAPE CHANGE

The magnitude of impact for GI change is influenced by a number of factors including the extent to which landscape features are lost and / or altered, the introduction of new features into the landscape and the resulting change in the physical and / or perceptual characteristics of the landscape. It is determined by, but not necessarily limited to:

- The size and scale of the effect on the GI Asset or Project
- The extent of the geographical area over which change is likely to be felt;
- The duration of the impact and its potential reversibility; and
- The proximity of the GI Asset or Project to LTC and the nature of the effect.

Table GI.05 Criteria for determining magnitude of impact

| MAGNITUDE | TYPICAL CRITERIA |
|------------|--|
| Very Large | The size and scale of change of LTC is considered to be very high due to the total loss of or alteration to existing GI or highly distinctive / important features and elements, and / or the addition of uncharacteristic conspicuous features and elements, resulting in a complete change to key aesthetic or perceptual qualities. There will be direct impacts. |
| Large | The size and scale of change of LTC is considered to be high due to the notable loss of or alteration to existing GI or distinctive / important features and elements, and / or the addition of uncharacteristic noticeable features and elements, degrading the integrity of key aesthetic or perceptual qualities. There will be direct impacts. |
| Moderate | The size and scale of change of LTC is considered to be medium due to the partial loss of or alteration to existing GI or features and elements, and / or the addition of uncharacteristic features and elements, resulting in key aesthetic or perceptual qualities out of scale or at odds with the local pattern and landform. There will be direct and indirect impacts. |
| Small | The size and scale of change of LTC upon the GI asset is considered to be low due to minor loss or alteration of existing GI and elements, resulting in a discernible negative effect to key aesthetic or perceptual qualities. |
| Negligible | The size and scale of change to existing GI and elements resulting from LTC is considered to be barely discernible or there would be no change. |

8.2.7 DEFINITIONS OF TERMS USED TO DESCRIBE CHANGE

The GLVIA3 emphasises the importance of clarifying any assumptions underlying professional judgements, therefore where verbal scales are used to describe the nature and magnitude of changes (impacts) likely to occur as a result of the proposed development, which differ from the previously defined scales, the following definitions apply.

Nature of Change

The nature of change is defined as follows:

- Direct (resulting directly from the development) or
- Indirect (consequential change resulting from the development);
- Permanent or Temporary (if temporary, a timescale will be described)

8.3 DETERMINING THE SIGNIFICANCE

The final conclusions for GI effects are based on a combination of sensitivity and magnitude of change. The overall judgement on the nature and level of these effects, referred to as significance, is based on the sequential combination of each of criteria, leading to a balanced justification, with professional judgement applied to inform this determination.

8.3.1 DESCRIBING THE IMPORTANCE OF EFFECTS TO DECISION MAKING AND RECOMMENDATIONS

For the purposes of this GI assessment, the significance of effects are described in relation to their importance to decision making and recommendations and have been defined as follows:

Substantial – Considerable effect (by extent, duration or magnitude of impact) of more than local significance or in breach of recognised acceptability, legislation, NPSNN policy compliance and / or standards. Considered to be very important and material to decision making and taking forward required mitigation and design.

Major – Obvious effect (by extent, duration or magnitude of impact) considered to be important and material to the decision making process and NPSNN objectives. Considered to be very important and material to decision making and taking forward required mitigation and design.

Moderate – Identified direct or indirect adverse effects on the GI asset or project.

Minor – Slight, very short or highly localised effect of low significance, GI Asset or project not considered further as part of the GI Study.

Negligible or Neutral – No significant effect or direct effect on GI assets or project for further recommendation.

SECTION 9: RECOMMENDATIONS AND NEXT STEPS



9 RECOMMENDATIONS AND NEXT STEPS

The final stage of the GI Study has involved the preparation of the recommendation assessment for identifying priority projects and mitigation measures which respond directly to GI Policy and theme objectives. This assessment considers District and Regional aspirations for GI, incorporating the results of this Study and the outcome of the environmental stakeholders projects and identified opportunities.

This section sets out the recommendations to support LTC in the next steps for GI planning and the implementation of holistic design and mitigation with respect to:

- The Priority Projects and District-wide GI Projects;
- The recommended approach to embedding GI within LTC;
- Second tier projects and aspirations for further consideration.

These recommendations are set out in tables below and have also been geo-spatially mapped using ArcGIS for the wider LTC team to have access to inform the Design Principles and embed mitigation within the Environmental Masterplan.

The **Implementation Plan** provides the mechanism for recommendations to be implemented and developed into the Project. This has been undertaken through the following key stages:

- Consideration of the practical implications of achieving green infrastructure protection, creation and management through regular design reviews and presentations within LTC;
- Follow up engagement with all stakeholders who have contributed to the study, along with workshops for TIER1 Local Authorities and Environmental Stakeholders feeding back on the study outcome and recommendations;
- Identification of priority mitigation which has been secured through design principles providing objectives to be achieved against the identified GI ID Project codes. This has created an overarching shared resource which provides clarity to Stakeholders as to how the priority mitigation has been informed and secured; and
- The preparation of the following DCO Application documents where recommendations can be referenced:
 - 6.1 – Environmental Statement
 - 7.02 – Planning Statement
 - 7.04 – Project Design Report
 - 7.05 – Design Principles
 - 7.10 – Health and Equalities Impact Assessment

Appendix III sets out the Implementation Recommendation Tables which demonstrate how and where each unique GI Project ID and GI Site which has been recommended as TIER 1 and TIER 2 mitigation has been implemented providing specific cross -reference to the relevant Environmental Masterplan figures and sections and Design Principle references.

SECTION 10: GI REVIEW



10 GREEN INFRASTRUCTURE REVIEW

GI REVIEW

KEY:

| | |
|--|--|
| | TIER 1: Mandatory - GI assets identified in development plans directly impacted by LTC, Mitigation measures necessary to ensure compliance with the NPSNN. |
| | TIER 2: Non-Mandatory – GI assets directly affected by LTC. Mitigation measures identified in meeting GI requirements in support of plan policies which the Project may consider. |
| | TIER 3: Out of Scope – GI assets indirectly impacted by LTC providing potentially wider GI benefits beyond the LTC Study Area which the Project may consider. |

GI ASSETS AND PROJECT REVIEW

10.1 TIER 1

TIER 1

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|---|----------|----------------|-------------|------------|-----------------|--|--|
| Goshem's Farm LoWS B18, BL-04a | High | Low | Medium | Moderate | Moderate | Planned Project and Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological |
| 2022 Status change Goshem's Farm LoWS B18, BL-04a | Low | Very Low | Low | Negligible | Minor | GI asset is now very low quality and in poor condition due to the work being carried out by Ingrebourne Valley Ltd | Mitigation by Design – Ecological and Public Proposed as Tilbury Fields – The land will primarily be for ecological mitigation (to mitigate the loss of Goshems Farm LWS which hosted a nationally significant population of invertebrates) and the provision of a park/public open space. |
| Low Street Pit LoWS B17 /B15 | High | Medium | High | Moderate | Moderate | Planned Project Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological |

TIER 1

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|--|----------|----------------|-------------|------------|-----------------|--|--|
| Tilbury Power Station (and relevant LoWS sites in footprint) B19, BL-01, BL-04b | High | Medium | High | Moderate | Moderate | Planned Project Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological |
| 2022 Status change Tilbury Power Station (and relevant LoWS sites in footprint) B19, BL-01, BL-04b | Low | Very Low | Low | Negligible | Minor | GI asset is now very low quality and in poor condition due to the works carried out as part of proposals to expand the Port of Tilbury (Tilbury 2) | Mitigation measures to be provided as part of the Tilbury 2 DCO |
| Blackshots Nature Area LoWS & Ron Evans Memorial Field B12, R7, BL-04i | High | Low | Medium | Moderate | Moderate | Planned Project Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological and Public Open Space |
| TCCF-01 TCT-01 Thames Chase Community Forest Centre DFP-01: Access and habitat enhancements to the Thames Chase Community Forest CF2 | High | Medium | High | Moderate | Moderate | Ongoing - active LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| TCT-02 Out and About in Thames Chase and the Green Grid | Medium | Medium | Medium | Moderate | Moderate | Ongoing - Planned | DIRECT IMPACT Mitigation by Design – Ecological & Landscape |

TIER 1

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|--|-------------|----------------|-------------|----------------|-------------------------|--|--|
| TCT-03 The Forest Circle | Medium | Medium | Medium | Small | Minor - Moderate | Ongoing - Planned | DIRECT IMPACT Mitigation by Design – Ecological & Landscape |
| TCT-04 Mardyke River DFP-02: Landscape restoration along Mardyke Valley B11 | High | Medium | High | Moderate | Moderate | Ongoing - active LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Landscape |
| DFP-03: East Tilbury brownfield | Medium-High | Medium | Medium | Moderate | Moderate | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological |
| DFP-04: Landscape mitigation in partnership with other major developments | High | High | High | Moderate-Large | Moderate-Major | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Landscape |
| DFP-05: Enhancements at Tilbury Fort SM1 | Very High | Very High | Very High | Moderate | Major | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Landscape Opportunities with Historic England to deliver ecological (invertebrate), access (England coast path) and historic monument enhancements at Tilbury Fort |
| SM2 Coalhouse Fort, SM3 Coalhouse Battery | Very High | Very High | Very High | Moderate | Major | Existing GI feature | DIRECT IMPACT Mitigation by Design – Ecological & Landscape |

TIER 1

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|--|----------|----------------|-------------|-----------|-----------------|--|---|
| PL2 Hoford Lane Protected Lane | High | Very High | Very High | Large | Major | Existing GI feature | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| DFP-08: Ecological enhancements to flood defenses B2 | Low | Low | Low | Moderate | Minor | Existing and LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| DFP-09: A2 corridor Enhancements KWT-01 Roadside Nature Reserves | Medium | Medium | Medium | Moderate | Moderate | Existing and Proposed LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| DFP-11: Living bridge to link Claylane Wood to Shorne Woods DFD-13: Woodland Planting B7, B21 | High | Medium | High | Moderate | Moderate | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological, Engineering and Landscape |
| CP1 – Shorne Woods Country Park | High | Medium | High | Moderate | Moderate | Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological, Engineering and Landscape |
| DFP-12: Remove the barrier of the widened A2 for non-motorised users | Medium | Medium | High | Moderate | Moderate | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological, Engineering and Landscape |
| DFP-13 Woodland Planting A2 | Medium | Medium | High | Moderate | Moderate | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological, Engineering and Landscape |

TIER 1

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|---|-----------------|----------------|-------------|-----------|------------------------|--|---|
| DFP-14: A2/M2 widening KD1 | Very High | Medium | High | Moderate | Moderate | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| RSPB-01 North Kent Marshes Breeding Wader Project Shorne Marshes and Higham Marshes RSPB-WH-10 Hydrology of Shorne Marshes B10 | High | High | High | Large | Moderate -Major | RSPB-01 Active-ongoing RSPB-WH-10, 2020-2024 | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| KD-01 Improvements to NMU Connectivity between existing GI Network SWR5, SWR6 B3 | Very High | Low | Medium | Moderate | Minor-Moderate | Planned | DIRECT IMPACT Mitigation by Design – Ecological, Engineering and Landscape |
| KD-02 National Cycle Route SCR1 B3 | Very High | Low | Medium | Moderate | Minor-Moderate | Planned | DIRECT IMPACT Mitigation by Design – Ecological, Engineering and Landscape |
| TCCF-02 Jeskyns Community Woodland CF1 | Very High | Medium | High | Moderate | Moderate | Ongoing | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| GBC-01 Strategic Green Infrastructure Network | High- Very High | Medium | High | Moderate | Moderate | Aspirational | DIRECT IMPACT Mitigation by Design – Ecological & Landscape |

TIER 1

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|---|-----------|----------------|-------------|------------------|-----------------|----------|---|
| WT-01 Shorne and Ashenbank Wood CF4, B7 | Very High | Medium | High | Moderate | Moderate | Ongoing | DIRECT & INDIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| Two Forts Way, SWR2 | Medium | Medium | High | Moderate | Moderate | Existing | DIRECT IMPACT Mitigation by Design – Pedestrians, Cyclists and Equestrians |
| BL-04c Tilbury Marshes LoWS | High | Medium | High | Small - Moderate | Minor | Planned | DIRECT IMPACT – Ecological and landscape mitigation, public access |

10.2 TIER 2

TIER 2

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|--|-------------|----------------|-------------|------------------|-------------------------|--|--|
| RSPB-WH9a,b,c | Medium | Low | Medium | Small - Moderate | Minor | 2020-2024 | DIRECT IMPACT Match funding |
| TMCA-01 Dredge Canal from Mark Lane to Shore SWR3 | Medium | Medium | Medium | Moderate | Minor | Ongoing | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| EWT-01a & 01b The Lost Fens: Bulphan Fen (a) and Orsett Fen (b) | Medium | Medium | Medium | Moderate | Moderate | Aspiration – Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |
| DFP-16: Making a Buzz for the Coast BBC-01 Making a buzz for the coast | Medium-High | Low | Medium | Moderate | Minor - Moderate | LTC Legacy Project | DIRECT IMPACT Mitigation by Design – Ecological |
| BL-05 B-Lines & wider connectivity through hedgerow planting | Medium | Low | Medium | Moderate | Minor - Moderate | Active - awaiting development of partner-ships | DIRECT IMPACT Mitigation by Design – Ecological |
| Mucking Heath LoWS/Orsett Golf Course B14, BL-04g | High | Low | Medium | Small | Minor | Planned Project Existing GI Asset | DIRECT IMPACT Mitigation by Design – Ecological |
| TCCF-03 Folkes Lane Community Forest CF5 | High | Medium | High | Small | Minor | Ongoing - active | DIRECT IMPACT Mitigation by Design – Ecological & Engineering |

TIER 2

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|--|----------|----------------|-------------|----------------|-----------------|----------------|--|
| TLotF-04 A3.1- River Catchments | High | Low | Medium | Small-Moderate | Minor | | Direct and Indirect Impacts – Mitigation through design across Mardyke River with South Essex Catchment |
| EWT-03 Oakington Landfill Cap | Low | Medium | Medium | Moderate | Moderate | Aspirational | DIRECT IMPACT To take on as management to cap and restore landfill for biodiversity enhancement and public access |
| Peripheral Green Infrastructure and Public Open Space in consideration of utilities and construction | | | | | | | |
| R8 CycloPark | Medium | Low | Medium | Negligible | Minor | Existing Asset | INDIRECT IMPACT – Construction mitigation to avoid function of CycloPark |
| R9 Roman Road POS | Medium | Low | Medium | Small | Minor | Existing Asset | INDIRECT IMPACT – Construction mitigation |
| B23 North Ockendon Pit Metropolitan SINC designation | High | Medium | High | Small | Minor | Existing Asset | INDIRECT IMPACT – Construction mitigation |
| BL-04f Hob Hill Pit | High | Medium | High | Small | Minor | Planned | INDIRECT IMPACT - ecological enhancement |
| BL-04e Broom Hill LoWS | High | Medium | High | Small | Minor | Planned | INDIRECT IMPACT - ecological enhancement |

10.3 TIER 3

TIER 3

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|---|-------------------|----------------|-------------|-----------|--------------|-------------------------------------|--|
| EWT-02 Thurrock Thameside Nature Park | High | Medium | High | Small | Minor | Active, ongoing | Indirect Impact consideration of connectivity and severed links, accessibility and signage. |
| BL-02, BL-04h Orsett Camp Quarry/ Orsett East Quarry | High | Low | Medium | Small | Minor | Existing GI | Indirect Impact consideration of funding management of site/purchase site as mitigation |
| TLotF-01 A1.2- COMMUNITY TREE NURSERY | High | Low | Medium | Small | Minor | In deve- lopment - March 2021 | Offsite mitigation - trees produced in the nursery could be used for LTC, opportunities for training and volunteering |
| TLotF-02 A2.2- LOW NUTRIENT HABITATS | High | Low | Medium | Small | Minor | Active – March 2020 | Tylers Common and other sites based on further surveying potential to become reception sites for any translocation required as mitigation for LTC |
| TLotF-03 A3.2- CONNECTING HISTORIC LANDSCAPES | High/Very High | Low | Medium | Small | Minor | Active – March 2020 | Indirect Impact consideration of connectivity and severed links, accessibility and signage to Thorndon Country Park and Belhus Registered Park and Garden. |

TIER3

| PROJECT ID/GI REFERENCE | GI VALUE | SUSCEPTIBILITY | SENSITIVITY | MAGNITUDE | IMPORTANCE | STATUS | RECOMMENDATIONS |
|---|-----------|----------------|-------------|----------------|-----------------------|--------------------|---|
| DFP-06: Clay Spoil in Higham Creek | Medium | Medium | Medium | Small | Minor | LTC Legacy Project | Opportunities to use clay spoil (if the soil is compatible) to recharge areas if intertidal habitat e.g. Higham Creek |
| PL-01 Cobham Park Registered Park and Garden RPG1 | Very High | High | High | Small | Minor | Existing GI Asset | Indirect Impact consideration of connectivity and severed links, accessibility and signage |
| PL-02 Ranscombe Farm B9 | High | Low | Medium | Small | Minor | Existing GI Asset | Indirect Impact - ecological enhancement |
| RSPB-04a Shornmeade Fort Interpretation SWR1 | Very High | Medium | High | Small | Minor | Existing GI Asset | Indirect Impact consideration of connectivity and severed links, accessibility and signage |
| DFP-07: Management of water levels at SSSI | Very High | High | High | Small-Moderate | Minor-Moderate | LTC Legacy Project | Significant opportunities to use treated surface water to help manage water levels within the SSSI helping mitigate the impacts of climate change |
| DFP-15 | Very High | High | High | Small | Minor | LTC Legacy Project | Woodland creation linking Great Crabbles and Randall Woods |

SECTION 11: NON DIRECT PROJECTS



11 NON DIRECT PROJECTS

11.1 CONSIDERED POTENTIAL WIDER CONNECTIONS AND CONTRIBUTIONS TO GI, FALLING BEYOND LTC GI STUDY AREA

| | |
|---|--|
| RSPB-02a Cliffe Pools Enhancement | Requirement for 5 mill tonnes of aggregates Provide LTC arisings and bring to the site |
| RSPB-WH-02 Restoration of the Larkin Monument | Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham. Increase park use and its biodiversity Match funding with a multiplier effect of lottery funding |
| RSPB-WH-4a&b Cliffe village and its hinderland stepping stones: dead end paths | A volunteer based archaeological project involving local people discovering about the past. People access project for better pathways |
| RSPB-04b Hydrology at Cliffe Pools | To improve the habitat for breeding waders (lapwing and redshank) through careful hydrological management. To ensure there is optimum habitat for wintering wildfowl and waders, providing refuge sites. |
| RSPB-WH-01b Bessie's Lane – An ancient Royal Throughfare | People access project for better pathways |
| RSPB-WH-01a Cross Park Country Park | Improve setting and facilities of a public green space and increase volunteering capacity. Currently a single octogenarian volunteer manages the site |
| RSPB-WH-01c Slough Fort Visitor Cafe | To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries |
| RSPB-WH-01d Reform and Remodel the Glacis of Slough Fort | To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries |
| RSPB-WH-01e Create and interpretive display | To enhance the visitor offering of this great little fort and tell the story of defence on the Hoo Peninsula over the centuries |
| RSPB-WH-03 To develop a Wildflower Meadow | Improve a public green space |
| RSPB-WH-04b Stepping Stones: Dead End Paths | Cliffe cul-de sac paths a destination not a dead end. |
| RSPB-WH-04a Cliffe Village and its Hinderland | A volunteer based archaeological project involving local people discovering about the past |
| RSPB-WH-05 Re-discovering the Port Victoria Line and the town that never was | People access project for better pathways |

| | |
|--|---|
| RSPB-WH-06 William Hogarth Walking Trail | People access project for better pathways |
| RSPB-WH-07 Lapwig Lifeline at Cliffe Pools | To increase the breeding productivity of breeding waders by reducing predation by large mammals (fox/badgers) who take eggs of ground nesting birds. Typically a non Anti Predator fenced area will have a low yield of chicks per pair per annum, 0.1-0.2 chicks. To be sustainable, a pair must reproduce 0.6-0.8 chicks per year to replace adult mortality. This can be achieved and results of 1.0-1.2 are not unusual in specialist mesh and electrical fenced combinations |
| RSPB-WH-08 Increasing invertebrate food sources for Lapwing Chicks | Coastal and Floodplain Grazing Marsh, open water and reedbed UK BAP Habitats, key UK Bap species include breeding lapwing, skylark, grey partridge, corn bunting, reed bunting, brown hare, water voles and many more. Good assemblages of wintering waders and wildfowl. The site has SSSI, SPA and Ramsar designations and falls within the Greater Thames Marshes Nature Improvement Area. |
| RSPB-WH-09 Ways to Well Being | |
| RSPB-WH-09a Linking Denton and Shorne Mead Fort | |
| RSPB-WH-09c Young Persons Interpretation of Military Heritage and connecting Denton | Physical and mental health wellbeing walks, based from Denton. This community has a number of factors indicating high levels of social deprivation |
| RSPB-WH-10 Hydrology of Shorne Marshes | To improve habitat for breeding waders and the suite of species associated with wetlands. |

APPENDIX I: STAGE 1 BASELINE

Stage 1

| Drawing Name | Drawing Number | Sheet | Size |
|---|--|--------|------|
| LTC-GIS Biodiversity | HE540039-CJV-EGN-SZP_EGNE-00000000-DR-LE-30010 | 1 of 1 | A1 |
| LTC-GIS Landscape Character | HE540039-CJV-EGN-SZP_EGNE-00000000-DR-LE-30012 | 1 of 1 | A1 |
| LTC-GIS Open Space, Heritage and Sense of Place | HE540039-CJV-EGN-SZP_EGNE-00000000-DR-LE-30009 | 1 of 2 | A1 |
| LTC-GIS Open Space, Heritage and Sense of Place | HE540039-CJV-EGN-SZP_EGNE-00000000-DR-LE-30009 | 2 of 2 | A1 |
| LTC-GIS Connections | HE540039-CJV-EGN-SZP_EGNE-00000000-DR-LE-30011 | 1 of 1 | A1 |
| LTC-GIS Green Infrastructure Typologies | HE540039-CJV-EGN-SZP_EGNE-00000000-DR-LE-30013 | 1 of 1 | A1 |

LTC-GIS Biodiversity

- Fig. 1 Bluebells in ancient woodland
- Fig. 2 Deadwood at Ashenbank Woods
- Fig. 3 Azure damselfly at Shorne and Higham Marshes
- Fig. 4 Misty Shorne and Higham marshes

LTC-GIS Landscape Character

- Fig. 1 Steep Scarp and extensive views obtained from the North Downs
- Fig. 2 Grazing Marsh at Kings Mead Valley Meadowlands
- Fig. 3 View from Windmill Hill in Gravesend, looking towards the Thames
- Fig. 4 Wetland Habitats in the Stour Valley
- Fig. 5 The Queen Elizabeth II Bridge joining the M25 as it crosses the River Thames seen from Rainham Marshes

LTC-GIS Open Space, Heritage and Sense of Place

- Fig. 1 Cobham Conservation Area
- Fig. 2 Entrance gate to The Avenue leading to Cobham Hall Registered Park and Garden
- Fig. 3 Entrance gate to Orchard Path
- Fig. 4 View of Thong Lane
- Fig. 5 View towards Tilbury Fort
- Fig. 6 View towards Colehouse Fort from Princess Margaret Road
- Fig. 7 Shorne Woods Community Forest Centre and Wayfinding
- Fig. 8 Shorne Woods Trim Trail
- Fig. 9 Jeskyns Community Forest Café
- Fig. 10 Jeskyns Community Forest Public Footpath
- Fig. 11 Thames Chase Meadow
- Fig. 12 Thames Chase Information and Resource Centre
- Fig. 13 Thorndon Country Park Woodlands
- Fig. 14 Views out towards the River Thames from Shorne Village
- Fig. 15 Cyclopark playground
- Fig. 16 Meadow scarp with extensive views obtained from Kent Downs AONB
- Fig. 17 Thames mudflats and saltmarsh

LTC-GIS Connections

- Fig. 1 Elizabeth Gardens Park looking from Saxon Shore Way in Gravesend
- Fig. 2 Thames and Medway Canal path on northern side of railway, next to Queen's Farm Rd.
- Fig. 3 View of Shorne and Higham Marshes from Thames and Medway Canal path
- Fig. 4 National Cycle Route 177 looking south from Park Pale road junction with A2
- Fig. 5 National Cycle Route 177 looking north-east from Park Pale road junction with A2
- Fig. 6 Timeball and Telegraph Trail, junction with Wrotham Rd.



LOWER THAMES CROSSING- GREEN INFRASTRUCTURE STUDY

BIODIVERSITY

INTERNATIONALLY DESIGNATED SITES

Thames Estuary and Marshes Ramsar Site, Special Protection Area (SPA), and Site of Special Scientific Interest (SSSI)
The Thames Estuary and Marshes Ramsar Site/SPA/SSSI is located on the north and south side of the Thames Estuary and also includes intertidal areas on the north side of the estuary. To the south of the river, much of the area is brackish grazing marsh, although some of this has been converted to arable use. At Cliffe, there are flooded clay and chalk pits, some of which have been infilled with river dredgings. Outside the sea wall, there is a small extent of saltmarsh and broad intertidal mudflats. Areas of woodland provide additional variety and complement the estuarine habitats. The site supports outstanding numbers of waterfowl with many species regularly occurring in nationally important numbers and other species regularly using the site in internationally important numbers. The diverse habitats within the site support nationally rare and scarce invertebrate species and an assemblage of nationally scarce plants. The grazing marsh habitat complexes provide suitable conditions for a wide range of plants and animals.

NATIONALLY DESIGNATED SITES

River Thames/Thames Estuary recommended Marine Conservation Zone (M CZ)
The Thames Estuary M CZ extends from Richmond to the mouth of the River Thames at Westcliff-on-Sea and crosses most of London. It is an important site for fish nursery and spawning, seasonal seaward migration of smelt, and for tentacled lagoon worm mainly found at Greenhithe (Swancombe peninsula). The M CZ is also home to the short-snouted seahorse and has a high density of European eels.

Kent Downs Area of Outstanding Natural Beauty (AONB)
The Kent Downs AONB offers dramatic views, vibrant communities, a rich historic and cultural heritage, and diverse wildlife and habitats. Habitats found in the Kent Downs include chalk grassland, ancient woodland, veteran trees, wood pasture, traditional orchards, chalk cliffs, foreshore, chalk rivers, wet pasture, ponds, and heathland.



Fig.1 Bluebells in ancient woodland

Hangman's Wood and Deneholes SSSI and Ancient Woodland
These medieval chalk mines provide a hibernation site of county-level importance for brown long-eared bat. Natterer's bat, Daubenton's bat, as well as a remnant of ancient woodland for foraging.

Rainham Marshes SSSI and RSPB reserve
Rainham Marshes SSSI is also an RSPB reserve on an ancient, low-lying grazing marsh in the Thames Estuary, supporting a variety of marshland birds, small mammals, reptiles, and invertebrates.

Mucking Flats and Marshes SSSI
Mucking Flats and Marshes comprise an extensive stretch of Thames mudflats and saltmarsh, together with sea wall grassland, on the northern bank of the estuary. Wintering wildfowl and waders reach both nationally and internationally important numbers on the mudflats, roosting and feeding on adjacent saltmarsh and dissolved silt lagoons.

Shorne and Ashenbank Woods SSSI, Ancient Woodland, Woodland Trust Reserve, and Country Park
This large area of ancient semi-natural broad-leaved forest, rich in flora and fauna, is set in the Kent Downs AONB and part of it is a SSSI. Shorne Woods is a popular Country Park, featuring an eco-friendly visitor centre and café, space for leisure activities, and picnic and play areas, as well as the 292 acres of woodland, wetland, and meadow that can be explored via a variety of waymarked trails.

Ashenbank Wood is a 74-acre mix of ancient woodland and former wood pasture provides a range of habitats, closed canopy and open areas, veteran trees and notable wildlife species. The ancient woodland contains mainly broad-leaved trees including Ash, Field Maple, Hornbeam, Oak, and Sweet Chestnut, and is known for its beautiful shows of Bluebell and Wood Anemone during the spring. Huge veteran trees with girths up to six metres dominate the wood pasture which was once managed as parkland as part of the Cobham Hall estate. These open glades are once again maintained by grazing cattle, providing a beautiful pastoral scene with lovely views. The abundance of dead and decaying trees from the 1987 storm supports over 300 species of fungi and provides a home and food source for a range of specialist insects and invertebrates. Other rare and threatened wildlife supported by the woodland include great crested newt, hazel dormouse, and Leisler's bat.



Fig.2 Deadwood at Ashenbank Woods



Fig.3 Azure damselfly of Shorne and Higham Marshes

Great Crabbles Wood SSSI and Ancient Woodland
An 82-acre ancient woodland, comprising mixed coppice (Sweet Chestnut, Hornbeam, Ash, Field Maple, and Hazel) under Pedunculate Oak, Sessile Oak, and Birch standards. Other species recorded include Spindle, Wayfaring Tree, Traveller's Joy, Dog's Mercury, Lady Orchid, Man Orchid, White Helleborine, Bird's Nest Orchid, Wild Liquorice, and Spurge Laurel.

Cobham Woods SSSI and Ancient Woodland and Ranscombe Farm Plantlife reserve and Country Park
Ranscombe Farm is managed by Plantlife in partnership with Medway Council as a nature reserve, working farm and country park. The landscape includes arable habitats, extensive ancient woodland and fragments of chalk grassland. It is an important botanical site: the first UK records of two Nationally Rare species, Meadow Clay and Rough Mallow, were both from Ranscombe Farm, and both species still survive in the same spot. At least six species of orchid have also been recorded including Fly, Lady, and Man Orchid. The reserve boasts an impressive repertoire of arable flowers, including Blue Pimpernel, Night-flowering Catchfly, Narrow-fruited Corncockle, and Dense-flowered Furnitory. The woodlands are at their best in spring when a colourful display of Early-purple Orchids and Bluebells can be seen. Although limited in extent, the chalk grassland habitats host a rich suite of plants including Wild Liquorice and Horshoe Vetch. Other rarities include Ground Pine and Broad-leaved Cudweed.

COUNTY LEVEL DESIGNATED SITES

Shorne and Higham Marshes Local Wildlife Site (LWS) and RSPB reserve
Shorne Marshes, managed as grazing marsh is an important breeding ground for wading birds such as redshank and lapwing. It is set on an old firing range and features around 700 ponds formed as the result of bomb craters, some of which support great crested newt.

Mar Dyke river corridor LWS
The Mar Dyke river and river corridor comprises extensive riparian and grassland areas which form an important wildlife corridor and provide habitat for water vole and other noteworthy species.

Blackshots Nature Area LWS
A large area of rough grassland supporting an important invertebrate population, as well as providing potential nesting habitat for noteworthy bird species such as skylark.

Orsett Camp Quarry LWS
Former sand/gravel pit with important acidic grassland/heath and areas of taller grassland and scrub.

Orsett Golf Course and Mucking Heath LWS
Mucking Heath LWS covers the site of Orsett Golf course, which was constructed on the old heath. Orsett Golf Club was founded in 1899 and is characterised by heathland features. The rough areas of the course are of botanical and invertebrate importance.

Linford Pit LWS
This brownfield site supports an important invertebrate fauna and lies within a very significant cluster of such sites.

Broom Hill and West Tilbury Hall LWSs
These river terrace slope sites support acidic grassland of importance to invertebrates.

Low Street Pit LWS
Low Street Pit is a disused, wooded, sand and gravel pit situated on the regionally important Thames terrace gravels.

Goshems Farms LWS
This former landfill site supports two important species populations; the nationally rare Red Data Book plant Stinking Goosefoot and the hornet robberfly.

Tilbury Marshes LWS
This site comprises relict grazing-march, brackish ditches and the outer moats and grasslands of Tilbury Fort.

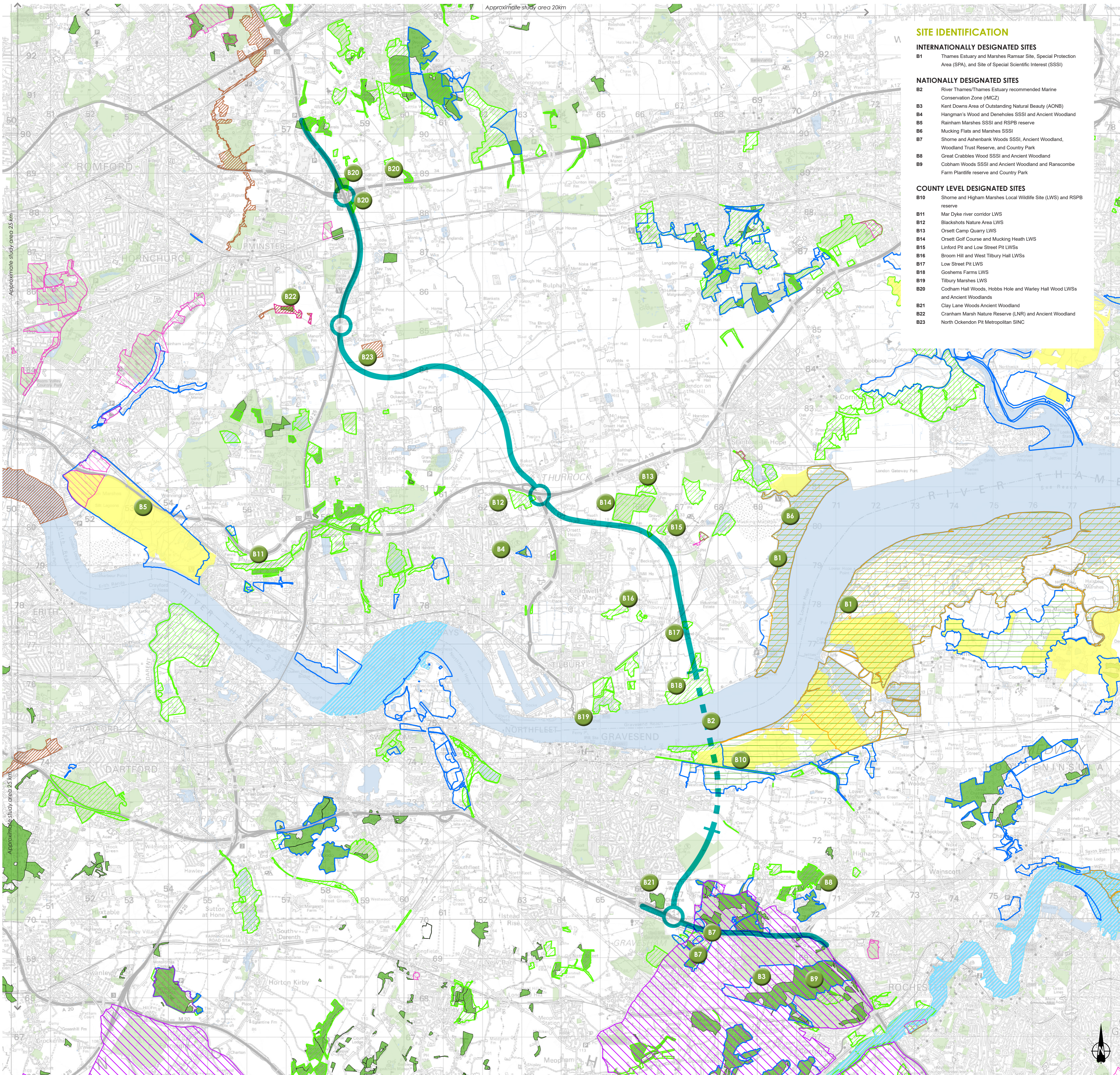
Codham Hall Woods, Hobbs Hole and Warley Hall Wood LWSs and Ancient Woodlands
Fragmented blocks of ancient woodland at the northern end of the proposed scheme.

Clay Lane Woods Ancient Woodland
Block of ancient woodland and associated ground flora used for recreation.

Cranham Marsh Nature Reserve (LNR) and Ancient Woodland
Cranham Marsh Nature Reserve (Essex Wildlife Trust Reserve) is all that remains of the marshland habitat that once covered south Essex, containing marshes, sedge fen, and ancient woodland habitats.



Fig.4 Misty Shorne and Higham marshes



SITE IDENTIFICATION

- INTERNATIONALLY DESIGNATED SITES**
B1 Thames Estuary and Marshes Ramsar Site, Special Protection Area (SPA), and Site of Special Scientific Interest (SSSI)
- NATIONALLY DESIGNATED SITES**
B2 River Thames/Thames Estuary recommended Marine Conservation Zone (M CZ)
B3 Kent Downs Area of Outstanding Natural Beauty (AONB)
B4 Hangman's Wood and Deneholes SSSI and Ancient Woodland
B5 Rainham Marshes SSSI and RSPB reserve
B6 Mucking Flats and Marshes SSSI
B7 Shorne and Ashenbank Woods SSSI, Ancient Woodland, Woodland Trust Reserve, and Country Park
B8 Great Crabbles Wood SSSI and Ancient Woodland
B9 Cobham Woods SSSI and Ancient Woodland and Ranscombe Farm Plantlife reserve and Country Park
- COUNTY LEVEL DESIGNATED SITES**
B10 Shorne and Higham Marshes Local Wildlife Site (LWS) and RSPB reserve
B11 Mar Dyke river corridor LWS
B12 Blackshots Nature Area LWS
B13 Orsett Camp Quarry LWS
B14 Orsett Golf Course and Mucking Heath LWS
B15 Linford Pit and Low Street Pit LWSs
B16 Broom Hill and West Tilbury Hall LWSs
B17 Low Street Pit LWS
B18 Goshems Farms LWS
B19 Tilbury Marshes LWS
B20 Codham Hall Woods, Hobbs Hole and Warley Hall Wood LWSs and Ancient Woodlands
B21 Clay Lane Woods Ancient Woodland
B22 Cranham Marsh Nature Reserve (LNR) and Ancient Woodland
B23 North Ockendon Pit Metropolitan SIN

| <p>Legend</p> <ul style="list-style-type: none"> Area of Outstanding Natural Beauty Local Nature Reserve Local Wildlife Site Site of Importance for Nature Conservation Special Protection Area Ancient Woodland Marine Conservation Zone Ramsar site Site of Special Scientific Interest RSPB Reserve Development Route | <table border="1"> <thead> <tr> <th>No.</th> <th>Rev.</th> <th>Drawn</th> <th>Checked</th> <th>Approved</th> <th>Agreed</th> <th>Revision Purpose</th> </tr> </thead> <tbody> <tr> <td>B01</td> <td>RM</td> <td>23/01/2016</td> <td>GM</td> <td>23/01/2016</td> <td>JAM</td> <td>23/01/2016 For Information</td> </tr> <tr> <td>B02</td> <td>RM</td> <td>08/08/2016</td> <td>GM</td> <td>08/08/2016</td> <td>JAM</td> <td>08/08/2016 For Information</td> </tr> <tr> <td>B03</td> <td>RM</td> <td>16/07/2021</td> <td>GM</td> <td>16/07/2021</td> <td>JAM</td> <td>16/07/2021 For Information</td> </tr> <tr> <td>B04</td> <td>LK</td> <td>28/09/2022</td> <td>GM</td> <td>09/09/2022</td> <td>JAM</td> <td>07/09/2022 For Information</td> </tr> </tbody> </table> | No. | Rev. | Drawn | Checked | Approved | Agreed | Revision Purpose | B01 | RM | 23/01/2016 | GM | 23/01/2016 | JAM | 23/01/2016 For Information | B02 | RM | 08/08/2016 | GM | 08/08/2016 | JAM | 08/08/2016 For Information | B03 | RM | 16/07/2021 | GM | 16/07/2021 | JAM | 16/07/2021 For Information | B04 | LK | 28/09/2022 | GM | 09/09/2022 | JAM | 07/09/2022 For Information | <p>Client: national highways</p> <p>Project Title: Lower Thames Crossing Green Infrastructure Study</p> <p>Drawing Title: GREEN INFRASTRUCTURE - BIODIVERSITY SHEET 1 OF 1</p> | <p>Main Map Name: 1:50,000 Inset: 1:1,000,000</p> <p>Copyright: Ordnance Survey data. © Crown copyright and database right 2022. Ordnance Survey 100030649</p> <p>Subsidiary: Final Status: S2 Revision: P04</p> <p>Drawing Number: HE540039-CJVEGN-SZP_EGNE0000000-DR-LE-30610</p> |
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| B01 | RM | 23/01/2016 | GM | 23/01/2016 | JAM | 23/01/2016 For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| B03 | RM | 16/07/2021 | GM | 16/07/2021 | JAM | 16/07/2021 For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B04 | LK | 28/09/2022 | GM | 09/09/2022 | JAM | 07/09/2022 For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LOWER THAMES CROSSING- GREEN INFRASTRUCTURE STUDY

LANDSCAPE CHARACTER

NATIONAL CHARACTER AREAS

Natural England has divided England into 159 distinct areas referred to as National Character Areas (NCAs). Their boundaries follow natural lines in the landscape, rather than administrative boundaries, and each is defined by a unique combination of landscape, biodiversity, geodiversity and cultural and economic activity. Four NCAs lie within the study area as follows.

NCA119: North Downs

- Key attributes**
- Cretaceous Chalk forms the backbone of the North Downs.
 - A distinctive chalk downland ridge rises up from the surrounding land, with a steep scarp slope to the south providing extensive views across Kent, Surrey and Sussex and across the Channel seascape to France.
 - Woodland is found primarily on the steeper slopes of the scarp, valley sides and areas of the dip slope capped with clay-with-flints. Much of the woodland is ancient.



Fig. 1 Steep Scarp and extensive views obtained from the North Downs

NCA111: Northern Thames Basin

- Key attributes**
- A diverse landscape with a series of broad valleys containing the major rivers Ver, Colne and Lea, and slightly steeper valleys of the rivers Stour, Colne and Roman.
 - The pattern of woodlands is varied and includes considerable ancient semi-natural woodland. Significant areas of wood pasture and pollarded veteran trees are also present.



Fig. 2 Grazing Marsh at Kings Mead Valley Meadows



Fig. 3 View from Windmill Hill in Gravesend, looking towards the Thames
Fig. 4 Wetland Habitats in the Stour Valley

- The diverse range of semi-natural habitats include ancient woodland, lowland heath and floodplain grazing marsh and provide important habitats for a wide range of species.

NCA113: North Kent Plain

- Key attributes**
- An open, low and gently undulating landscape, characterised by high quality, fertile, loamy soils dominated by agricultural land uses.
 - Woodland occurs on the higher ground around Blean and in smaller blocks to the west.



Fig. 5 The Queen Elizabeth II Bridge joining the M25 as it crosses the River Thames seen from Rainham Marshes

much of it ancient and of high nature conservation interest.

NCA81: Greater Thames Estuary

- Key attributes**
- Eastern edge of the London Basin with its underlying geology of the extensive London Clay, containing important sites for geodiversity including fossiliferous deposits, and overlain by productive loamy soils derived from intertidal alluvial muds.
 - Major historical and current transport link to London provided by the River Thames, with an extensive network of road and rail bridges spanning its reaches within the city.

BOROUGH CHARACTER AREAS

Thurrock

- Thurrock exhibits a mosaic of markedly contrasting landscapes: from open and relatively tranquil and undeveloped farmland in the rural parts of the Borough to the north, to the contrast of the densely developed urban areas and industrial development adjacent to widespread grazing marshes along the Thames riverbank. The Thames forms a distinctive 'river-cape' along the southern edge of the Borough. In the west near Aveley Marshes, the Thames is narrow, widening towards Holehaven Creek in the east. The banks of the river are punctuated by large creeks, smaller inlets and bays. Numerous jetties, wharfs and piers punctuate the northern bank, which is heavily industrialised for most of its length between Aveley Marshes and Tilbury, and again around Holehaven Creek. The presence of industry creates a dramatic riverscape of angular machinery and buildings, dock activity, river traffic and changing light reflected on the constantly moving water of the Thames. This contrasts with adjacent open and low-lying marshes that accentuate the vertical features of the docks. Settlement has sprawled along an east-west band to the north of the river and of South Ockendon. Road and rail infrastructure, pylons and power lines are prominent features within the urban fringe landscapes.

LCAs within the Study Area include:

- Aveley / South Ockendon Urban Fringe
- Belhus Rolling Farmland / Wooded Hills
- Bulphan Farmland
- Chadwell Escarpment Urban Fringe
- Grays / Chadwell St Mary Urban Area
- Linford / Buckingham Hill Urban Fringe
- Mar Dyke River Valley Urban Fringe
- Mucking Flats and Marshes
- Mucking Marshes
- North Stifford Corridor Urban Fringe
- South Ockendon Urban Area
- Slidding Hill Rolling Farmland / Wooded Hills
- Tilbury Marshes
- Tilbury and Docks Urban Area
- West Tilbury
- White Crofts / Orsett Heath Urban Fringe

Gravesham

The varied vegetation patterns across Gravesham Borough provide a range of habitat types. The flat, low lying grazing marshes to the north offer an important habitat for birds, whilst woodland areas further south support birdlife, insects and mammals. Fragmented clumps of woodland vegetation and larger swatches of woodland are scattered throughout the Borough, with more substantial woodland blocks to the south. Pockets of orchards and areas of coppiced woodland support a variety of habitat types. Hedgerows and shelterbelts between agricultural fields provide wildlife corridors and link woodland areas. The range of habitats across the Borough is reflected by several ecological designations, which are scattered throughout Gravesham.

- Key characteristics include:** Wooded ridge isolated by A2; residential ribbon development with prominent hills and low lying alluvial marshes; intensive open farmed arable land and extensive views across the River Thames and to the higher ground to the south.
- LCAs within the Study Area include:
- Ashenbank and Cobham Parkland
 - Gravesham Southern Fringe
 - Higham Arable Farmland

- Istead Arable Farmlands
- Shorne Woodlands
- Shorne and Higham Marshes

Landscape of the Fanns – Havering

The Fanns covers an area defined by the sinuous path of the Thames in the south and the Brentwood Hills to the north. The Land of the Fanns Landscape Partnership (LP) is an initiative which seeks to provide a coherent and structured approach to restoring the landscape, educating communities and providing opportunities for people to learn new skills and appreciate the heritage around them.

Key characteristics of the landscape include:

- Gently sloping valley sides forming a shallow yet distinctive valley landscape.
- Land use comprises pasture on steeper slopes and valley floor with arable on the upper slopes and significant areas of amenity open space and woodland.
- Scenic qualities derived from topography, patchwork of land uses, expansive areas of marsh and reedbed and sense of remoteness despite close proximity to urban areas.
- Land use comprises notable areas of former parkland now managed as county parks and remnant commons within a rural landscape of pasture and arable.
- There are numerous waterbodies in this landscape including field ponds and reservoirs.

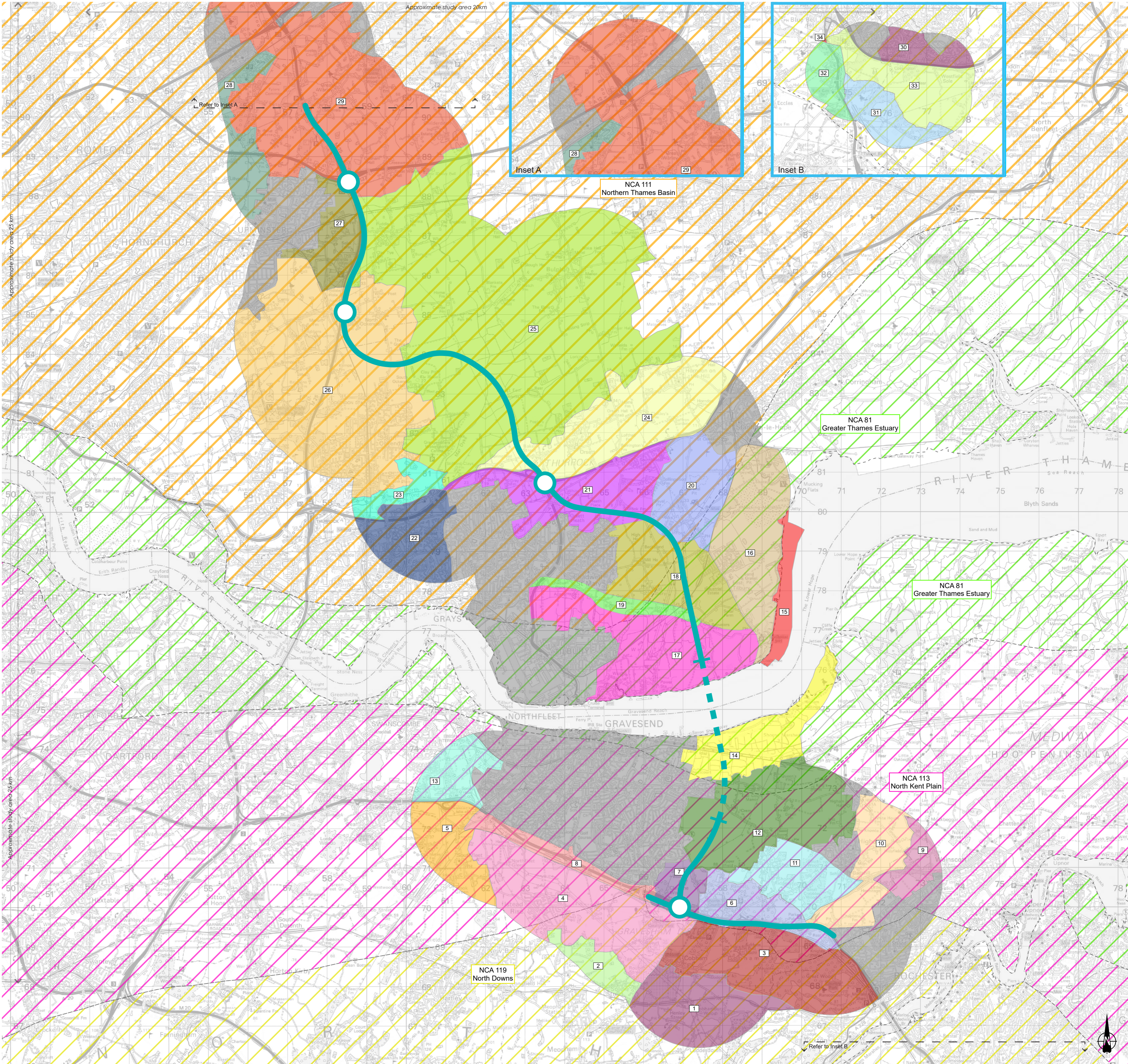
LCAs within the Study Area include:

- Belhus Lowland Quarry Farmland
- Brentwood Wooded Hills
- Ingrebourne Valley
- Langdon Hills and Farmland
- Orsett Lowland Farmland
- Thurrock Reclaimed Fen

Kent Downs AONB Character Assessment

The fundamental and special characteristics that distinguish the natural beauty of the Kent Downs landscape were identified when the Kent Downs AONB was designated in 1968. This was reconfirmed in the 1995 Kent Downs AONB Landscape Assessment. The Kent Downs AONB contains a broad diversity of landscape types, from the chalk downs to vale landscapes and the anciently enclosed Wealden landscapes around Sevenoaks. There are some villages, concentrated in the Stour Valley and the Hollingbourne Vale, but the AONB is otherwise characterised by high densities of dispersed settlement (isolated farmsteads and hamlets) which had been established by the 11th century and sometimes earlier. The farmsteads are mostly sited along the existing road network (medieval and earlier routeways). The closest LCA within the Study is the West Kent Key Characteristics:

- The south-facing, chalk scarp between the Medway and the Darent provides a strong visual boundary, dividing the Kensing Vale from the deep, dry valleys and wooded plateau of the West Kent Downs.
- The sense of separation is increased by the extensive tracts of ecologically valuable deciduous woodlands along the top of the scarp.
- Woodland is very significant in this landscape, providing an important backdrop for the rolling landscape, the network of small county lanes, the scattered settlements and the extensive valley pastures.
- fields are contained by thick walls of woodland, and strips of remnant coppice, or shaws, occur frequently along the steeper valley sides.
- The settlements of Shorne and Shorne Ridgeway are spread out along the minor roads running north and east through this area.
- Much of this residential ribbon development is absorbed by existing woodland and therefore does not have an extensive influence. This area has a distinctly rural character.

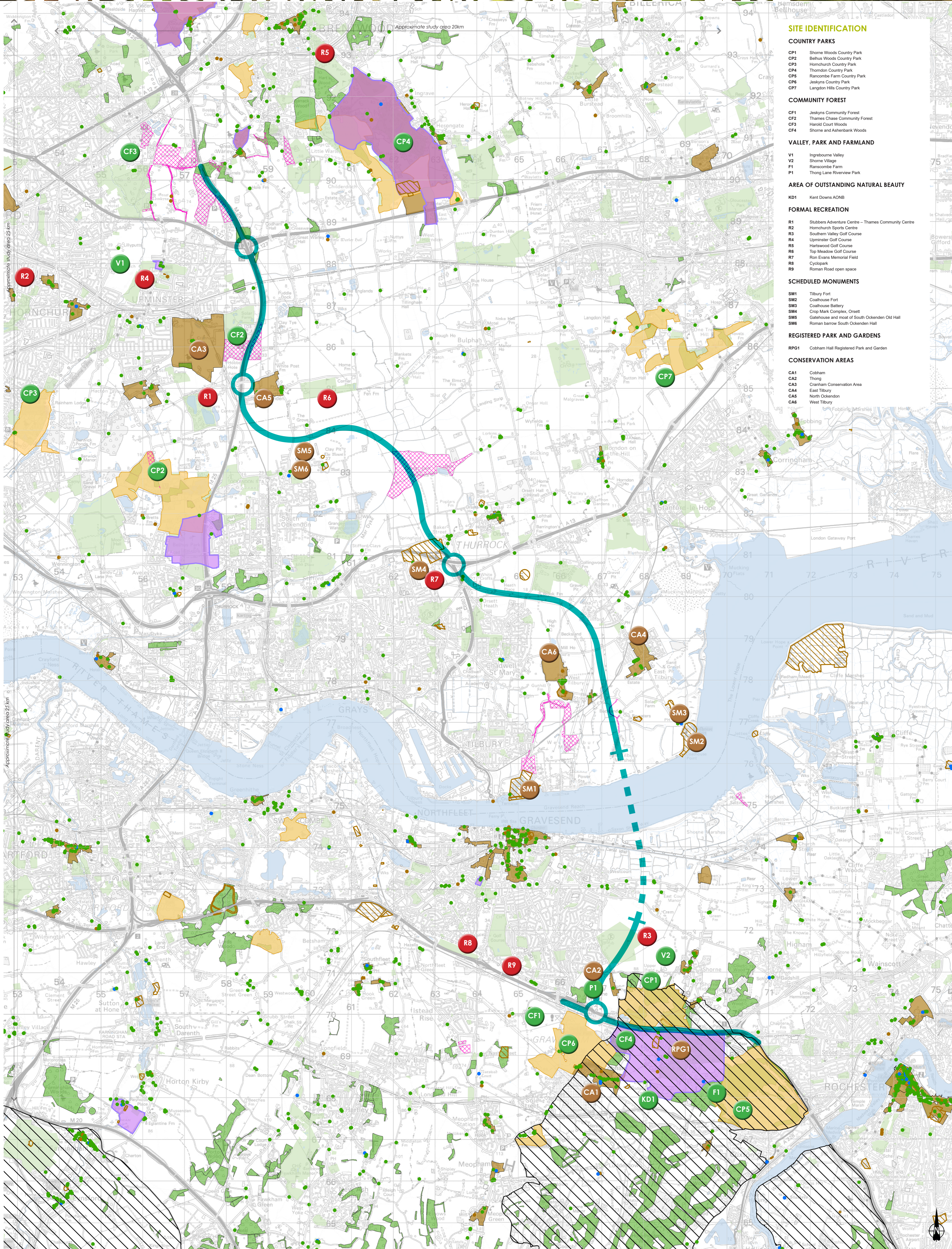


| Rev | Date | Drawn | Checked | Approved | Agreed | Release Purpose |
|-----|------------|-------|---------|----------|------------|-----------------|
| 001 | 19/11/2019 | GM | GM | AM | 20/11/2019 | For Information |
| 002 | 08/03/2018 | GM | GM | AM | 08/03/2018 | For Information |
| 003 | 16/07/2021 | GM | GM | AM | 16/07/2021 | For Information |
| 004 | 28/09/2022 | GM | GM | AM | 01/10/2022 | For Information |

| Client | Scale of A1 |
|-------------------|-------------------------|
| national highways | Main Map Frame 1:50,000 |
| | Inset 1:1,000,000 |

| Subality | Status | Revision |
|----------|--------|----------|
| Final | S2 | P04 |

| Drawing Title | Drawing Number |
|---|---|
| GREEN INFRASTRUCTURE - LANDSCAPE CHARACTER SHEET 1 OF 1 | HE540039-CJVEGN-SZP_EONE0000000-DR-LE-30012 |



SITE IDENTIFICATION

COUNTRY PARKS

- CP1 Shorne Woods Country Park
- CP2 Belhus Woods Country Park
- CP3 Hornchurch Country Park
- CP4 Thornodon Country Park
- CP5 Ranscombe Farm Country Park
- CP6 Jeskyns Country Park
- CP7 Langton Hills Country Park

COMMUNITY FOREST

- CF1 Jeskyns Community Forest
- CF2 Thames Chase Community Forest
- CF3 Harold Court Woods
- CF4 Shorne and Ashenbank Woods

VALLEY, PARK AND FARMLAND

- V1 Ingrebourne Valley
- V2 Shorne Valley
- F1 Ranscombe Farm
- P1 Thong Lane River View Park

AREA OF OUTSTANDING NATURAL BEAUTY

- KD1 Kent Downs AONB

FORMAL RECREATION

- R1 Stubbens Adventure Centre – Thames Community Centre
- R2 Hornchurch Sports Centre
- R3 Southern Valley Golf Course
- R4 Uppminster Golf Course
- R5 Hatwood Golf Course
- R6 Top Meadow Golf Course
- R7 Ron Evans Memorial Field
- R8 Cyclopark
- R9 Roman Road open space

SCHEDULED MONUMENTS

- SM1 Tibury Fort
- SM2 Coalhouse Fort
- SM3 Coalhouse Battery
- SM4 Crop Mark Complex, Orsett
- SM5 Gatehouse and moat of South Okenden Old Hall
- SM6 Roman barrow South Okenden Hall

REGISTERED PARK AND GARDENS

- RP01 Cobham Hall Registered Park and Garden

CONSERVATION AREAS

- CA1 Cobham
- CA2 Thong
- CA3 Cranham Conservation Area
- CA4 East Tibury
- CA5 North Okenden
- CA6 West Tibury

Legend

- Open access land
- Conservation area
- Grade II* listed building
- Development Route
- Area of Outstanding Natural Beauty
- Scheduled monument
- Grade II listed building
- Ancient Woodland
- Registered Park and Garden
- Country Park
- Grade I listed building

| Rev | Issue No | Issue Date | Created By | Checked By | Approved By | Approved Date | Revision Purpose |
|-----|----------|------------|------------|------------|-------------|---------------|------------------|
| P01 | RM | 23/07/2018 | GM | 23/07/2018 | AM | 23/07/2018 | For information |
| P02 | RM | 08/08/2018 | GM | 08/08/2018 | AM | 08/08/2018 | For information |
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LOWER THAMES CROSSING- GREEN INFRASTRUCTURE STUDY

OPEN SPACE, HERITAGE AND SENSE OF PLACE 2 OF 2

CONSERVATION AREAS

Cobham

Cobham Conservation Area is on high ground in a rural chalk-land setting to the south east of Gravesend. At the east end of the village beyond the Conservation Area is Cobham Park and here an avenue leads off from The Street to the north-east to Cobham Hall while a road runs east to the Hall's home farm, Lodge Farm.



Fig.1 Cobham Conservation Area
Fig.2 Entrance gate to The Avenue leading to Cobham Hall Registered Park and Garden
Fig.3 Entrance gate to Orchard Path

Thong

Thong is a very gently rolling landscape to one side of a shallow and almost impenetrable city valley. This runs northwards from the side of Shorne Woods and runs out into the chalk-land fields beyond Shorne field. Thong has no public open spaces other than the highway and, where present, its verges.



Fig.4 View of Thong Lane

Cranham Conservation Area

The listed buildings in the Conservation Area, all at grade II, are: the Church of All Saints, a railed tomb to its west, Cranham Hall, and the garden walls of Cranham Hall, Nos. 62, 64, 66 and 70 Front Lane are included in the Council's Local List. There are two green spaces within the Conservation Area, which are included in the London Parks and Gardens Trust's London Inventory of Historic Green Spaces. These are All Saints churchyard, which has public access, and the garden of Cranham Hall, which does not. Cranham Marsh, at the south west corner of the Conservation Area, is a designated Site of Importance for Nature Conservation and is managed as a nature reserve by the Essex Wildlife Trust. A number of public rights of way cross the Conservation Area. All of the Conservation Area is within the Thames Chase Community Forest Area.

East Tilbury

The Conservation Area consists of the former factory complex of the British Bata Shoe Company and a large housing development of some 352 houses in a 'garden village' setting. The site of the whole Conservation Area is enhanced by the central area of open spaces and the original 'garden village' layout can still be appreciated. The estate still has the very spacious feel of the original design, so evident in plan form.

North Ockendon Conservation Area

North Ockendon lies 3km (1.9 miles) to the south east of Upminster, just outside the M25 motorway which crosses the parish of North Ockendon. The Conservation Area lies on the very edge of the Havering borough on the boundary of London with Essex. The setting is mainly open farmland, with scattered farms down narrow tracks. There is one green space which is included in the London Parks and Gardens Trust's London Inventory of historic green spaces: this is the churchyard of St Mary Magdalene, which is publicly accessible.

West Tilbury

West Tilbury is situated at the edge of an escarpment immediately overlooking the marshes. The historic elongated central common encompasses the Green and the meeting of several ancient lanes and footpaths, Blue Anchor Lane, Rectory Road and Church Road.

REGISTERED PARKS AND GARDENS

Cobham Hall Registered Park and Garden

Cobham Hall lies on the south side of the A2, some 4km west of Rochester and at the east end of the village of Cobham. The registered site of c. 338ha comprises c. 22ha of formal gardens and pleasure grounds surrounded by a park of 316ha of which c. 120ha are wooded. The site extends over both level and gently undulating ground which rises to a low ridge in the south-east and to an isolated hill, Windmill Hill (scheduled ancient monument), north of the house. The wooded slopes of the North Downs lie beyond the site to the south. Agricultural fencing encloses the site to the east and south from a surrounding landscape of woodland and arable farmland, with the minor Lodge Lane and the housing of Cobham village abutting the western end of the southern boundary. Cobham Hall (listed grade I) stands west of the centre of its park, below the southern slopes of Windmill Hill.

The park surrounds Cobham Hall although the main surviving area of parkland lies to the west in the West Park. Immediately west of the Hall are loose clumps of trees of mixed ages from which the south-west lime avenue extends 300m to Cobham village. North-west of the main entrance, and to the south-west either side of the avenue, the park consists of largely open grassland with a few isolated trees.

The Park now has several owners. The largest area open to the public, Cobham Wood, belongs to the National Trust. The wood, a Site of Special Scientific Interest, is open all year but the Darnley Mausoleum is open only on certain days.

FORTS

Tilbury Fort

Tilbury Fort is England's most spectacular surviving example of a late 17th century coastal fort, designed at a time when artillery had become the dominant feature of warfare and therefore built with massive low earthworks, resilient to the shock of bombardment, instead of stone fortifications. The layout and construction was geared to the optimum siting of cannon at the forward batteries which, in conjunction with batteries on the opposing bank of the Thames, could create a field of fire spanning the estuary providing defence for the river itself and the capital.

Tilbury Fort on the Thames estuary has protected London's seaward approach from the 16th century through to the Second World War. Henry VIII built the first fort here, and Queen Elizabeth I famously rolled her army nearby to face the threat of the Armada. The present fort is much the best example of its type in England, with its circuit of mounds and bastioned outworks.

Tilbury Fort is now operated by the heritage agency English Heritage as a tourist attraction (open Wednesday - Sunday 10am-4pm, receiving 16,154 visitors in 2014). Many of the more modern military features were demolished during the 1950s, with further restoration work taking place during the 1970s ahead of the site opening to the public in 1983. The 17th-century defences are considered by the historian Paul Pattison to be the "best surviving example of their kind in Britain".



Fig.5 View towards Tilbury Fort

Colehouse Fort & Country Park

Coolhouse Fort Park is 400 metres south of East Tilbury Village on Princess Margaret Road. It is home to Coolhouse Fort, built during the 19th century to help protect the Thames estuary. Coolhouse Fort was built between 1861 and 1874 – partly under the direction of General Gordon (of Khartoum) – and was one of a number of forts built to fortify the Thames estuary. It stands within a parkland setting and features a number of World War 2 gunnery posts. The monument comprises the Victorian Coolhouse Fort at East Tilbury, with its associated railway link and jetty and its rifle range, as well as the foundations of an Henrician 'blockhouse' coastal battery, a late 19th century 'Quick-Firer' battery and a low-level radar tower dating from World War II. The earliest of this remarkable sequence of Thameside defences is the blockhouse, the construction of which was ordered by Henry VIII in 1539/40



Fig.6 View towards Colehouse Fort from Princess Margaret Road

COUNTRY PARKS, PARKLAND AND FORESTS

Shorne Woods Country Park

Kent County Council bought Shorne Wood in 1982 and opened the site as a country park in 1987. The site includes the eco-friendly visitor centre and café, a sensory garden, orienteering, fishing lakes, a film trail and picnic and play areas – including 292 acres of rolling woodlands, wetlands and meadows that can be explored via a variety of waymarked trails. There are a number of other colour-coded waymarked trails too, ranging in length from the 1 mile Easy Route to the 6.2 mile Donkey Trail that also takes in the nearby Jeskyns and Cobham Wood sites. The medieval remains of Randall Manor, the original seat of the De Cobham family, are hidden in the woods. The park opens at 9am and shuts at dusk/8.30pm.



Fig.7 Shorne Woods Community Forest Centre and Wayfinding
Fig.8 Shorne Woods Trim Trail

Jeskyns Community Forest

Opened to the public in 2007, Jeskyns is 360 acres of greenspace that has been specially created by the Forestry Commission. The entrance to Jeskyns is on Henhurst Road, Cobham. The forest comprises:
Jeskyns Woods- 100,000 young trees make up Jeskyns own brand new woodland.
Jeskyns Meadows- 100 acres of meadowland with over 40 species of wildflower provide important habitat for wildlife.
Jeskyns Orchards- 756 different varieties of apple as well as plums, cherries, pears, walnuts and cobnuts grow in this area.
Jeskyns Glades- With a backdrop of ancient woodland
Jeskyns Grove - This secluded area, sown with barley and wildflowers provides shelter and winter food for birds.



Fig.9 Jeskyns Community Forest Café
Fig.10 Jeskyns Community Forest Public Footpath

Belhus Woods Country Park

Belhus Woods Country Park is a diverse landscape of ancient woodland, grassland and lakes. The park has been given the Green Flag Award. The ancient woodlands have changed little in shape and size since at least 1777, but since then significant extra planting has created new areas. The woodlands are home to rich communities of wildlife and are managed traditionally. Belhus has all types of grassland, from mown grass kept short to provide picnic areas to tall swards ideal for grassland butterflies and sky larks. Lake margins and adjacent fields provide ideal sites for family games, while the hay meadows are seas of green, rich with colonies of plants and insects.

Thames Chase Community Forest

The London Borough of Havering, along with Thurrock Borough Council include large areas of protected land through which the proposed LIC route crosses, designated as 'Thames Chase'. This area extends from the north-eastern corner of Thurrock BC into LB Havering where it crosses a wide area to the south of the Borough. This forms part of the 'Thames Chase Community Forest', identified as an asset of regional significance for the retention, enhancement and provision of Green Infrastructure for its value as an area of landscape, ecological and recreational importance. Thames Chase Forest covers 40 square miles of countryside around the London/Essex borders. Thames Chase Community Forest encompasses countryside in Barking and Dagenham, Brentwood, Havering and Thurrock. Within its boundaries there has been a concerted effort, over the last 25 years to re-generate despoiled landscape and enhance the natural environment for the benefit of local people and wildlife. The Forest area can be divided into three geological zones. The Boulder Clay Plateau forms a pronounced ridge, running in a north-easterly direction towards Colchester. Below the plateau, the land slopes to the Clay Plains, where London clays form an extensive plain. Further south and west the sands, gravels and brickearth of the Thames Terraces were deposited by a prehistoric River Thames. Throughout Thames Chase, the soils are predominantly acid, and reasonably fertile. They are drained by three main river systems – the Beorn, Ingrebourne and Mardyke – flowing southwards across gently sloping land, mostly less than 20 metres above sea level. There is significant provision for countryside sport and recreation within Thames Chase. Major facilities include country parks at Belhus Woods, Thorndon, Hornchurch and Broadfields Farm, and outdoor recreation centres at Belhus Park, Brelons, Grangewaters and Stubbers. The sites of Belhus Woods, Eastbrookend, Grangewaters and Stubbers are good examples of how old mineral workings can be used for recreation. Further provision includes a privately owned multi-use centre, established golf courses and other facilities for activities such as horse-riding, fishing, archery, and orienteering. Informal access to the forest is largely via a footpath network of varying quality. The area has few bridleways and there is little formal provision for cycling, meaning that cyclists and horse riders often have to deal with the hazards presented by heavily trafficked roads.



Fig.11 Thames Chase Meadow
Fig.12 Thames Chase Information and Resource Centre

Ingrebourne Valley

Ingrebourne Valley LTD (IVL) is a leading reclamation and restoration company in ownership of 16 sites. Goshems Farm is a site in the Ingrebourne Valley which borders Tilbury Power station. The aim of the site project is to raise the land using inert material, restore it back to high quality arable farmland and include a riverside public footpath.

Thorndon Country Park

Thorndon Park is a 141.4 hectare biological Site of Special Scientific Interest in Brentwood in Essex. Part of it is run by Essex County Council as Thorndon Country Park, and the Essex Wildlife Trust manages its visitor centre. The site is semi-natural woodland and ancient parkland. The country park is divided into Thorndon Park North, with access from the Avenue, and Thorndon Park South, with access from Arterial Road. The tranquil woodlands of Thorndon North surround the beautiful Childerick pond and attract many migrant and over-wintering birds such as bramblings, skinks and redpolls.



Fig.13 Thorndon Country Park Woodlands

Shorne Village

Shorne village is clustered around two locations. Upper Shorne is about 3 miles east of Gravesend, south of the A226 with Lower Shorne north of the A226 extending toward the Thames Estuary and Shorne Marshes. Although most of the village occupies a shallow valley the perimeter of upper Shorne lies on some of the highest ground in the vicinity giving magnificent views of the Thames Estuary from Gravesend to Southend. There are several areas of woodland to the west and east of the village including Great Crabbles Wood and Stormore Woods to the east and Randall Wood, Shorne Wood and Brewers Wood to the west. Most of the woodland to the west is part of the picturesque Shorne Wood Country Park.



Fig.14 Views out towards the River Thames from Shorne Village

Hornchurch Country Park

Hornchurch Country Park is a large area of glades, attractive mature woodland and meadows. It is hard to believe that this park, which was created in 1980 from a huge landfill site, sits on thousands of tons of household and industrial rubbish.

Harrow Lodge Park

Harrow Lodge is one of the largest parks in the borough and one of the most popular due to the facilities provided. The River Ravensbourne cuts a path through the park before entering the first of two large meadow lakes, one of which is used for boating. Other facilities include a cafe, 2 playtays with inclusive play equipment and multi-use ball courts (at either end of the park) and tennis courts. The park is used by the resident clubs for cricket and hockey and local teams can also hire football pitches. Set inside the park at its northern boundary is Hornchurch Sports Centre; a popular location for major events including the Havering Show and visiting fairs/guards.

Ranscombe Farm

Ranscombe Farm is a botanical gem. It is a square mile in total and it has been a favourite haunt of wild plant enthusiasts for hundreds of years. Managed by the charity Plantlife International in partnership with the tenant farmer, Ranscombe is now a country park. It combines a place for quiet walks in attractive countryside with a fascinating flora on the slopes of the North Downs. There is a five-year plan to restore coppicing an ancient Kentish trade, to the woodland and to improve conditions for wildlife. These woodlands are best in spring with early-purple orchids and bluebells. Plantlife is organising volunteer workdays, talks, free guided walks and other events throughout the year.

Harold Court Woods

Harold Court Woods is located right on the doorstep of Harold Wood and Harold Hill; easily accessed under the railway arch on Harold Court Road. Stretches of woodland and grassland rise to 150 foot at its highest point where a sculpted wooden seat created by artist Tim Norris offers a view west across London. Planting of ground 40,000 trees by the Forestry Commission has been supplemented by the creation of meadow and pond/wetland areas. New paths give good access to pedestrians, cyclists and designated horse routes. Open 8am till dusk.

Shorne and Ashenbank Woods

Shorne and Ashenbank Woods form a complex of ancient and plantation woodland, and include a variety of stand-types associated with Tertiary gravels, clays and sands. Ashenbank Woods is part ancient woodland. It was traditionally managed as coppice, and part wood pasture where historically the wood was grazed by livestock. There are many examples of veteran trees and pollards to see as well as relics from Ashenbank's social history - a Bronze Age Barrow and structures from the Second World War when the RAF accommodated personnel from the Gravesend Airfield in the wood. Interpretation panels are placed along two waymarked routes. Part of the site is owned and managed by the County Council as Shorne Country Park. Part is owned by the Woodland Trust.

RECREATION

Gravesend CycloPark

CycloPark is a multi-sports facility offering a range of activities for all ages and abilities - from dedicated cyclists and athletes to families. The ultimate aim of the park is to encourage more people to take up sport. The main facilities available daily are the Road Circuit (our 3km road track), Mountain Bike Trails (total of 6km off-road routes), Skatepark, and our PlayPark (with a mini road track just for kids called the Cycloland).



Fig.15 CycloPark playground

Roman Road

The Roman Road owned by Kent County Council is a linear Green Infrastructure asset providing recreational value for cyclists and walkers with space for informal recreation on the southern edge of Gravesend running parallel with the A2

RECREATION (PRIVATE)

Stubbers Adventure Centre – Thames Community Centre

Stubbers Adventure Centre comprises 130 acres of land, including 3 lakes. Facilities available to book include windsurfing, sailing, a climbing wall, canoeing, archery, orienteering, quad bikes, jet skiing, a challenge course and team challenge events.

Opening Hours:

- 9am-5:30pm
- Features of the Park include:
 - Site Area: 130 acres
 - Site Type: Activity Centre
 - Site Users: Pedestrians
 - Path Length: 5.2km (unsurfaced)
 - Play Area
 - 3 lakes

Hornchurch Sports Centre

Hornchurch Sports Centre in Essex offers a variety of sports and activities to the local community. There are two swimming pools with three diving boards, a sports hall with eight badminton courts.

Southern Valley Golf Course

Southern Valley is situated in Shorne, just south east of Gravesend in Kent. The site originally made up part of Gravesend Airport, which was actively in use during the 2nd World War from 1932 until 1956. Gorse and Broom plants have been imported and planted on the course.

Upminster Golf Course

The course combines views of the surrounding countryside and has a mature course, which is spread out over the rolling greenward that runs gently down to the River Ingrebourne. It combines wide fairways and holes through which the Ingrebourne winds. It was originally laid out in 1928 by the great Harry (H. A.) Colt who is often described as the founder of golf course architecture in Britain.

Hartswood Golf Course

Hartswood Golf Course of Brentwood is located in a parkland setting comprising an 18 hole public, established in 1920.

Top Meadow Golf Club

Top Meadow is a 18 hole golf course set in the centre of the Essex Countryside. Established in 1985 the golf course has matured to a parkland course.

SOUTH EAST LONDON GREEN CHAIN PLUS

In 1977, four London Boroughs and the Greater London Council created the South East London Green Chain to protect and improve this existing landscape and its public spaces. With the addition of Southwark borough in 2009, the Green Chain now includes over 300 open spaces. The landscape of the South East London Green Chain Plus is a collage of parks, commons, ancient woodlands, allotments, cemeteries, farms and gardens.

The All London Green Grid has been developed to provide a strategic interlinked network of high quality green infrastructure and open spaces that connect with town centres, public transport nodes, the countryside in the urban fringe, the Thames and major employment and residential areas. Opportunities include the promotion and enhancement of the long distance South East London Green Chain footpaths and links by improving accessibility into and through the area, particularly access from its edges. Develop extensions of the SE London Green Chain by creating new link.

AREAS OF OUTSTANDING NATURAL BEAUTY

Kent Downs AONB

The rich landscape of the Kent Downs AONB is made up of diverse special characteristics and qualities which together distinguish it as a landscape of national and international importance and which are consistently identified and valued by the public, individuals, institutions, organisations and experts alike. The Kent Downs dramatic and diverse topography is based on the underlying geology. These features comprise: impressive south-facing steep slopes (scarp) of chalk and greensand; scalloped and hidden dry valleys – these features are especially valued where they have a downward character; expansive open plateaux; broad, steep-sided river valleys, and the dramatic, iconic white cliffs and foreshore. Breathtaking, long-distance panoramas are offered across open countryside, estuaries, towns and the sea from the scarp, cliffs and plateaux; the dip slope dry valleys and river valleys provide more intimate and enclosed vistas. Overlaying this landscape are diverse natural and man-made features creating distinctiveness at a local level.

Access to the Kent Downs AONB particularly through walking, cycling and riding can provide benefits to health and well-being as well as supporting the local community.



Fig.16 Meadow scarp with extensive views obtained from Kent Downs AONB

Fen and Marshland

Mucking Flats and Marshes

Mucking Flats and Marshes comprise an extensive stretch of Thames mudflats and saltmarsh, together with sea wall grassland. Between the sea wall and mean high water line lie areas of high level saltmarsh of a type uncommon in Essex. The vegetation is dominated by sea couch Elymus pycnanthus and sea purslane Halimione portulacaoides, with sea aster Aster tripolium, common sea-savender Limonium vulgare and common saltmarsh-grass Puccinellia maritima. Fragments of lower saltmarsh include gresswort Salicornia spp., common cordgrass Spartina anglica and lesser sea-pursley Spergularia marina, together with the nationally scarce golden samphire Inula citharoides. The saltmarshes are truncated to their landward edge by sea walls, which in places are vegetated with a sward dominated by sea couch Elymus pycnanthus. The saltmarsh has a high invertebrate interest, which includes the rare spider Euryphma duffeyi, as well as many notable and local species.

Orsett Fen

Orsett Fen is open common land of 85 hectares located 1.5km north-west of Orsett. The land includes minor roads, footpaths and S193 common. (more text read)



Fig.17 Thames mudflats and saltmarsh

| Rev | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Purpose | Client | Insert | |
|---|----------|------------|------------|--------------|-------------|---------------|------------------|--|------------------------------------|-----------------|
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LOWER THAMES CROSSING - GREEN INFRASTRUCTURE STUDY CONNECTIONS

STRATEGIC WALKING ROUTES

Saxon Shore Way

The long distance path, known as the Saxon Shore Way, stretches from Gravesend to Hastings, some 160 miles from start to finish. Originally opened in 1980, it has since been in parts re-routed and extended. Where possible it uses existing Public Rights of Way and allows the walker to follow roughly the coastline as it was around 1,500 years ago. The way takes its name from the line of fortifications built along the southern and eastern coasts by the Romans in the third century AD.



Fig. 1 Elizabeth Gardens Park looking from Saxon Shore Way in Gravesend

Thames Estuary Path

7 mile walk between Tilbury Town and East Tilbury Station. Some of the places of interest:

- Tilbury cruise terminal
- Tilbury Fort
- Coochouse Fort
- Tilbury Marshes
- Tilbury Power station
- West Tilbury Church and the site of QE1's speech to the English fleet
- WWII radar station and bunkers

Thames and Medway Canal Towpath

The Thames and Medway Canal is a disused canal in Kent, south east England, also known as the Gravesend and Rochester Canal. It was originally some 11 km (6.8 mi) long and cut across the neck of the Hoo peninsula, linking the River Thames at Gravesend with the River Medway at Strood. The canal was first mooted in 1778 as a shortcut for military craft from Deptford and Woolwich Dockyards on the Thames to Chatham Dockyard on the Medway, avoiding the 74 km (46 mi) journey round the peninsula and through the Thames estuary. The towpath has recently been renovated for use by pedestrians and cyclists. It now forms part of Route 1 of the National Cycle Network from Dover to John o' Groats. For walkers, it forms part of circular walks linked to the Saxon Shore Way.

London Loop

The circular Walk London route consists of 24 sections between Erith station and Purfleet. The mostly flat or gently sloping sections incorporate a combination of beautiful open spaces

and historic buildings. The London Loop is way-marked by different signs including white discs, aluminium walking man symbols, word links and tall green and white signposts. Section 23 - 24 links Uppminster Bridge to Rainham covering a distance of 4 miles. The route travels through Hornchurch Country Park and generally follows the River Ingrebourne. It passes roughly north east to south west through the London Borough of Havering and into the River Thames at Rainham Creek. Much of the river's route is classed as a London site of metropolitan importance because of the wildlife.

Timeball and Telegraph Trail

This trail is a 97 mile walk between Deal and Greenwich.

Darley Trail

Named after the Earls of Darley, who previously owned Cobham Hall the Darley Trail is an excellent way to see the highlights of this area. This is a circular route for pedestrians, cyclists and equestrians that links Shorne Woods Country Park with the gently undulating countryside on the other side of the A2, over a distance of approximately 10km. From the Country Park, the Darley Trail takes in Cobham Park, Ranscombe Farm Reserve, Ashenbank Wood and Jeskyns Community Woodland, with several entry points and various short cuts that make up a varied and interesting route.

STRATEGIC CYCLING ROUTES

National Cycle Route 177

National Cycle Route 177 of the National Cycle Network is currently open in two sections: one between Northfleet and Rochester, and another between Downswood and the western edge of Mole Park. This route is mixed on roads/traffic-free along Watling Street. It then restarts as a great 2 mile traffic free route taking you from Downswood into Maidstone, past the River Len and through Mole Park. The route is currently 11 miles long.

National Cycle Route 13

National Route 13 of the National Cycle Network passes through Albert Dock and Rainham Marshes on its way to Grays and Tilbury. The short open sections are almost entirely traffic-free. The route is under development but there are many sections already open: between Rainham Marshes and Purfleet; alongside the Thames at Grays and Tilbury; through Basildon; from the outskirts of Basildon to Bures near Colchester; and from Sudbury to Coney Weston. The longest continuously open stretch is from Theford to Fakenham. The route is currently 125 miles long.

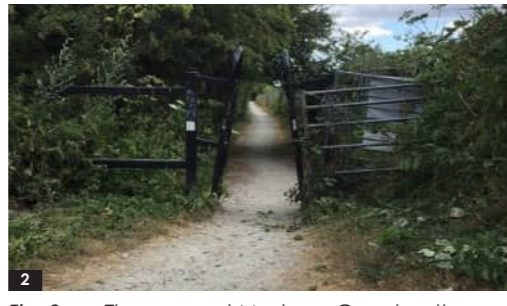


Fig. 2 Thames and Medway Canal path on northern side of railway, next to Queen's Farm Rd.
Fig. 3 View of Shorne and Higham Marshes from Thames and Medway Canal path



Fig. 4 National Cycle Route 177 looking south from Park Pale road junction with A2
Fig. 5 National Cycle Route 177 looking north-east from Park Pale road junction with A2

National Cycle Route 1

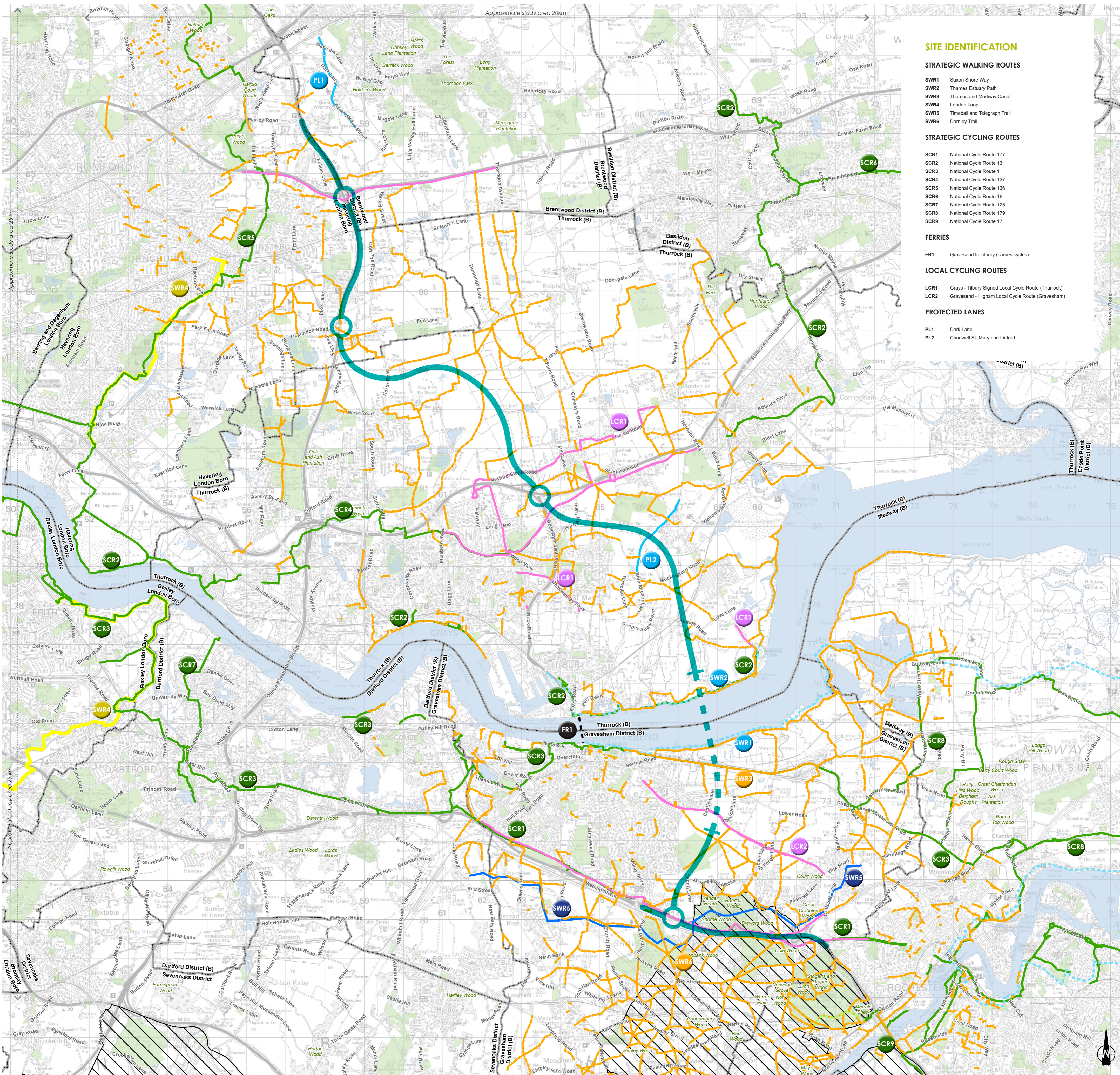
This section of the Dover to London route, also known as the Garden of England follows the North Kent coast, passes through Canterbury, Rochester and Dartford before following the Thames to Greenwich. Dover to London also forms part of EuroVelo 5. The route leaves Dover passing by the White Cliffs of Dover, following the stunning Kent Coastal Castles ride to Deal before joining the Crab and Winkle Way between Canterbury (home of World Heritage Site Canterbury Cathedral) and Whitstable. Further on into London the Thamesmead to Greenwich section is a great traffic-free section from which you can see the Thames Barrier and O2 Arena.

Protected Lanes

The policy to preserve Essex historic lanes has been in operation for over a quarter of a century and is summarized in a document prepared by Essex County Council (ECC, 1998). However when Local Authorities decided to reassess their existing Protected Lanes as part of the evidence base for the Local Development Frameworks, precise information on the criteria used to assess historic lanes for Protected Lane status and the original survey guidelines for making this assessment were found to be no longer available. Essex County Council's Historic Environment Branch was commissioned by Chelmsford Borough Council to develop robust and defensible criteria for its Local Development Framework, Core Strategy and Development Control Policies (Policy DC 15) on Protected Lanes (CBC, 2008, 75) and then to apply these criteria to Protected Lanes in the Borough (ECC, 2009) and has been used to assess lanes in Essex (reference from Uttlesford Protected Lanes Assessment March 2012).



Fig. 6 Timeball and Telegraph Trail, junction with Wrotham Rd.



SITE IDENTIFICATION

STRATEGIC WALKING ROUTES

- SWR1 Saxon Shore Way
- SWR2 Thames Estuary Path
- SWR3 Thames and Medway Canal
- SWR4 London Loop
- SWR5 Timeball and Telegraph Trail
- SWR6 Darley Trail

STRATEGIC CYCLING ROUTES

- SCR1 National Cycle Route 177
- SCR2 National Cycle Route 13
- SCR3 National Cycle Route 1
- SCR4 National Cycle Route 137
- SCR5 National Cycle Route 136
- SCR6 National Cycle Route 16
- SCR7 National Cycle Route 125
- SCR8 National Cycle Route 179
- SCR9 National Cycle Route 17

FERRIES

- FR1 Gravesend to Tilbury (carries cycles)

LOCAL CYCLING ROUTES

- LCR1 Grays - Tilbury Signed Local Cycle Route (Thurrock)
- LCR2 Gravesend - Higham Local Cycle Route (Gravesham)

PROTECTED LANES

- PL1 Dark Lane
- PL2 Chadwell St. Mary and Linford

| Legend Existing Public Right of Way Time Ball and Telegraph Trail Local cycle route Long Distance Path Protected Lane London Loop National Trail Sustans National Cycle Network Gravesend to Tilbury ferry (carries cycles) Area of Outstanding Natural Beauty District/Borough/Unitary region Development Route | | <table border="1"> <thead> <tr> <th>Rev</th> <th>Drawn By</th> <th>Drawn Date</th> <th>Checked By</th> <th>Checked Date</th> <th>Approved By</th> <th>Approved Date</th> <th>Revision Purpose</th> </tr> </thead> <tbody> <tr> <td>P01</td> <td>RM</td> <td>23/07/2016</td> <td>GM</td> <td>23/07/2016</td> <td>AM</td> <td>23/07/2016</td> <td>For Information</td> </tr> <tr> <td>P02</td> <td>RM</td> <td>06/08/2016</td> <td>GM</td> <td>08/08/2016</td> <td>AM</td> <td>06/08/2016</td> <td>For Information</td> </tr> <tr> <td>P03</td> <td>RM</td> <td>16/07/2021</td> <td>GM</td> <td>16/07/2021</td> <td>AM</td> <td>16/07/2021</td> <td>For Information</td> </tr> <tr> <td>P04</td> <td>LK</td> <td>23/06/2022</td> <td>GM</td> <td>09/06/2022</td> <td>AM</td> <td>07/06/2022</td> <td>For Information</td> </tr> </tbody> </table> | Rev | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Purpose | P01 | RM | 23/07/2016 | GM | 23/07/2016 | AM | 23/07/2016 | For Information | P02 | RM | 06/08/2016 | GM | 08/08/2016 | AM | 06/08/2016 | For Information | P03 | RM | 16/07/2021 | GM | 16/07/2021 | AM | 16/07/2021 | For Information | P04 | LK | 23/06/2022 | GM | 09/06/2022 | AM | 07/06/2022 | For Information | Scale at A1 Main Map frame: 1:50,000 Inset: 1:1,000,000 Copyright: Ordnance Survey data. © Crown copyright and database rights 2022. Ordnance Survey 100000068 Drawing Title: GREEN INFRASTRUCTURE - CONNECTIONS SHEET 1 OF 1 Drawing Number: HE40003-CIV-EGN-S2P_EGNEN000000-DR-E-00011 |
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| Rev | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Purpose | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P01 | RM | 23/07/2016 | GM | 23/07/2016 | AM | 23/07/2016 | For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P02 | RM | 06/08/2016 | GM | 08/08/2016 | AM | 06/08/2016 | For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P03 | RM | 16/07/2021 | GM | 16/07/2021 | AM | 16/07/2021 | For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P04 | LK | 23/06/2022 | GM | 09/06/2022 | AM | 07/06/2022 | For Information | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LOWER THAMES CROSSING - GREEN INFRASTRUCTURE STUDY

GREEN INFRASTRUCTURE TYPOLOGIES

PARKS AND OPEN SPACE

- COUNTRY PARKS**
- CP1 Shorne Woods Country Park
 - CP2 Belhus Woods Country Park
 - CP3 Hornchurch Country Park
 - CP4 Thorndon Country Park
 - CP5 Ranscombe Farm Country Park
 - CP6 Jeskyns Country Park
 - CP7 Langdon Hills Country Park

COMMUNITY FOREST

- CF1 Jeskyns Community Forest
- CF2 Thames Chase Community Forest
- CF3 Harold Court Woods
- CF4 Shorne and Ashenbank Woods

VALLEY, PARK AND FARMLAND

- V1 Ingrebourne Valley
- V2 Shorne Village
- F1 Ranscombe Farm
- P1 Thong Lane Riverview Park

AREA OF OUTSTANDING NATURAL BEAUTY

- KD1 Kent Downs AONB

FORMAL RECREATION

- R1 Stubbers Adventure Centre – Thames Community Centre
- R2 Hornchurch Sports Centre
- R3 Southern Valley Golf Course
- R4 Upminster Golf Course
- R5 Hartswood Golf Course
- R6 Top Meadow Golf Course
- R7 Ron Evans Memorial Field
- R8 Cyclopark
- R9 Roman Road open space

RECREATION CORRIDORS

- STRATEGIC WALKING ROUTES**
- SWR1 Saxon Shore Way
 - SWR2 Thames Estuary Path
 - SWR3 Thames and Medway Canal
 - SWR4 London Loop
 - SWR5 Timeball and Telegraph Trail
 - SWR6 Darnley Trail

STRATEGIC CYCLING ROUTES

- SCR1 National Cycle Route 177
- SCR2 National Cycle Route 13
- SCR3 National Cycle Route 1
- SCR4 National Cycle Route 137
- SCR5 National Cycle Route 136
- SCR6 National Cycle Route 16
- SCR7 National Cycle Route 125
- SCR8 National Cycle Route 179
- SCR9 National Cycle Route 17

LOCAL CYCLING ROUTES

- LCR1 Grays - Tilbury Signed Local Cycle Route (Thurrock)
- LCR2 Gravesend - Higham Local Cycle Route (Gravesham)

PROTECTED LANES

- PL1 Dark Lane
- PL2 Hoford Road

FERRIES

- FR1 Gravesend to Tilbury (carries cycles)

BIODIVERSITY

- INTERNATIONALLY DESIGNATED SITES**
- B1 Thames Estuary and Marshes Ramsar Site, Special Protection Area (SPA), and Site of Special Scientific Interest (SSSI)

NATIONALLY DESIGNATED SITES

- B2 River Thames/Thames Estuary recommended Marine Conservation (rMCZ)
- B3 Kent Downs Area of Outstanding Natural Beauty (AONB)
- B4 Hangman's Wood and Deneholes SSSI and Ancient Woodland
- B5 Rainham Marshes SSSI and RSPB reserve
- B6 Mucking Flats and Marshes SSSI
- B7 Shorne and Ashenbank Woods SSSI, Ancient Woodland, Woodland Trust Reserve, and Country Park
- B8 Great Crabbles Wood SSSI and Ancient Woodland
- B9 Cobham Woods SSSI and Ancient Woodland and Ranscombe Farm Plantlife reserve and Country Park

COUNTY LEVEL DESIGNATED SITES

- B10 Shorne and Higham Marshes Local Wildlife Site (LWS) and RSPB reserve
- B11 Mar Dyke river corridor LWS
- B12 Blackshots Nature Area LWS
- B13 Orsett Camp Quarry LWS
- B14 Orsett Golf Course and Mucking Heath LWS
- B15 Linford Pit and Low Street Pit LWSs
- B16 Broom Hill and West Tilbury Hall LWSs
- B17 Low Street Pit LWS
- B18 Goshems Farms LWS
- B19 Tilbury Marshes LWS
- B20 Codham Hall Woods, Hobbs Hole and Warley Hall Wood LWSs and Ancient Woodlands
- B21 Clay Lane Woods Ancient Woodland
- B22 Cranham Marsh Nature Reserve (LNR) and Ancient Woodland
- B23 North Ockendon Pit Metropolitan SINC

HERITAGE

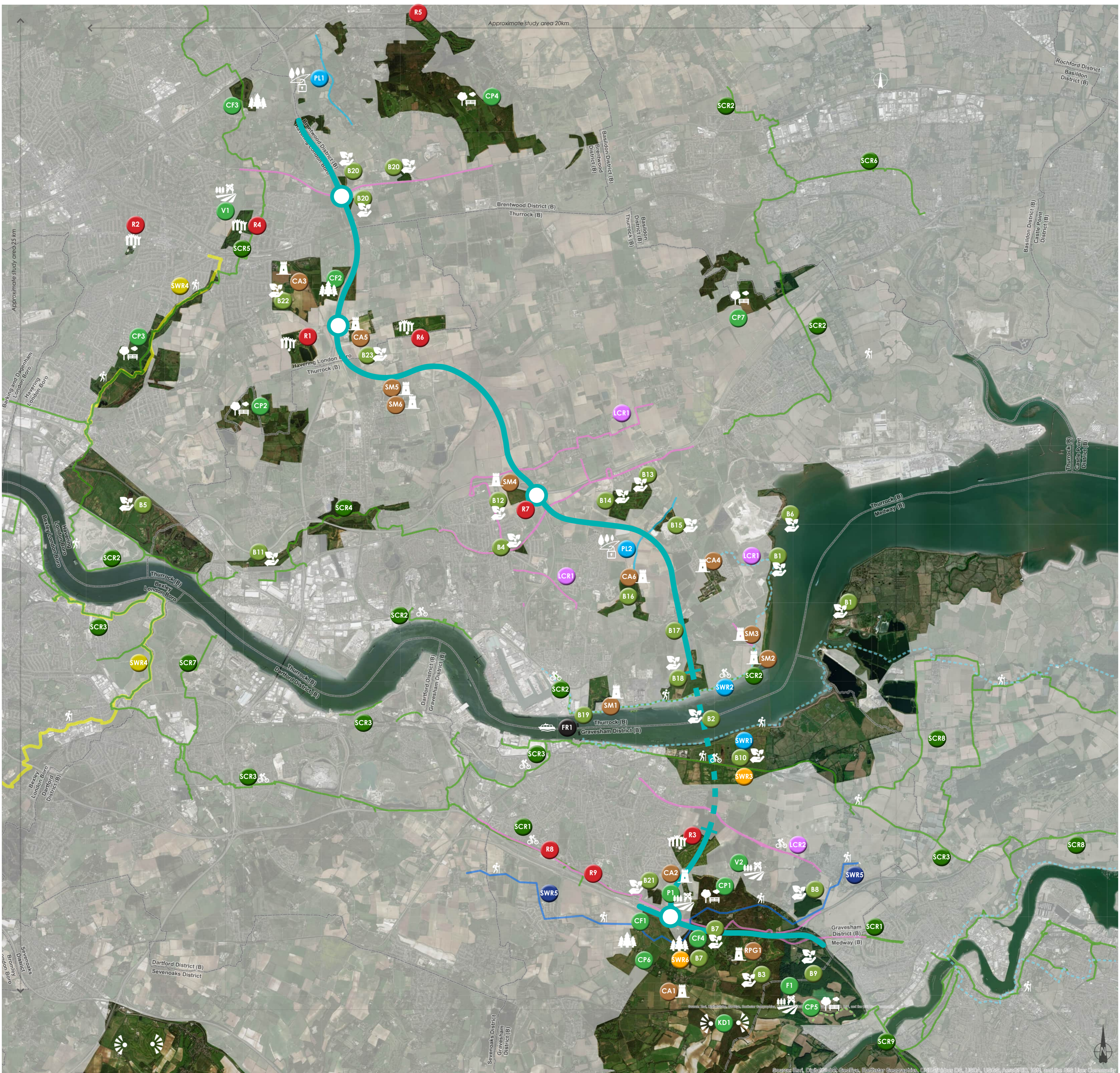
- SCHEDULED MONUMENTS**
- SM1 Tilbury Fort
 - SM2 Coalhouse Fort
 - SM3 Coalhouse Battery
 - SM4 Crop Mark Complex, Orsett
 - SM5 Galehouse and moat of South Ockenden Old Hall
 - SM6 Roman barrow South Ockenden Hall

REGISTERED PARK AND GARDENS

- RPG1 Cobham Hall Registered Park and Garden

CONSERVATION AREAS

- CA1 Cobham
- CA2 Thong
- CA3 Cranham Conservation Area
- CA4 East Tilbury
- CA5 North Ockendon
- CA6 West Tilbury



| Rev | Drawn By | Check By | Checked By | Approved By | Approved Date | Revision Purpose | |
|-----|----------|------------|------------|-------------|---------------|------------------|-----------------|
| 001 | RM | 23/01/2018 | GM | 23/01/2018 | AM | 23/01/2018 | For Information |
| 002 | RM | 08/02/2018 | GM | 08/02/2018 | AM | 08/02/2018 | For Information |
| 003 | RM | 16/07/2021 | GM | 16/07/2021 | AM | 16/07/2021 | For Information |
| 004 | LK | 16/09/2022 | GM | 16/09/2022 | AM | 07/09/2022 | For Information |

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|---|---------------|--|
| | Client | Main Map Frame 1:50,000 Inset 1:1,000,000 |
| | Project Title | |
| Drawing Title GREEN INFRASTRUCTURE TYPOLOGIES | Subsidiary | Status S2 |
| | Revision | |
| Drawing Number | | HE540039-CJVEGN-S2P_EGNE00000000-DR-LE-30013 |

| Legend |
|---|
| <ul style="list-style-type: none"> Time Ball and Telegraph Trail Local cycle route London Loop National Trail Long Distance Path Sustrans National Cycle Network Protected Lane Development Route Gravesend to Tilbury ferry (carries cycles) Area of Outstanding Natural Beauty District/Borough/Unitary region |

APPENDIX II: STAKEHOLDER RESPONSE AND MAPPING

Environmental Stakeholder Workshop 5th September 2018

TIER 1 Local Authority Engagement Responses

- Brentwood [30.10.18]
- Essex [01.11.18]
- Gravesham [01.10.18]
- Thurrock [26.10.18]
- The London Borough of Havering [23.10.19]

| Drawing Name | Drawing Number | Sheet | Size |
|--|------------------------------------|--------|------|
| Stakeholder Project Identification Mapping | HE540039-CJV-GEN-GEN-DRA-LSC-00101 | 1 of 2 | A1 |
| Stakeholder Project Identification Mapping | HE540039-CJV-GEN-GEN-DRA-LSC-00102 | 2 of 2 | A1 |
| Stage 3- NPS TIER 1 Recommended Mitigation & TIER 2 Opportunities | HE540039-CJV-GEN-GEN-DRA-LSC-00301 | 1 of 2 | A1 |
| Stage 3- NPS TIER 1 Recommended Mitigation & TIER 2 Opportunities | HE540039-CJV-GEN-GEN-DRA-LSC-00302 | 2 of 2 | A1 |





Lower Thames Crossing Project Identification Workshop

5 September 2018



Lower Thames Crossing team

Malcolm Orford - *Consents*

Emma Long - *Environment*

Fiona Man – *Environment*

Ben Green – *Construction*

Silvia To – *Stakeholder Engagement*

Molly Stroyman – *Stakeholder Engagement*

An aerial photograph of a wide river estuary at sunset. The sun is low on the horizon, creating a bright orange and yellow glow that transitions into a deep blue sky. The water reflects the light, and the surrounding land is dark with some lights visible. The text is overlaid on the left side of the image.

Stakeholder representatives

Sam Page - Bumblebee Conservation Trust

Mark Iley - Essex Wildlife Trust

Bethany Cambridge - Forestry Enterprise

Katie Miller - Kent Downs AONB

Greg Hitchcock - Kent Wildlife Trust

Jonathan Cook – RSBP

Aisling Woodhead - Thames Chase Trust

Dave Bigden - Thames Chase Trust

Meghna Shah - Thames Estuary Partnership

Dave Parnell - Thames and Medway Canal Association



Objectives

- To provide an update on the LTC project to date
 - To learn about your projects



Morning:

- 10:00 Arrivals & refreshments
- 10:15 Welcome, introductions & objectives
- 10:30 Project update
- 11:15 Q&A
- 12:00 Project identification & engagement
- 12:15 Projects on a map
- 12:30 Break for lunch



Afternoon:

13:00 Project presentations (5 min per organisation)

14:00 Projects review

Overlay projects on the map & discussion around approaches, concerns potential opportunities

16:30 Actions & next steps

17:00 AOB



Project update



Scheme Objectives



ECONOMIC

Support sustainable local development and regional economic growth medium to long term

Be affordable for Government and users

Achieve value for money



COMMUNITY & ENVIRONMENT

Minimise adverse impacts on health and the environment



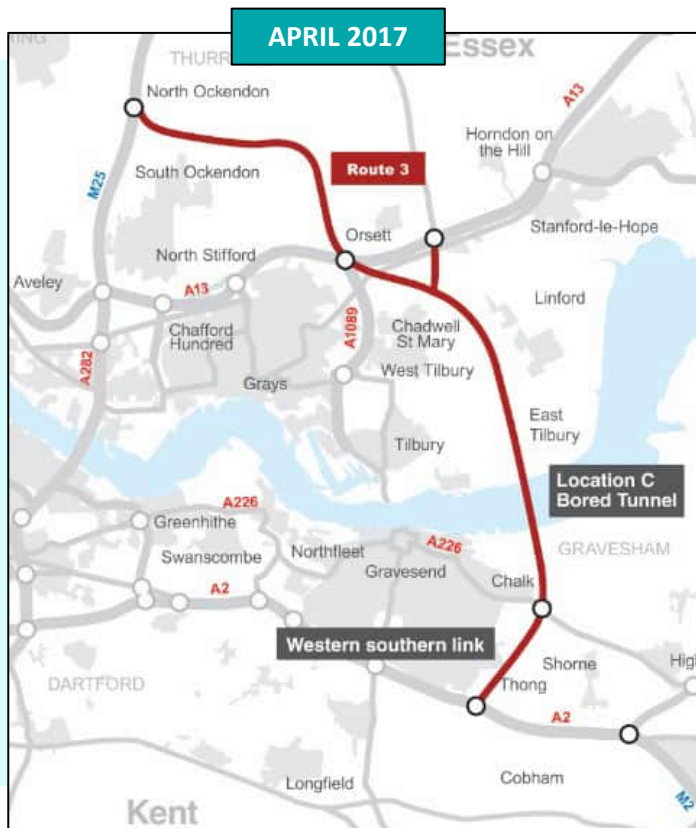
TRANSPORT

Relieve the congested Dartford Crossing and approach roads and improve performance by providing free flowing north-south capacity

Improve resilience of the Thames crossings and major road network

Improve safety

Scheme evolution





LTC Fly-through

- <https://www.youtube.com/watch?v=dHnXp7VdLNw&feature=youtu.be>

Legacy and Benefits

Key Themes:

Environmental
Benefits

Education and
Skills

Jobs and
Employment

Economic
Development

Community
Needs

- What is the ambition and aspirations for the area and its people?
 - Environmentally
 - Future economy
 - Job prospects
 - Areas of specialism or expertise
- How can we help support rapidly changing technology?
 - Digitisation
 - New technologies
- Are there specific initiatives we could support?

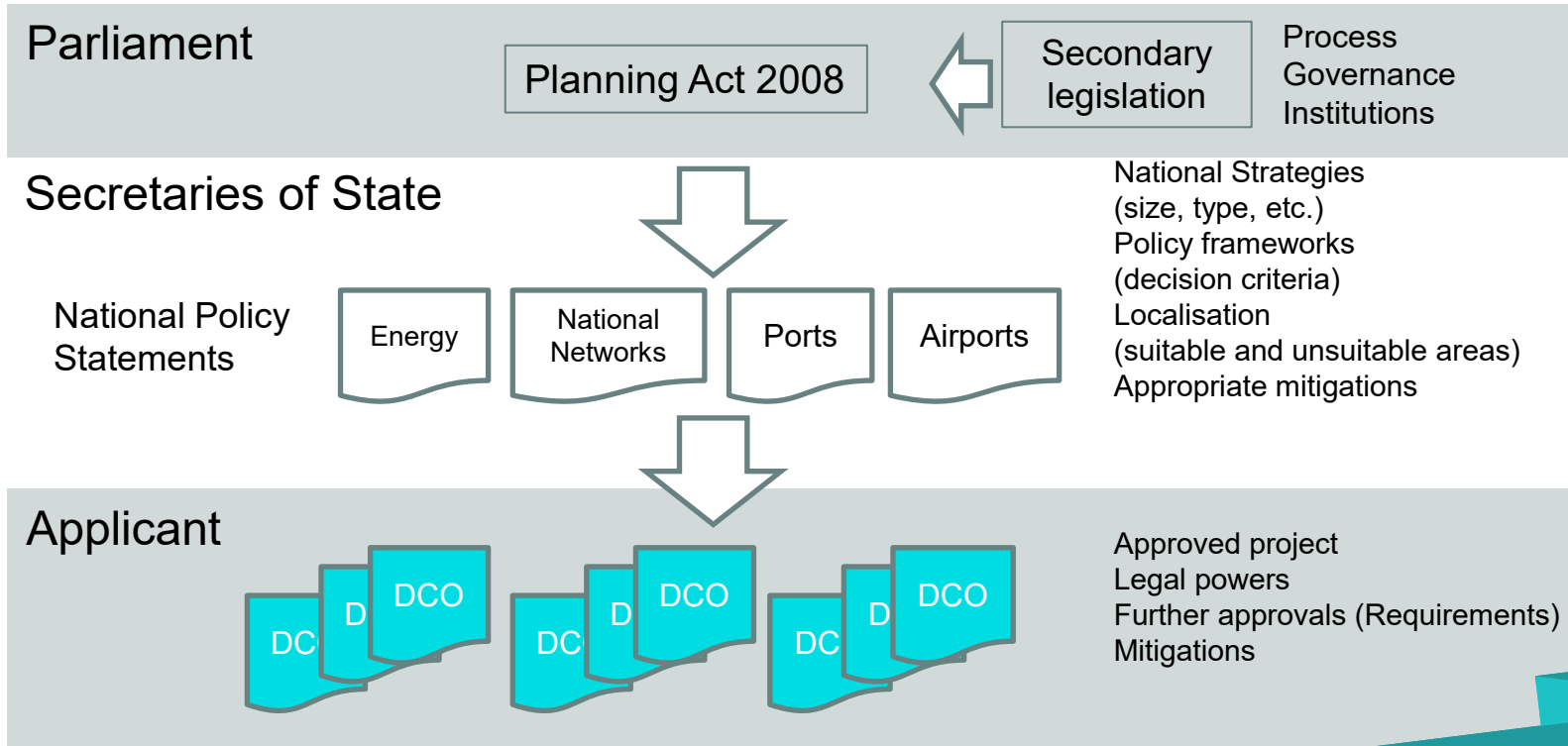
Key challenges

- Minimising impacts on communities
- Environmental constraints
- Visual impacts
- Network integration during and post construction





Development Consent Order (DCO)



Environmental surveys – where we are:

Air Quality

Biodiversity

Landscape

Cultural
Heritage

People and
Communities

Water

Noise &
Vibration

Geology &
Soils





Introduction to the PEIR

- Purpose is to inform the public and stakeholders of the likely effects of the project
- It will provide baseline information for each environmental topic (via surveys and consultation) and outline mitigation
- A non-technical summary will be prepared with visual aids to set out the headline issues presented in the PEIR
- Will be published as part of the Statutory Consultation
- The Environmental Statement will be issued to PINS as part of the DCO



What happens next?

PREFERRED ROUTE ANNOUNCEMENT



April 2017

DESIGN DEVELOPMENT



STUDIES:
Environmental
Traffic Modelling
Ground Investigations

STATUTORY CONSULTATION



2018

DESIGN FINALISATION



APPLICATION PREPARATION:
Environmental Impact Assessment
Land Referencing
Planning Statement

DCO APPLICATION



2019

**DCO GRANTED;
START ON SITE**



OPENING



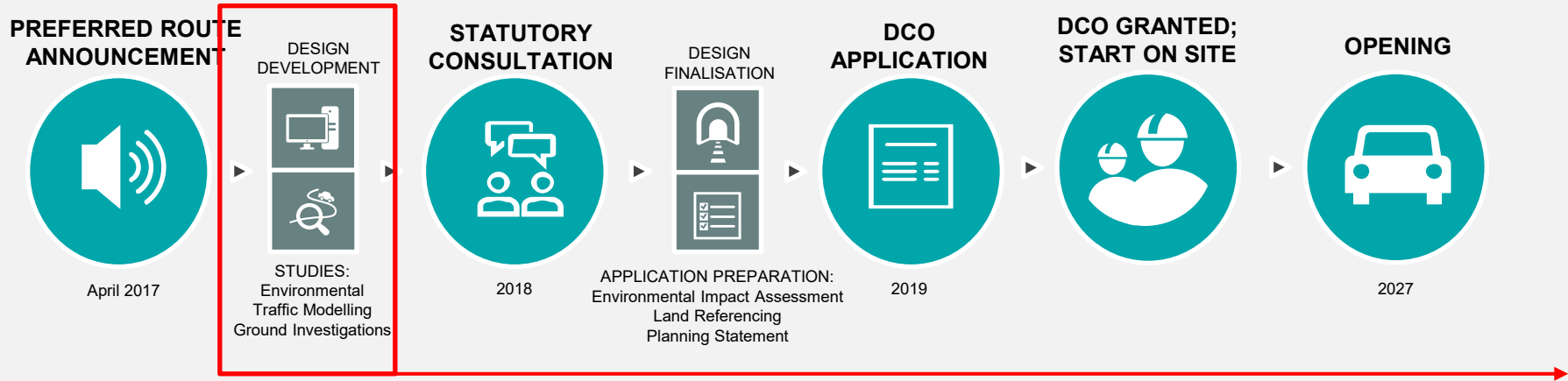
2027

**CONTINUOUS
ENGAGEMENT**

Q&A



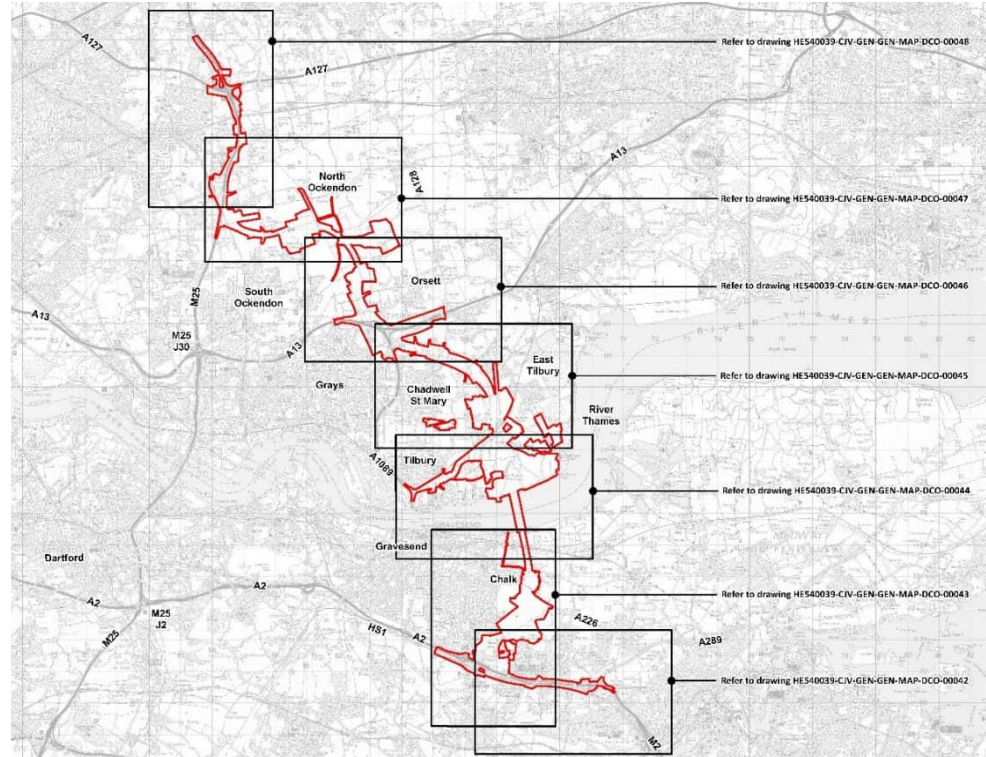
Project identification & engagement

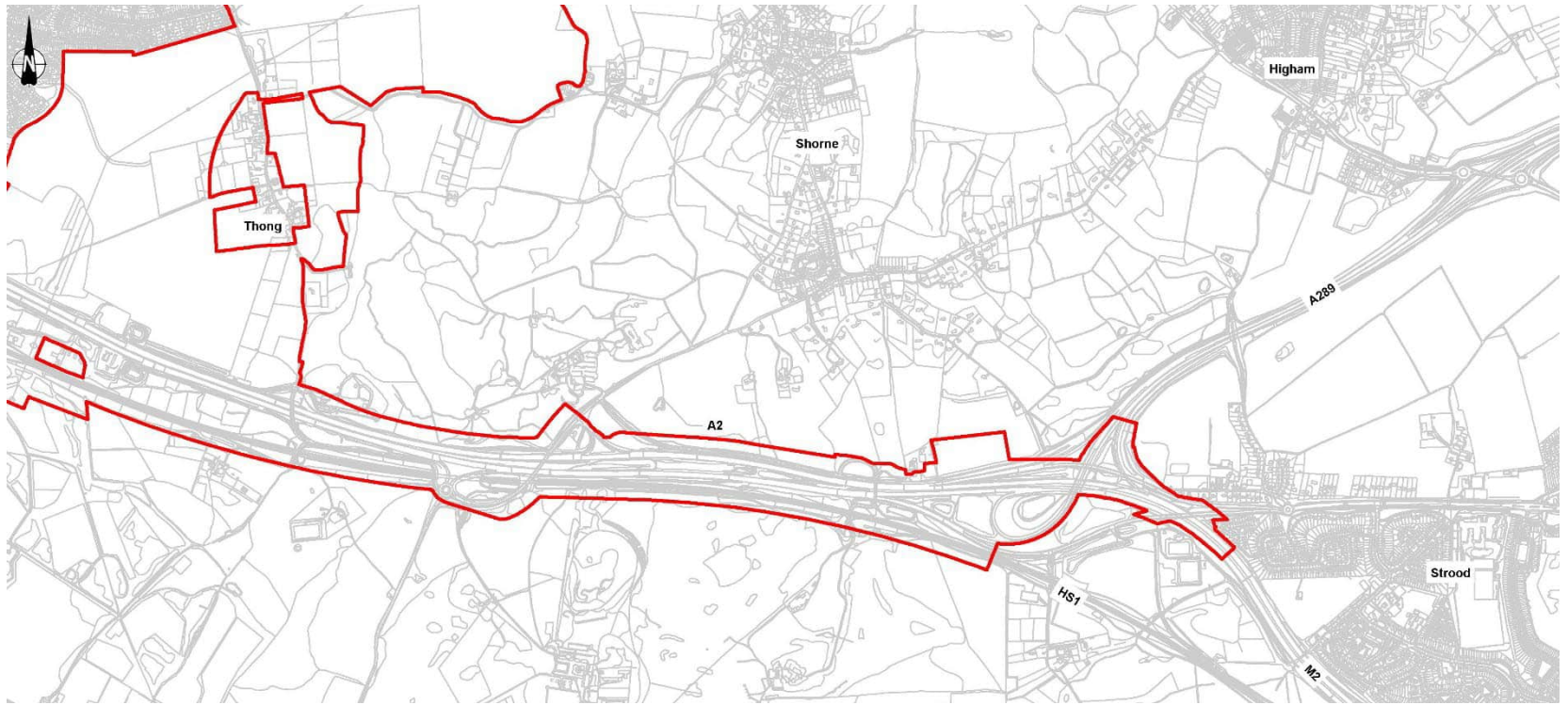


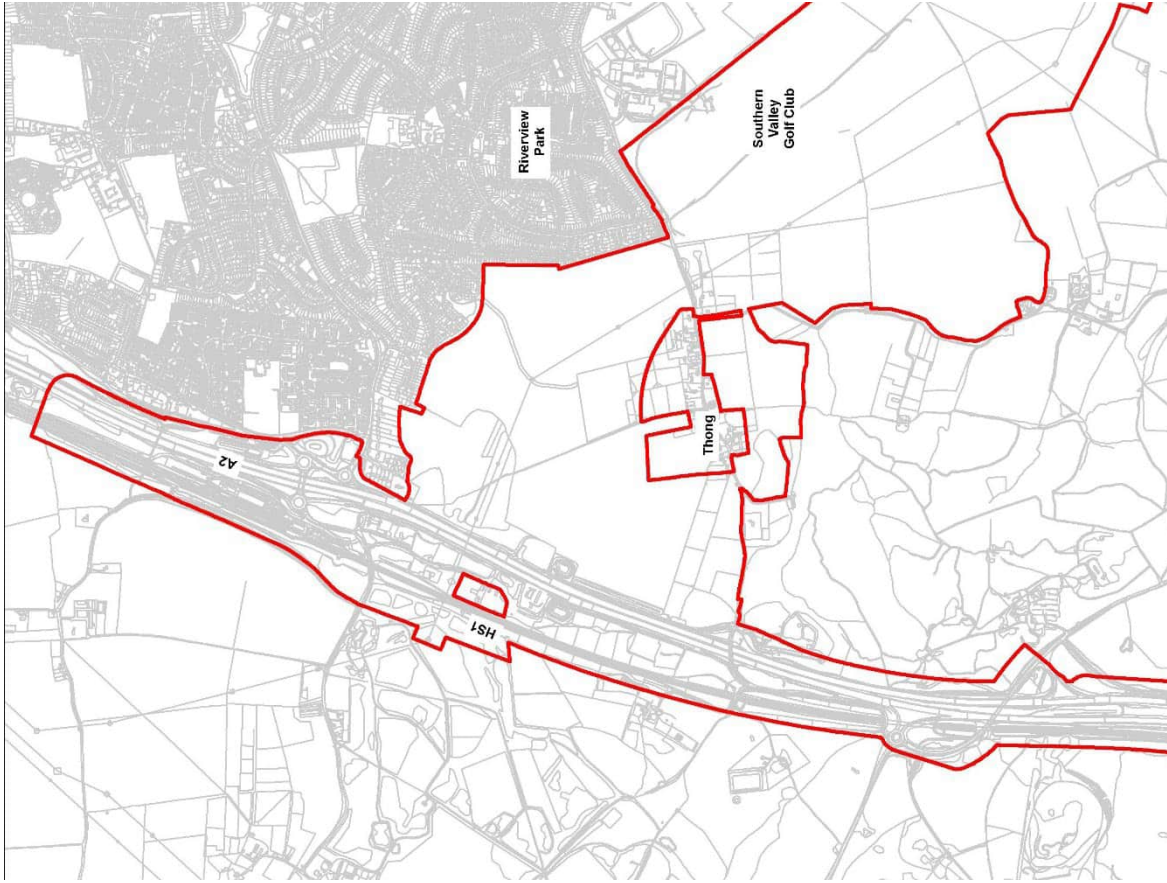
**CONTINUOUS
ENGAGEMENT**

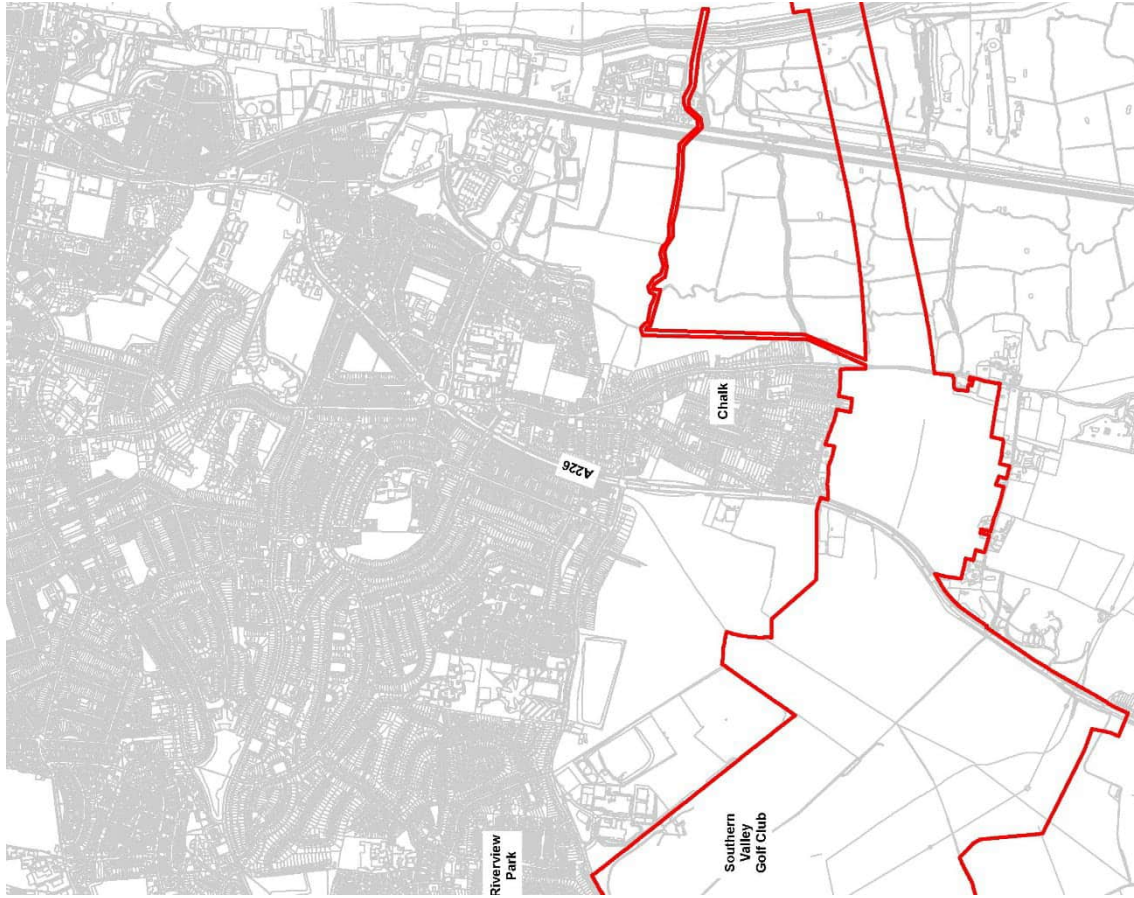


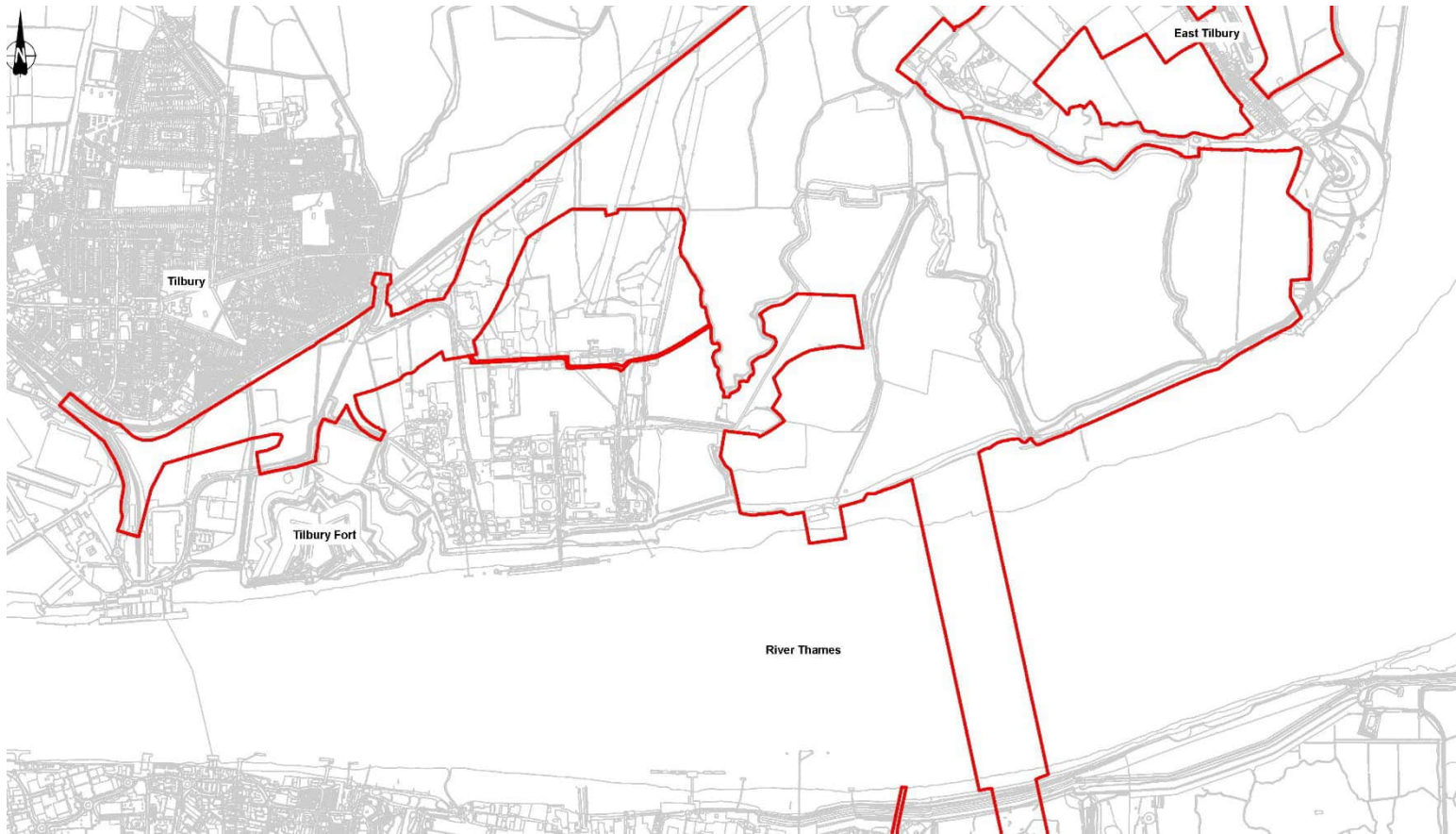
Project identification – green infrastructure

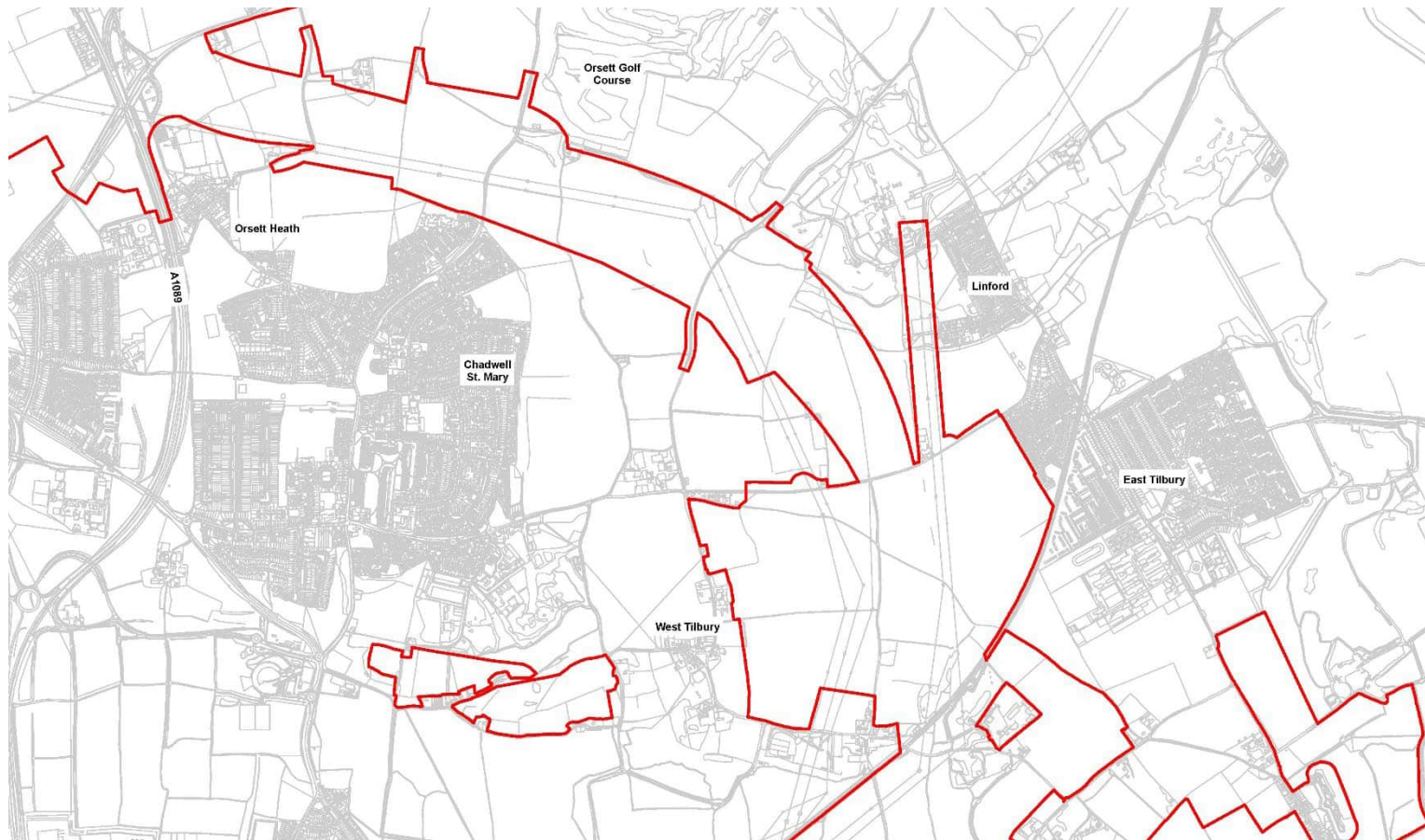


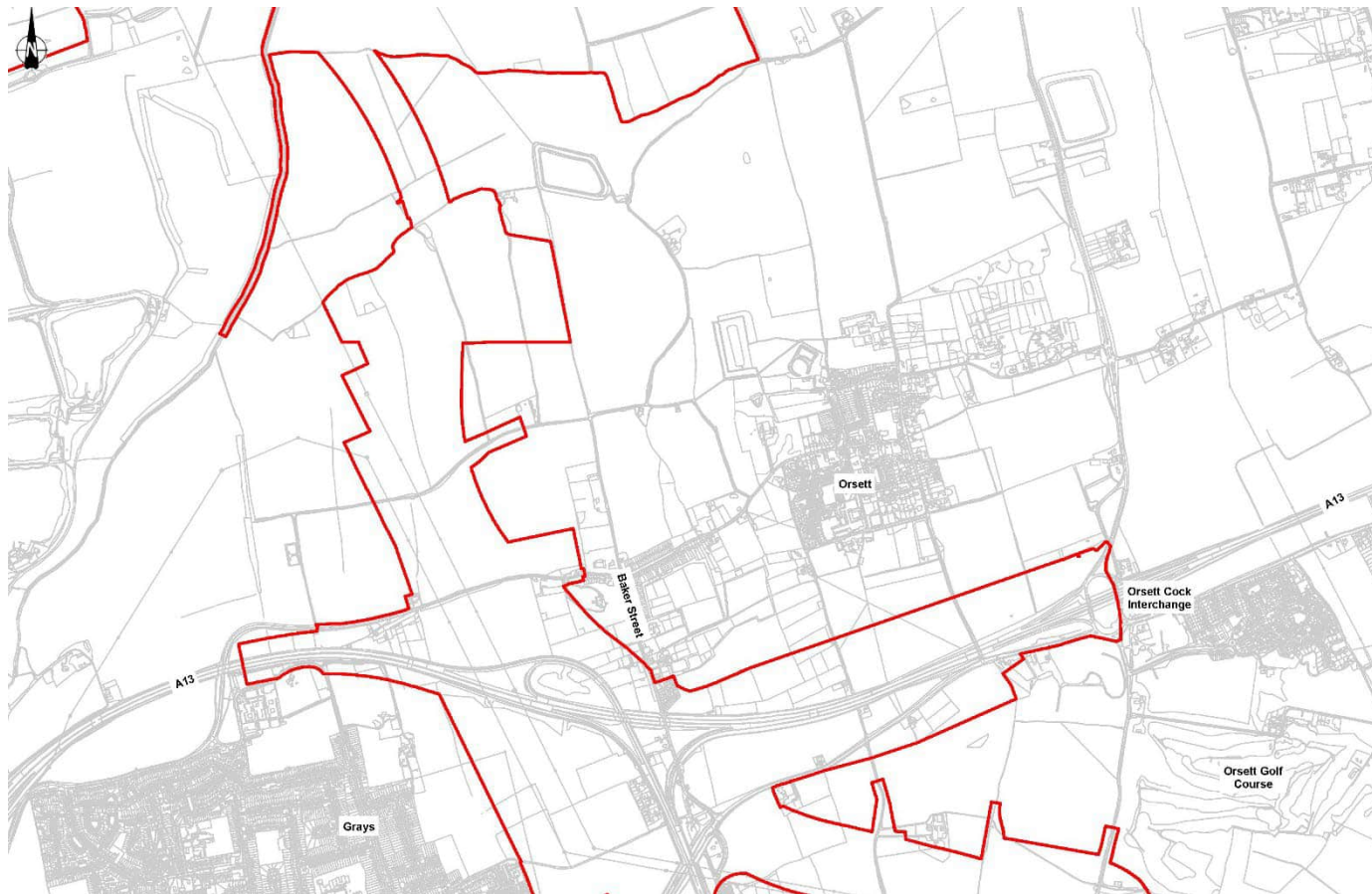




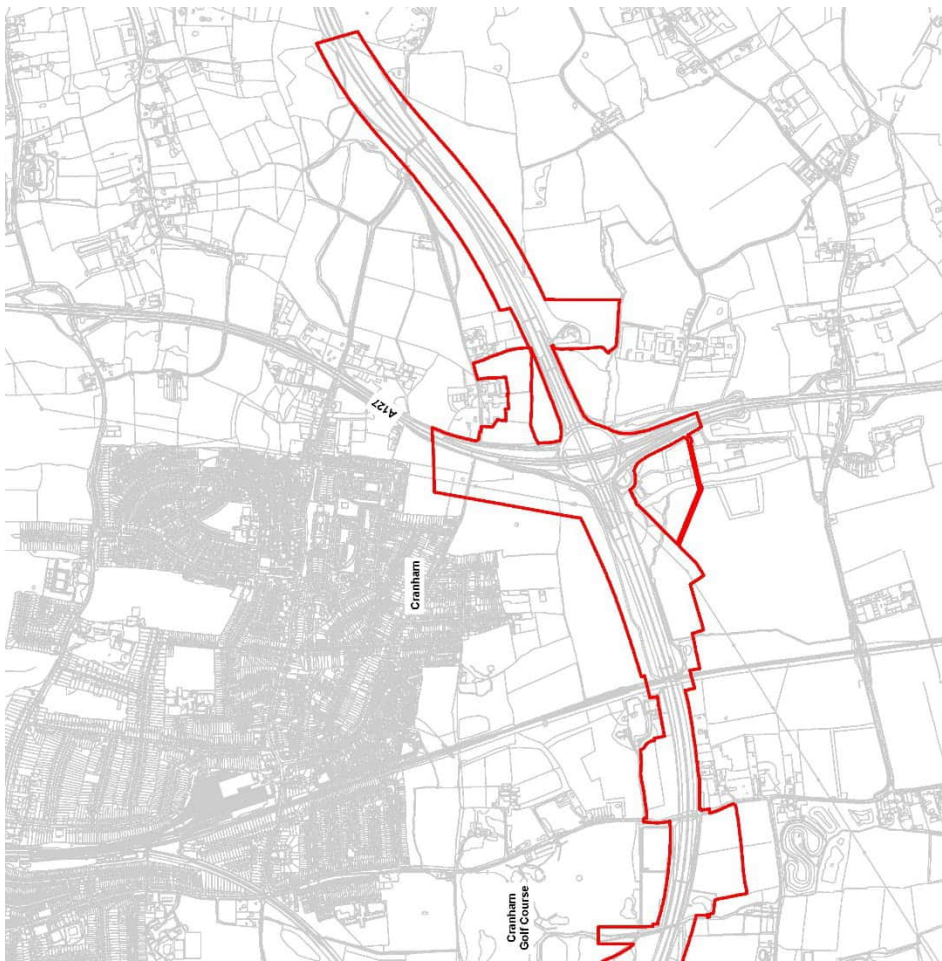












Project presentations



Buglife
Bumblebee Conservation Trust
Essex Wildlife Trust
Forestry Enterprise
Kent Downs AONB
Kent Wildlife Trust
RSPB
Thames and Medway Canal Association
Thames Chase Trust
Thames Estuary Partnership
Woodland Trust



Actions & next steps

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Green Infrastructure Study
Date: 30 October 2018 17:25:37
Attachments: [TEIR 1 - Stakeholder Engagement Response form Brentwood BC.docx](#)

Apologies [REDACTED] see attached.

Best

[REDACTED]

[REDACTED] | Brentwood Borough Council
[REDACTED] | www.brentwood.gov.uk | [REDACTED]

From: [REDACTED]
Sent: 30 October 2018 11:28
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
Subject: RE: Green Infrastructure Study

Hi [REDACTED]
Further to my email below, I wonder if you are yet in a position to respond to our information request.
Look forward to hearing from you soon.

[REDACTED]
Lower Thames Crossing – Stakeholder Engagement & SoCG Advisor
Tel: [REDACTED] [REDACTED]

**Working on behalf of
Highways England**

Highways England Customer Contact Centre
0300 123 5000
www.highwaysengland.co.uk

From: [REDACTED]
Sent: 24 September 2018 15:26
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]
Subject: RE: Green Infrastructure Study

Dear [REDACTED]
[Lower Thames Crossing: Green Infrastructure Study \(Pre Statutory Consultation\)](#)

Further to our email dated 17th September 2018 regarding the Green Infrastructure Study (GI Study) we are now collating information received to date from TIER 1 Local Authority Stakeholders. I understand we have not as yet had a response from you and ask if you able to consider the information we are requesting and who is best placed to provide us with this.

To reiterate our request we would be grateful to receive your written response to the following to assist with our study:

- Main Pressures and potential impacts to GI as a result of the LTC scheme
- Identification of current projects and initiatives which could potentially be supported
- Collation and mapping of GI opportunities

Please could the attached table be completed as far as possible us along with any relevant mapping (GIS/shape files for example) so that we can capture all key issues and opportunities from you.

We request that information is returned by Tuesday 2nd October 2018.

Please do not hesitate to contact [REDACTED] or by phone: [REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing [REDACTED]
[REDACTED]

**Working on behalf of
Highways England**

Highways England Customer Contact Centre

0300 123 5000

www.highwaysengland.co.uk

From: [REDACTED]

Sent: 17 September 2018 16:04

To: [REDACTED]

Cc: [REDACTED]

Subject: Green Infrastructure Study

Dear [REDACTED]

Lower Thames Crossing: Green Infrastructure Study (Pre Statutory Consultation)

As you are aware we are currently preparing a Green Infrastructure Study (GI Study) to provide

Highways England with an understanding of the extent and nature of Green Infrastructure provision affected by the preferred Lower Thames Crossing route alignment and to follow a clear process for ensuring that Green Infrastructure is considered as part of the design process and legacy for the Lower Thames Crossing.

As a starting point, existing GI Assets in and around the designated Green Infrastructure Networks have been identified and mapped. The functions provided by the existing GI Assets have been appraised from site visits and by reference to relevant data and information. This has included an assessment of the connectivity of existing GI Assets in and around the designated areas for the general public as well as wildlife interests.

The key findings of the survey have considered

- Biodiversity
- Landscape Character
- Connectivity and NMUs
- Open Space function, Heritage and Sense of Place

Through engagement with yourselves we wish to consider how the proposed development and the designated Green Infrastructure Networks can contribute to meeting local GI needs and opportunities through identifying appropriate opportunities for contributing to potential GI requirements. The opportunities for GI provision in and around the preferred LTC route alignment will be presented as opportunities which could be considered as part of mitigation and compensatory measures, looking at wider connectivity with existing GI Assets and existing and proposed projects.

To assist with this stage of the study, we would be grateful to receive your written response to the following:

- Main Pressures and potential impacts to GI
- Identification of current projects and initiatives which could potentially be supported
- Collation and mapping of GI opportunities

Please find attached a tabulated form for completing and request that information is supplied to us along with any relevant mapping (GIS/shape files for example) so that we can capture all key opportunities from you. We request that information is returned by Tuesday 2nd October 2018.

Following collation of all data and information across the TIER 1 Local Authority Stakeholders we also proposed that a workshop could be held in October to provide feedback on the outcome of the study work so far and discuss next steps.

We propose the following draft agenda for the workshop:

1. **Introductions and Objectives**
2. **Project update**
3. **Presentation and Background to the GI Study**
4. **Aspirations of the GI Study and summary presentation of the next stage**
5. **Identification of GI Needs and Opportunities and mapping**
6. **Conclusions and Next Steps**

We hope that there is a collaborative approach with you and look forward to receiving your

response.

Please do not hesitate to contact [REDACTED] or
by phone: [REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing – Stakeholder Engagement & SoCG Advisor

Tel: [REDACTED]

**Working on behalf of
Highways England**

Highways England Customer Contact Centre

0300 123 5000

www.highwaysengland.co.uk

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prevent or detect fraud. To find out more, go to www.brentwood.gov.uk/privacy.*

Green Infrastructure request for information

| | |
|--|---|
| <p>Authority: Brentwood Borough Council</p> <p>Officer/Lead Contact: [REDACTED] Director of Strategic Planning</p> <p>Reference:</p> | |
| <p>Aim 1:</p> <p>What are the potential impacts to GI from LTC</p> | <p>LTC proposals only impact the area around M25 junction 29 within Brentwood Borough. This area has been identified for the delivery of employment land through the Brentwood Local Plan (Brentwood Enterprise Park and Codham Hall). There will be implications for GI from this development as well as proposals to improve M25 junction 29, and so both need to be considered together to improve GI wherever possible.</p> |
| <p>Aim 2:</p> <p>What are the main pressures to existing GI, current policy and allocations</p> | <p>Current GI policy is limited. Emerging policy through the Brentwood Local Plan can be viewed via www.brentwood.gov.uk/localplan as well as development allocations in the M25 J29 area</p> |
| <p>Aim 3:</p> <p>What are considered the key opportunities for GI enhancement and creation as part of LTC.</p> <p>Identification of Priorities and Projects</p> | <p>No particular opportunities that LTC can deliver, beyond wider redevelopment work taking place at M25 junction 29 that when reinstated could provide opportunities for improvements to landscape quality / GI etc. Delivery of Brentwood Enterprise Park project through the Brentwood Local Plan will include provision for improved landscaping and provision of open space. Proposals for M25 junction 29 improvements may be able to assist with this, depending on where development takes place etc.</p> |
| <p>Aim 4:</p> <p>Identification of Projects/Initiatives currently underway and which can be supported.</p> | <p>Delivery of Brentwood Enterprise Park, and regularisation of land north east of M25 junction 29, provide key employment opportunities through the Brentwood Local Plan. As part of these developments, we have outlined opportunities for landscape improvements and provision of green space in and around the employment land that will link to surrounding countryside and existing rights of way etc.</p> |
| <p>Aim 5:</p> <p>Key contacts and other studies</p> | <p>Emerging green and blue infrastructure policy through the Brentwood Local Plan. Evidence base on these issues. All can be found via www.brentwood.gov.uk/localplan</p> |

| | |
|--|--|
| Aim 6: Collation of data, mapping, size of areas and projects | The only area affected by LTC proposals is around M25 junction 29. Key policy designations for mapping include the proposed development allocations in the area (Brentwood Enterprise Park and Codham Hall), Thames Chase Community Forest designation, public rights of way, and local wildlife sites (or similar). Please advise which of these you need GIS information for. |
| Aim 7: Identification of timescales and what is required to achieve targets | Timescales for delivery of employment land in the M25 junction 29 area are set out in the emerging Brentwood Local Plan. Once adopted (late 2019) we anticipate employment land can be brought forward and delivered within the first five years of the plan period, i.e. by 2024. This will be dependent on adoption of the Local Plan following an examination in public process, to take place in mid 2019. |

Green Infrastructure request for information **DRAFT**

| | |
|---|--|
| Authority: Essex County Council | |
| Officer/Lead Contact: [REDACTED] | |
| Reference: | |
| Aim 1: What are the potential impacts to GI from LTC | <p>There are several general impacts which will substantially effect the open areas and GI on the line of the LTC and link road bearing in mind most of the land is Green Belt, there are SPA/Ramsars sites adjacent in the River Thames, and numerous Local Wildlife sites and archaeological sites. These are</p> <ul style="list-style-type: none">a) Noiseb) Fragmentation of habitats for speciesc) Barriers for recreation links such as pathsd) Pollutione) Light Pollution <p>There are strategic GI projects which will be badly impacted by the LTC. Namely:</p> <ul style="list-style-type: none">1) West Tilbury Marshes2) The Thames Estuary Path3) The Mardyke Way4) Thames Chase Community Forest5) The potential South Essex Marshes project <p>1)West Tilbury Marshes will be split north South and their sense of isolation and wilderness lost. The road will fragment the marsh prevent migration of species. It is possible because of the central nature of the road line and the small size of the marsh that the marshes will be obliterated by the development</p> <p>2)The Thames Estuary Path broken by the LTC which at this point is on the River and will need to be connected, presumably further north away from the River thus devaluing the experience. In addition the major site adjacent to Coal House Fort will be also impact the adjacent Thames Estuary Path.</p> <p>3) The Mardyke Way and the wider Mardyke valley is effected visually and in noise terms, The Mardyke Way and River are crossed by the M25 Link road. Visually the flat valley will be dominated by the motorway construction and the present sense of wilderness and isolation will be lost.</p> <p>4) The M25 link road enters the Thames Chase Forest north of the A13 as the forest area cover 40 sq miles. The Mardyke valley as a landscape area of Thames Chase is</p> |

| | |
|--|--|
| | <p>adversely affected as stated above. As the M25 link road sweeps west it passes a number of brownfield sites which have potential for Thames Chase to plant, eg Grangewaters, the Grange Hill Veolia site and the brownfield west of Ockendon Rd. As the road joins the M25 the land-take removes the first plantings of Thames Chase which date from 1990 to 2000. These are highly visible from the M25 going south as they sit upon high land called Clay Tye Hill. They are symbolic of Thames Chases’s environmental regeneration of Thurrock and Havering and their removal will require sensitive restoration. Further north the land-take impacts on Codham Hall wood(ancient woodland owned by ECC), land north of Cranham which has block TPOs because of the regenerating woodland and land owned by the Forestry Commission (also planted in the late 1990s as part of the Thames Chase FC estate).</p> <p>5) The South Essex Marshes has been the focus of local partnerships as a potential Regional park spreading from West Thurrock Marshes to the mudflats of Leigh on Sea. The area has been subject to an unsuccessful HLF bid. ECC hold a full HLF report and map information. South Essex Marshes include 2 historic forts, the Thurrock Wildlife Centre, Wat Tyler Country Park and the Hadleigh Mountain Bike Centre. In addition, a large extent of marshes owned by the RSPB, Essex Wildlife Trust, ECC and other local authorities. This is a more recent idea but the concept is integral to the Greengrid strategy for South Essex.</p> |
| <p>Aim 2:</p> <p>What are the main pressures to existing GI, current policy and allocations</p> | <p>The Main pressures are listed above to the 5 strategic elements of GI.</p> |
| <p>Aim 3:</p> <p>What are considered the key opportunities for GI enhancement and creation as part of LTC.</p> <p>Identification of Priorities and Projects</p> | <p>Opportunities are difficult as connectivity is a key element of GI and a road scheme will be a barrier to species and people.</p> <p>However an advantage could be that the transport corridor could act as an access and habitat corridor. An example could be taking a spur of the Mardyke Way and head south and connect with the Thames Estuary Path. In this way Thames Chase could be connected to the South Essex Marshes. The HLF project called Land of the Fanns, managed by Thames Chase already manages a live project covering this area. LTC could support Thames Chase and Thurrock through this project.</p> <p>LTC could support the Thames Estuary Path by providing the path diversions necessary for the LTC and providing further development investment for Mobile Apps, website, signage etc.</p> <p>The LTC could support the wider South Essex Marshes project across South Essex to Leigh on Sea. LTC could help support a central managing body to develop the project and create the wider landscape improvements</p> |

From: [REDACTED]
Cc: [REDACTED]
Subject: RE: Green Infrastructure Study
Date: 02 October 2018 10:55:55
Attachments: [image001.png](#)
[LTC TEIR 1 - Stakeholder Engagement Response form ECC.DOCX](#)

[REDACTED]

Please see attached.

Regards,

From: [REDACTED] Head of Network Development
Sent: 19 September 2018 12:22
To: [REDACTED]
Subject: FW: Green Infrastructure Study



From: [REDACTED]
Sent: 17 September 2018 16:04
To: [REDACTED]
Cc: [REDACTED]
Subject: Green Infrastructure Study

Dear [REDACTED]

Lower Thames Crossing: Green Infrastructure Study (Pre Statutory Consultation)

As you are aware we are currently preparing a Green Infrastructure Study (GI Study) to provide Highways England with an understanding of the extent and nature of Green Infrastructure provision affected by the preferred Lower Thames Crossing route alignment and to follow a clear process for ensuring that Green Infrastructure is considered as part of the design process and legacy for the Lower Thames Crossing.

As a starting point, existing GI Assets in and around the designated Green Infrastructure Networks have been identified and mapped. The functions provided by the existing GI Assets have been appraised from site visits and by reference to relevant data and information. This has included an assessment of the connectivity of existing GI Assets in and around the designated

areas for the general public as well as wildlife interests.

The key findings of the survey have considered

- Biodiversity
- Landscape Character
- Connectivity and NMUs
- Open Space function, Heritage and Sense of Place

Through engagement with yourselves we wish to consider how the proposed development and the designated Green Infrastructure Networks can contribute to meeting local GI needs and opportunities through identifying appropriate opportunities for contributing to potential GI requirements. The opportunities for GI provision in and around the preferred LTC route alignment will be presented as opportunities which could be considered as part of mitigation and compensatory measures, looking at wider connectivity with existing GI Assets and existing and proposed projects.

To assist with this stage of the study, we would be grateful to receive your written response to the following:

- Main Pressures and potential impacts to GI
- Identification of current projects and initiatives which could potentially be supported
- Collation and mapping of GI opportunities

Please find attached a tabulated form for completing and request that information is supplied to us along with any relevant mapping (GIS/shape files for example) so that we can capture all key opportunities from you. We request that information is returned by Tuesday 2nd October 2018.

Following collation of all data and information across the TIER 1 Local Authority Stakeholders we also proposed that a workshop could be held in October to provide feedback on the outcome of the study work so far and discuss next steps.

We propose the following draft agenda for the workshop:

1. **Introductions and Objectives**
2. **Project update**
3. **Presentation and Background to the GI Study**
4. **Aspirations of the GI Study and summary presentation of the next stage**
5. **Identification of GI Needs and Opportunities and mapping**
6. **Conclusions and Next Steps**

We hope that there is a collaborative approach with you and look forward to receiving your response.

Please do not hesitate to contact [REDACTED]
[REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing – Stakeholder Engagement & SoCG Advisor

Tel: [REDACTED]

**Working on behalf of
Highways England**

Highways England Customer Contact Centre

0300 123 5000

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Gravesham Borough Council

Lower Thames Crossing Environmental considerations

Background

The area of interest is taken as the area between Gravesend and Strood, with extensions, particularly for NMU. Links into the urban areas are important part of access. The wider area which can be split into three broad areas:

- North Kent Marshes & River Thames
- Agricultural land leading up to A2
- Kent Downs Area of Outstanding Natural Beauty

Organisations and landowners

Organisations we are currently aware of are:

- Kent Downs AoNB JAC
- Old Chalk New Downs Project (KCC based)
- Hoo Peninsula Project
- North Kent Environmental Planning Group (hosted by Medway)
- North Kent SAMS (hosted by Medway)

Environmental Organisations with significant land holdings:

- RSPB (North Kent marshes)
- KCC (Shorne Woods CP)
- Woodlands Trust (Ashenbank Wood)
- Forest England (Jeskyms)
- Gravesham BC (West Park & Cascades)
- National Trust (Cobham Woods and Mausoleum)

Related to Cobham Park

- Cobham Hall School (School and surrounding grounds) – Educational Trust so primary purpose is not environmental
- Rochester and Cobham Golf Club – East Park

There are a number of other land owners in the area. Some of these have promoted sites to the Local Plan process as part of the SLAA (Strategic Land Availability Assessment) call for sites.

CAMS

There is a major precedent for a major comprehensive environmental scheme in this area. It provides a useful model to set any proposals against, which is not to say that it is a model to be necessarily followed.

CAMS (Cobham Ashenbank Management Scheme) was set up in response to the implications on Cobham Park wider area of what is now called HS1. It was made up of (using current names) GBC, KCC, Union Railways (as promoter of HS1 then called CTRL), Natural England, Historic England, National Trust, Woodlands Trust and Cobham Hall School).

This was part of an overall package of mitigation (for the railway and A2/M2 widening) and compensation agreed as an undertaking with the Promoters at the House of Lords Committee stage of the Channel Tunnel Rail Link Bill, which became an Act in 1996.

It took an endowment of £750,000 (1996 prices) and turned it into about £7.25m worth of projects – covering nature conservation, landscape, access as well as buildings (the Darnley Mausoleum restoration) over the area. A key component of this was the employment of a scheme manager to act as a focus for both bids to funding bodies (HLF, Lottery, Government etc.) but also in building relationships between organisations and land owners.

It was hosted and managed by Gravesham BC but run by a steering group of the above organisations. Geographically it covered the historic Cobham Park plus Shorne Woods – but had links to projects like Ranscombe Farm (Plantlife) in Medway as well as the wider Green Grid (see below).

As currently understood the LTC scheme will potentially damage some of this mitigation and compensation, as well as its impact on other areas.

Green Grid

In the context of Kent Thameside (Dartford and Gravesham north of the A2), and derived from RPG9a: Thames Gateway Planning Guidance (1995) a key policy objective was the creation of what was called the Green Grid. This was the network of open spaces across the area (urban and rural) and the links between them (both physical and in nature conservation terms). A large amount of work was done on this and the outworking can be found in the relevant Local Plans. It also had links to the archaeology, listed buildings, conservation areas which are part of the character of the area as well as the natural environment.

There were a series of cluster studies across North Kent which are now potentially out of date which provide a wealth of thoughts and information from mid 2000's (see attached map). Shorne to Shore can be found at [REDACTED]

Designations

The above is in addition a large number of designations in the area which include:

- Ramsar
- SPA (Thames Estuary and Marshes)
- SAC (North Downs Woodland)
- SSSI's
- Kent Downs Area of Outstanding Natural Beauty
- Ancient Woodland
- Conservation Areas
- Listed Buildings
- Areas of archaeological search
- PROW (and informal routes within areas like Jeskyns and Shorne Woods Country Park)

Given the wealth of research and information that already exists (plus of course the work Highways England are doing for EIA) the logic would be both gather potential projects (bottom up) and looking at an overall plan (top down) which would be bring together landscape, nature conservations, NMU's, archaeology et al also taking account of proposed mitigation.

This also fits with para 141 on the new NPPF, since the area in question is mainly Green Belt:

Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land.

From that can emerge a plan with whatever the appropriate delivery mechanism(s) might be (with no implication that it is all down the HE to fund since it will be looking in effect at the Green Belt gap between Gravesend and Medway).

The great advantage the CAMS approach was that there was a sum of money that was not constrained by some of the usual rules – which meant for example some of the £750k went to National Trust as a dowry for future maintenance.


As Union Railways was on the steering group is still had influence on what happened (and a veto if things had gone awry).

The same funding sources that were tapped then are not around now (especially from the Local Government side) but ambition is always a useful starting point.

01/10/2018

Green Infrastructure request for information

| | |
|--|--|
| <p>Authority: Gravesham Borough Council</p> <p>Officer/Lead Contact: [REDACTED]</p> <p>Reference:</p> | |
| <p>Aim 1: What are the potential impacts to GI from LTC</p> | <p>Since we have not been supplied to date with detailed plans of what is proposed or the PEIR it is unclear at this stage what the scale of impact might be. It is assumed to be significant, both during construction and when complete.</p> |
| <p>Aim 2: What are the main pressures to existing GI, current policy and allocations</p> | <p>The broad area concerned has some of the highest national (and international) designations for nature conservation and landscape. It contains a number of listed buildings, conservation areas and areas of archaeological potential. It is crossed by a number of PROW's, cycle routes and informal paths within places such as Shorne Woods and Cobham Woods which make up a comprehensive network. It has sub-regional role as a set of open spaces which serve Kent Thameside (especially Gravesend) and Medway Towns (especially Strood) and wider. Visitor pressure (and more specifically their dogs) is a major concern on the North Kent Marshes due to bird disturbance. The area is also Green Belt which, whilst not an environmental designation, does require the maintenance of openness and separation between settlements which is also relevant to the proposals.</p> |
| <p>Aim 3: What are considered the key opportunities for GI enhancement and creation as part of LTC. Identification of Priorities and Projects</p> | <p>The attached document sets out the bodies that are currently operating in the area that Gravesham is aware of.</p> <p>There is a brief history of CAMS and the Green Grid both of which have relevance to the sorts of approaches that might be taken in the future to environmental projects.</p> <p>Once the plans are available it will be possible to evaluate the types and scale of impact and therefore what mitigation and compensation measures might be appropriate.</p> |
| <p>Aim 4: Identification of Projects/Initiatives currently underway and which can be supported.</p> | <p>See document – some of the current projects may offer some quick wins in the short term. However there needs to be a comprehensive longer term strategy for the wider area, which can then be used as a basis to bid for funding from a range of sources.</p> |

| | |
|---|--|
| <p>Aim 5: Key contacts and other studies</p> | <p>At Gravesham Tony Chadwick in the first instance. Local Plan Core Strategy information base will be found at:</p> <p>https://www.gravesham.gov.uk/data/assets/pdf_file/0003/96321/Updated-List-of-Examination-Documents.pdf</p> <p>The information base for the recent regulation consultation can be found at:</p> <p>https://localplan.gravesham.gov.uk/consult.ti/sareg18/consultationHome?_ga=2.103290944.1512810251.1538061828-404626239.1529664513</p> <p>The current Local Plan Policies Map can be found at:</p> <p></p> |
| <p>Aim 6: Collation of data, mapping, size of areas and projects</p> | <p>Designations information available from normal sources. We don't hold in a GIS layer the current scheme boundaries.</p> |
| <p>Aim 7: Identification of timescales and what is required to achieve targets</p> | <p>There may be opportunities for quick wins from current project's – but best results will be obtained by getting an overall vision which can be delivered by a variety of means.</p> |

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Green Infrastructure Study
Date: 01 October 2018 17:23:10
Attachments: [image001.png](#)
[180925 LTC Environment Note.docx](#)
[180925 TEIR 1 - GBC Response.docx](#)
[Green Cluster Studies - location map.pdf](#)

[REDACTED]

GBC response

[REDACTED]
Acting Planning Policy Manager
Planning & Regeneration Services
Address: Gravesham Borough Council, Civic Centre, Gravesend, Kent DA12 1AU

[REDACTED]

Gravesham Borough Council - Delivering for the Community

cid:image003.png@01D10DA6.6D83A010



From: [REDACTED]
Sent: 24 September 2018 15:28
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Green Infrastructure Study

Dear [REDACTED]

Lower Thames Crossing: Green Infrastructure Study (Pre Statutory Consultation)

-
Further to our email dated 17th September 2018 regarding the Green Infrastructure Study (GI Study) we are now collating information received to date from TIER 1 Local Authority Stakeholders. I understand we have not as yet had a response from you and ask if you able to consider the information we are requesting and who is best placed to provide us with this.

To reiterate our request we would be grateful to receive your written response to the following to assist with our study:

- Main Pressures and potential impacts to GI as a result of the LTC scheme
- Identification of current projects and initiatives which could potentially be supported
- Collation and mapping of GI opportunities

Please could the attached table be completed as far as possible us along with any relevant mapping (GIS/shape files for example) so that we can capture all key issues and opportunities from you.

We request that information is returned by Tuesday 2nd October 2018.

Please do not hesitate to contact [REDACTED]
[REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing – Stakeholder Engagement & SoCG Advisor
[REDACTED]

**Working on behalf of
Highways England**

Highways England Customer Contact Centre

0300 123 5000

www.highwaysengland.co.uk

From: [REDACTED]

Sent: 17 September 2018 16:04

To: [REDACTED]

Cc: [REDACTED]
[REDACTED]

Subject: Green Infrastructure Study

Dear [REDACTED]

[Lower Thames Crossing: Green Infrastructure Study \(Pre Statutory Consultation\)](#)

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opportunities through identifying appropriate opportunities for contributing to potential GI requirements. The opportunities for GI provision in and around the preferred LTC route alignment will be presented as opportunities which could be considered as part of mitigation and compensatory measures, looking at wider connectivity with existing GI Assets and existing and proposed projects.

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[REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing – Stakeholder Engagement & SoCG Advisor
Tel: [REDACTED]

**Working on behalf of
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GRAVESHAM BOROUGH COUNCIL

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— District Boundaries
 - - - Green Cluster Boundaries

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GREEN CLUSTER STUDIES

| | |
|---|---------------------------------|
| drawn DG | checked SF |
| DRAWING TITLE Green Clusters - Location | DRAWING NO 230/FS/082 |

FIGURE NO

Green Cluster Studies

Ebbsfleet Valley and A2 Corridor

Technical Report



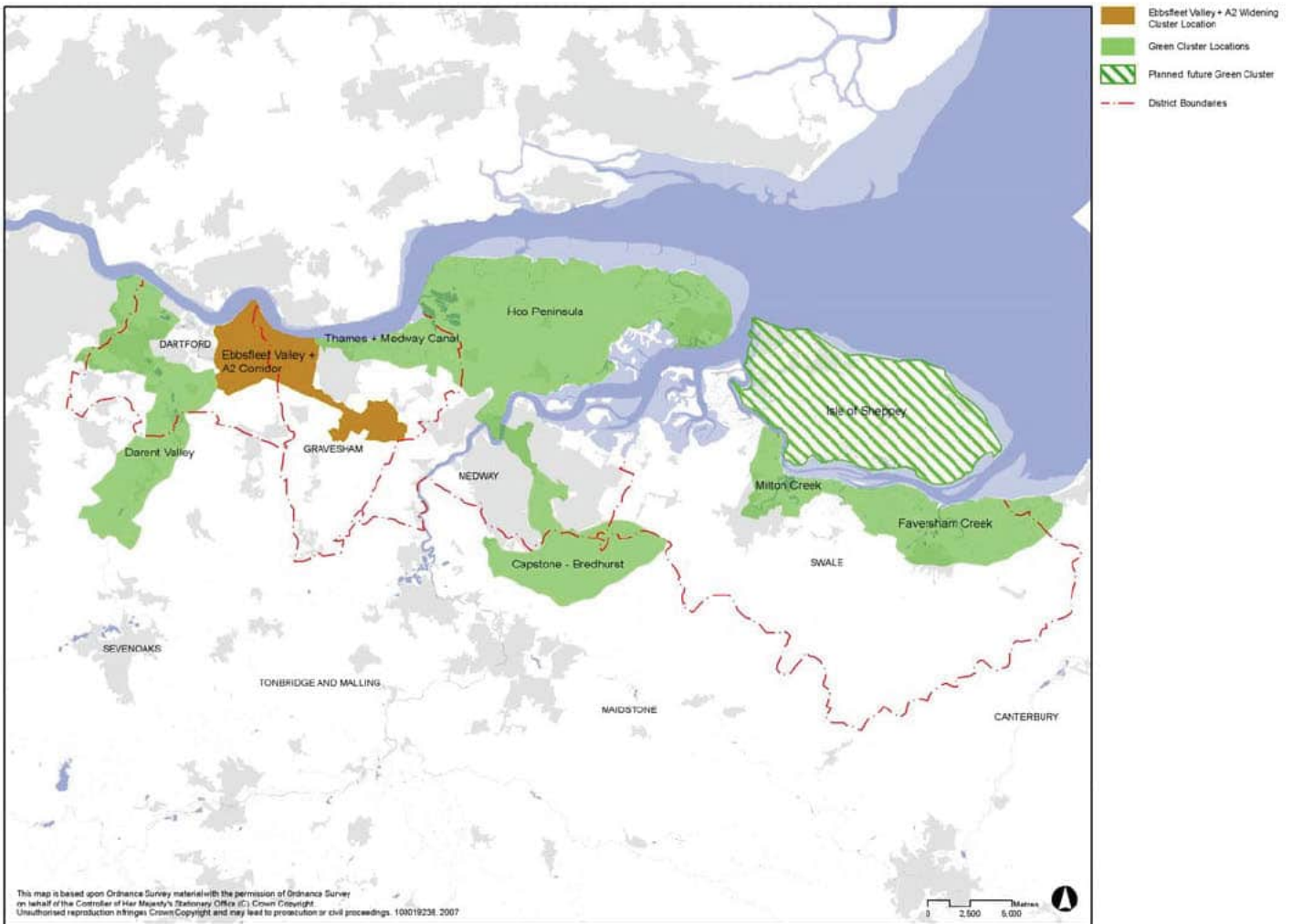
March 2008

1 What are the Green Cluster Studies?

The Green Cluster studies set out an ambitious vision for the Green Grid public realm and provide an Action Plan to support its delivery across north Kent. Seven Green Cluster Studies have been undertaken to date, and a further Cluster Study is planned for the Isle of Sheppey. Each one focuses on areas of intensive regeneration and change where there are superb opportunities to create strategically sited new greenspaces which will raise expectations, add value to existing investment and create high quality green infrastructure for future development.

'Clusters' or groupings of planned and aspirational green space projects were identified during the Green Grid stakeholder workshops held in Kent Thameside, Medway and Swale in 2007 and the areas selected for the Green Cluster Studies take account of this earlier work. The Green Cluster Studies have:

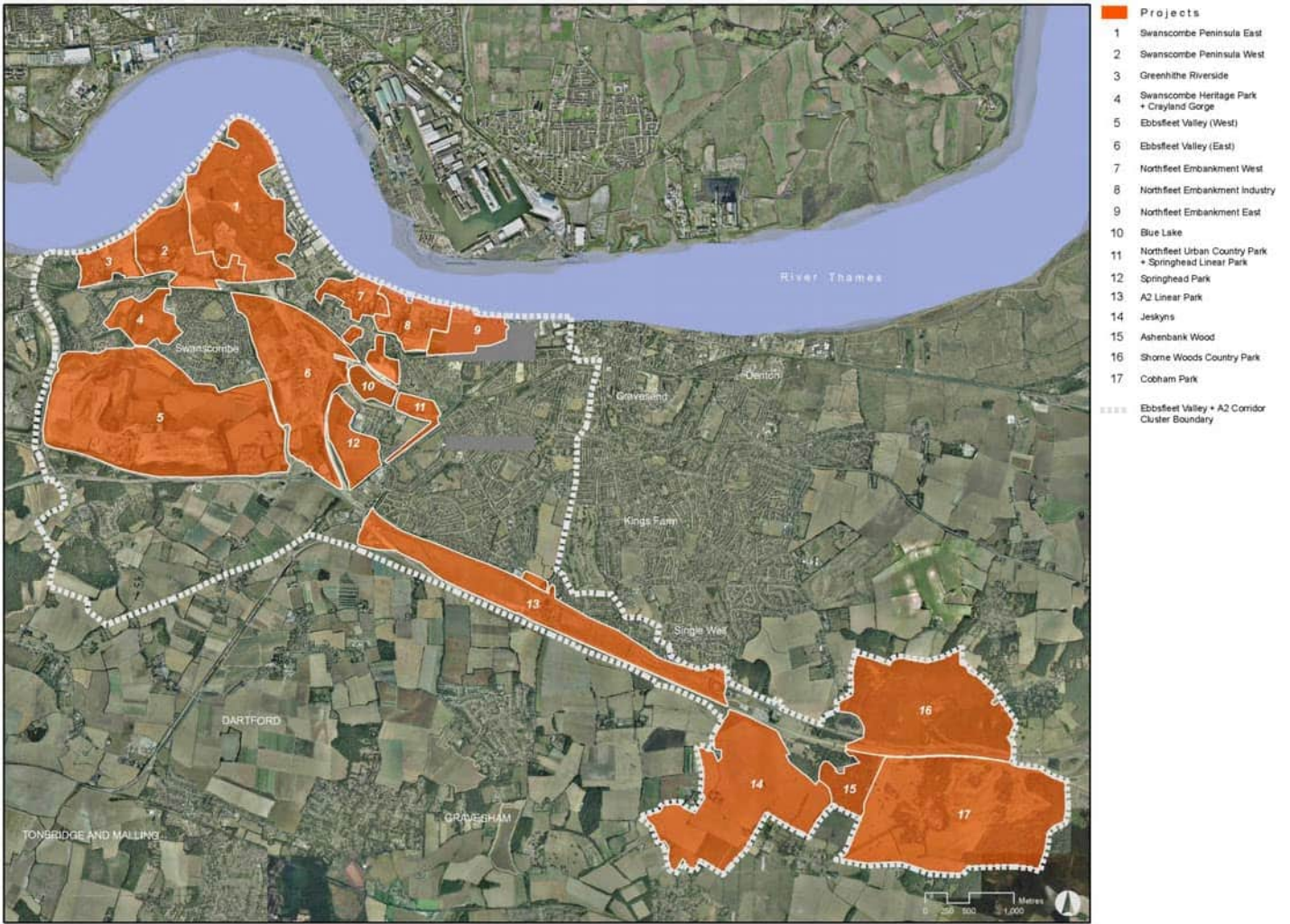
- identified a coherent sense of place for each cluster area
- captured what is already happening
- identified stakeholder aspirations and updated existing studies
- identified inter-dependencies, gaps and opportunities
- articulated a common vision for each cluster area
- developed an outline action plan which set out actions, governance and phasing for delivering the vision
- made the business case for investment



Green Clusters



Forces for change - existing proposals, projects & activities



Existing proposals, projects & activities

The Ebbsfleet Valley & A2 Corridor Cluster is set to become an international gateway and one of the largest regeneration areas in Europe. The principal built development sites are:

- **Ebbsfleet Valley** - 10,000 new homes in a series of urban villages with ancillary social, community, retail and leisure facilities. Ebbsfleet Valley covers an area the size of five Hyde Parks! The developments incorporate a range of formal and informal open spaces, including lakes, parks, woodland, sports pitches and ecological areas, linked by pathways and cycle tracks. The residential development at Springhead Park is well underway and Ebbsfleet Valley now has outline planning permission (Eastern Quarry consent granted in November 2007). Ebbsfleet Valley will incorporate mixed use high density development including residential, offices, hotels, bars and restaurants, retail, leisure facilities, community facilities and education provision together with high quality public realm and landscaping. Development will also encourage better links out to Northfleet station, the River Thames, existing footpaths, cycleways and bridleways. A £2million public art commission to create the 40m high Ebbsfleet Landmark Project will deliver a prominent landmark sited on elevated land at the southern entrance to the valley.
- **Northfleet Embankment** - 87ha of mixed use development along the Thames waterfront. The area is subdivided into 3 zones comprising an industrial core (in the centre) flanked by two areas of mixed use development with an extensive network of open spaces. A riverside promenade will run along the entire waterfront, providing additional open space, footpaths and cycleways.



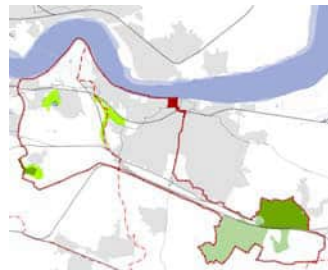
3 Policy Context

The context maps have been prepared using GIS data. They illustrate our current knowledge of the cluster area and highlight key potential influences which should be taken into account in planning future activities.

The mini-maps below provide an indication of the range of context maps available; the full set of maps (at a larger scale) is available separately.



Statutory Designations



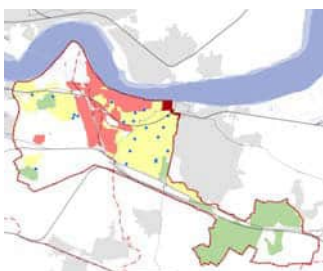
Accessible Greenspaces



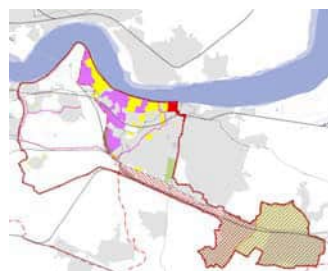
Cultural Heritage



Ecological Network



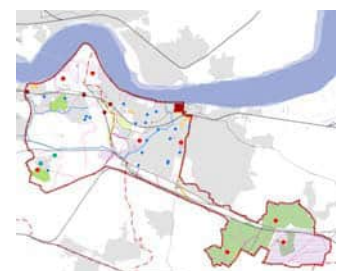
Land Use



Planning & Policies



Topography



Destinations & Connections

Key issues to note from the context drawings are:

- **Planning & Policy**
 - All the land to the south of the A2 is Metropolitan Green Belt in Gravesham Borough Council and Dartford Borough Council
 - Ebbsfleet Valley is a major development node in regional policy
 - The wooded countryside at Jeskyns and in the vicinity of Ashenbank Woods is designated as a Special Landscape Area in the Gravesham Borough Council Local Plan
- **Cultural Heritage**
 - There is a cluster of scheduled ancient monuments in and around the Ebbsfleet Valley
- **Access**
 - The Ebbsfleet Valley is a major international and regional hub for sustainable transport
 - National Cycle Route 1 links Dartford to Gravesend and is being realigned to pass Ebbsfleet International Station.
- **Statutory designations**
 - Blue Lake, parts of Swanscombe Heritage Park/Crayland Gorge and part of the Ebbsfleet River Valley is designated as a Local Wildlife Site
- **Ecological network model**
 - Many of the woodlands at Shorne Woods Country Park and in the Cobham/Ashenbank area are semi-natural ancient woodlands



Green Cluster Studies

Shorne to Shore Technical Report



January 2011

Figure 1: Green Infrastructure Opportunities

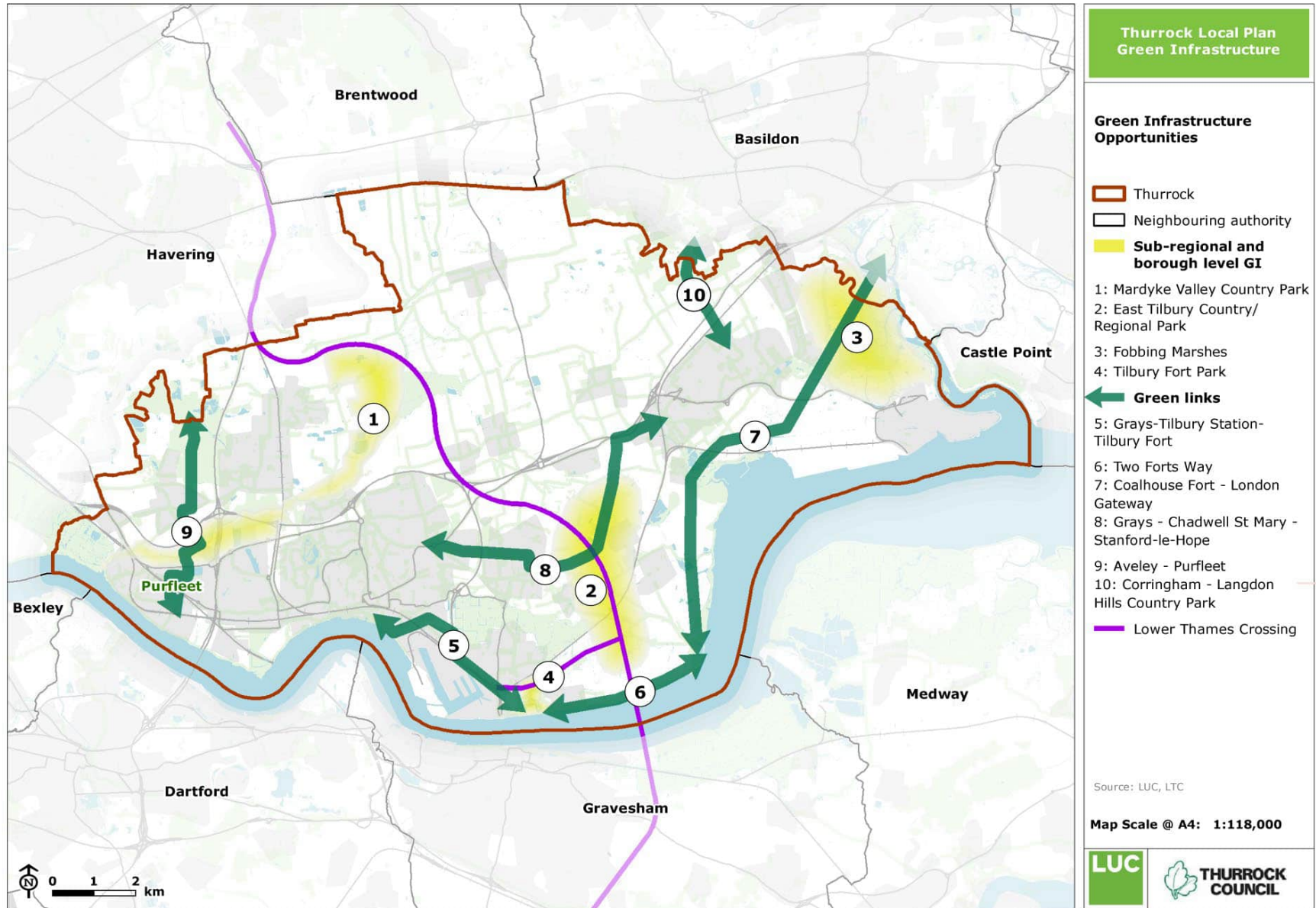
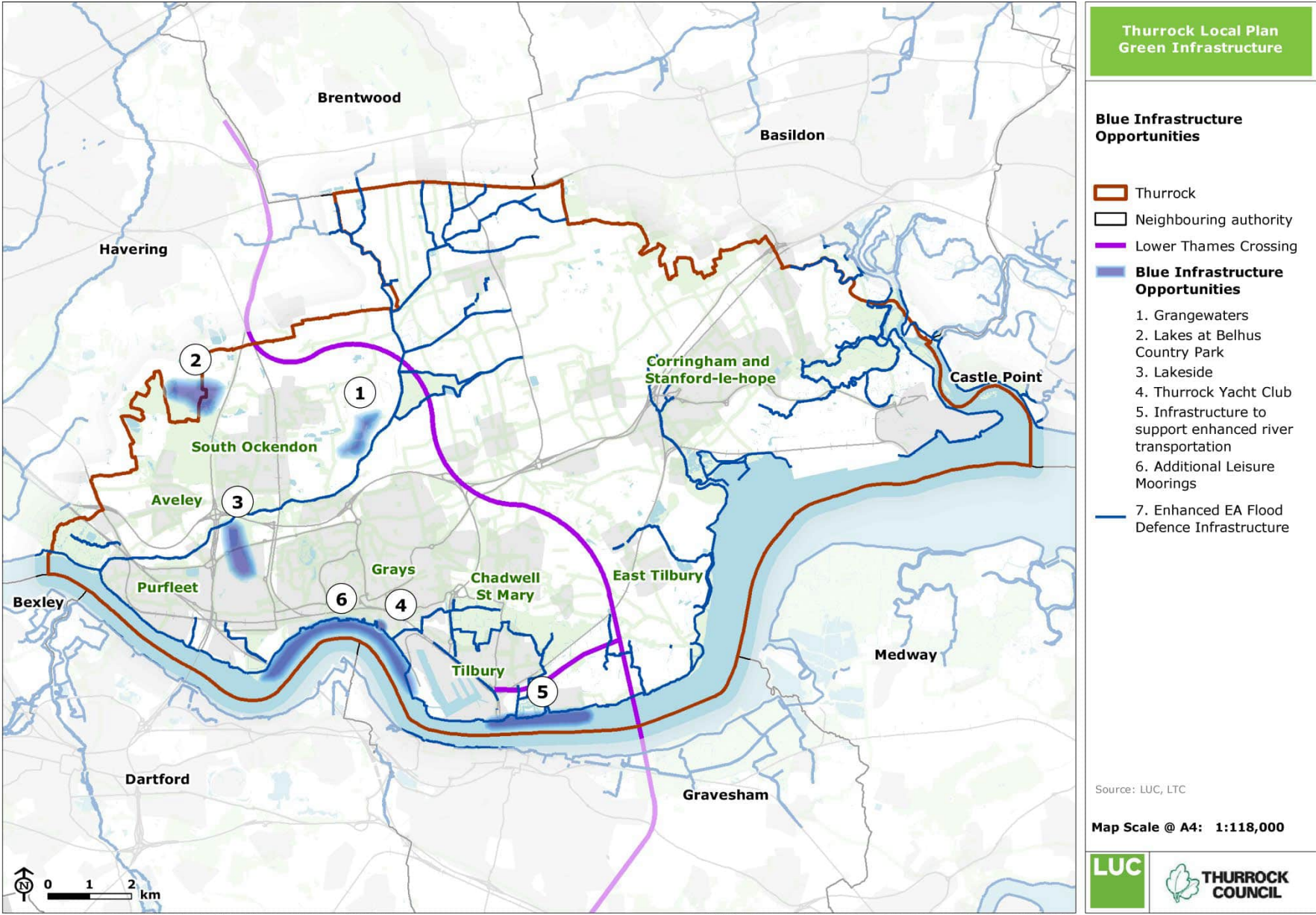


Figure 2: Blue Infrastructure Opportunities



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CB:KS EB:nunn_j LUC FIGX_6767_Blue_Infrastructure_A4L 28/09/2018

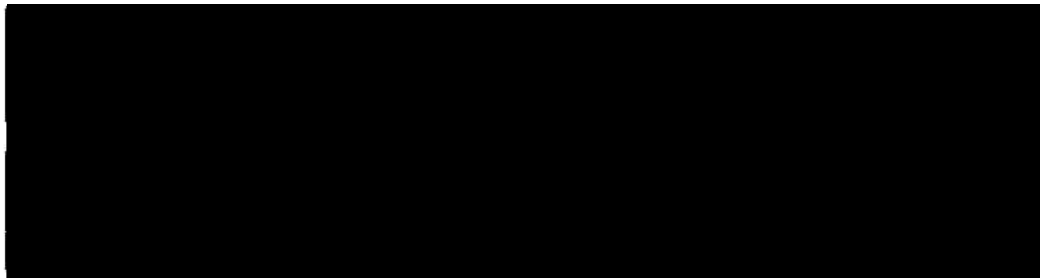
From: [REDACTED]
To: [REDACTED]
Subject: Fwd: Green Infrastructure Study
Date: 26 October 2018 16:15:40
Attachments: [Draft Strategic GBI projects relevant to the Lower Thames Crossing 26.10.18.docx](#)
[ATT00001.htm](#)
[Green Infrastructure request for information 26.10.18.docx](#)
[ATT00002.htm](#)

Thurrock response below



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From: [REDACTED]
Sent: Friday, October 26, 2018 10:35:42 AM
To: [REDACTED]
Subject: Fwd: Green Infrastructure Study



Working on behalf of
Highways England

Highways England Customer Contact Centre
[0300 123 5000](tel:03001235000)
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Begin forwarded message:

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
[REDACTED]



Apologies for the delay but you will be pleased to hear I have all of the information you required.

Please find attached the questionnaire completed and an accompanying note.

Thanks

[REDACTED] Assistant Director Lower Thames Crossing I Place
thurrock.gov.uk | [REDACTED]
Thurrock Council, Civic Offices, New Road, Grays, Essex RM17 6SL

An ambitious and collaborative community which is proud of its heritage and excited by its diverse opportunities and future

From: [REDACTED]

Sent: 12 October 2018 14:37

To: [REDACTED]

Cc: [REDACTED]

Subject: RE: Green Infrastructure Study

Good afternoon all,
Further to my emails of both 17 September and 24 September, we have not yet heard from you and the preferred deadline has now passed. However, we still would be most grateful to receive your response on the attached form.

I look forward to hearing from you at the earliest opportunity.
Many thanks in anticipation.

[REDACTED] – Stakeholder Engagement & SoCG Advisor
[REDACTED]

**Working on behalf of
Highways England**

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Dear XXXXXXXX,
[Lower Thames Crossing: Green Infrastructure Study \(Pre Statutory Consultation\)](#)

Further to our email dated 17th September 2018 regarding the Green Infrastructure Study (GI Study) we are now collating information received to date from TIER 1 Local Authority Stakeholders. I understand we have not as yet had a response from you and ask if you able to consider the information we are requesting and who is best

placed to provide us with this.

To reiterate our request we would be grateful to receive your written response to the following to assist with our study:

- Main Pressures and potential impacts to GI as a result of the LTC scheme
- Identification of current projects and initiatives which could potentially be supported
- Collation and mapping of GI opportunities

Please could the attached table be completed as far as possible us along with any relevant mapping (GIS/shape files for example) so that we can capture all key issues and opportunities from you.

We request that information is returned by Tuesday 2nd October 2018.

Please do not hesitate to contact [REDACTED] by email:

[REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing | [REDACTED]
[REDACTED]

**Working on behalf of
Highways England**

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Dear XXXXX,

Lower Thames Crossing: Green Infrastructure Study (Pre Statutory Consultation)

As you are aware we are currently preparing a Green Infrastructure Study (GI Study) to provide Highways England with an understanding of the extent and nature of Green Infrastructure provision affected by the preferred Lower Thames Crossing route alignment and to follow a clear process for ensuring that Green Infrastructure is considered as part of the design process and legacy for the Lower Thames Crossing.

As a starting point, existing GI Assets in and around the designated Green Infrastructure Networks have been identified and mapped. The functions provided by the existing GI Assets have been appraised from site visits and by reference to relevant data and information. This has included an assessment of the connectivity of existing GI Assets in and around the designated areas for the general public as well as wildlife interests.

The key findings of the survey have considered

- Biodiversity
- Landscape Character
- Connectivity and NMUs
- Open Space function, Heritage and Sense of Place

Through engagement with yourselves we wish to consider how the proposed development and the designated Green Infrastructure Networks can contribute to meeting local GI needs and opportunities through identifying appropriate opportunities for contributing to potential GI requirements. The opportunities for GI provision in and around the preferred LTC route alignment will be presented as opportunities which could be considered as part of mitigation and compensatory measures, looking at wider connectivity with existing GI Assets and existing and proposed projects.

To assist with this stage of the study, we would be grateful to receive your written response to the following:

- Main Pressures and potential impacts to GI
- Identification of current projects and initiatives which could potentially be supported
- Collation and mapping of GI opportunities

Please find attached a tabulated form for completing and request that information is supplied to us along with any relevant mapping (GIS/shape files for example) so that we can capture all key opportunities from you. We request that information is returned by Tuesday 2nd October 2018.

Following collation of all data and information across the TIER 1 Local Authority Stakeholders we also proposed that a workshop could be held in October to provide feedback on the outcome of the study work so far and discuss next steps.

We propose the following draft agenda for the workshop:

1. **Introductions and Objectives**
2. **Project update**
3. **Presentation and Background to the GI Study**
4. **Aspirations of the GI Study and summary presentation of the next stage**
5. **Identification of GI Needs and Opportunities and mapping**
6. **Conclusions and Next Steps**

We hope that there is a collaborative approach with you and look forward to receiving your response.

Please do not hesitate to contact [REDACTED] by email:

[REDACTED] should you have any specific or technical queries.

Kind regards

[REDACTED]
Lower Thames Crossing – Stakeholder Engagement & SoCG Advisor
[REDACTED]

**Working on behalf of
Highways England**

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Green Infrastructure request for information

| | |
|---|--|
| <p>Authority: Thurrock Council</p> <p>Officer/Lead Contact: [REDACTED]</p> <p>Reference:</p> | |
| <p>Aim 1: What are the potential impacts to GI from LTC</p> | <p>Thurrock Council has yet to be provided with detailed information regarding the extent of cuttings, embankments etc to be able to make any detailed comments.</p> <p>The LTC would divide the borough in two. This would result in significant loss of connectivity for people and wildlife unless properly mitigated.</p> <p>Direct effects e.g. air pollution and noise on people (health and well-being); direct loss of GI; loss of connectivity between GI assets and severance of sustainable transport links; habitat fragmentation; air and water pollution and noise on wildlife; increased risk of flooding; degradation of water quality due to contaminated runoff and dust during construction; degradation of quality of intact landscapes.</p> <p>Indirect effects – e.g. reduced likelihood of people walking or cycling and use of existing and proposed recreation sites with knock-on effects on health and well-being, air pollution, greenhouse gas emissions; reduction of ecosystem services associated with degraded habitats and biodiversity; reduced quality of life for existing residents of borough due to degraded natural environment and reduced attractiveness to potential future employers and employees.</p> |
| <p>Aim 2:</p> <p>What are the main pressures to existing GI, current policy and allocations</p> | <p>Growing demand for housing and infrastructure will result in loss of existing greenspace and GI, which could result in loss of recreational opportunities, biodiversity and visual amenity. Development of housing and infrastructure is also likely to alter the local landscape and riverscape character. This proposed scheme will exacerbate these issues.</p> <p>Proposed route can harm the settings of historic assets and their settings. The development can also increase risk to heritage assets, for example through increasing the area of impermeable surfaces, which in turn could increase the risk of heritage assets being subject to flooding.</p> <p>We draw your attention to Natural England’s Site Improvement Plan for the Greater Thames Complex of European sites, one of which (Thames Estuary & Marshes SPA) lies within Thurrock, which recognizes a number of threats and pressures facing the ecology of this site. The SPA is particularly sensitive to pressure from development and recreation.</p> <p>There are areas of fragmented habitat across the borough, particularly with regards to deciduous woodland.</p> <p>There are water quality issues within the lower stretches of the River Mardyke, largely due to poorly managed surface water runoff from development. The LTC is likely to worsen these issues.</p> |

| | |
|--|---|
| | <p>Climate change is likely to lead to changes in habitat distribution and resultant changes to the character of existing GI.</p> <p>Existing GI may be under-used, as only 59.5% adults in Thurrock are physically active, which is less than the national average of 66%¹. This could be an indicator of poor access to GI, lack of awareness of local GI and opportunities for GI to be made more welcoming, attractive and diverse. Development could further separate residents from opportunities to access the countryside. A growing population will also need increased provision of open space.</p> <p>The active transport network could be disrupted by development, including severance of existing routes.</p> <p>There is likely to be increasing demand for transportation along the Thames, resulting in a busier waterway.</p> |
| <p>Aim 3:</p> <p>What are considered the key opportunities for GI enhancement and creation as part of LTC.</p> <p>Identification of Priorities and Projects</p> | <p>Improvements to public rights of way and other routes for Non Motorised Users</p> <p>Improvements to existing and proposed recreation sites to increase the amount of use.</p> <p>Opportunity to view the Mardyke Valley comprehensively. Looking at:</p> <ul style="list-style-type: none"> • flood management and water quality. Including measures to integrate with landscape and biodiversity recreation works. • Landscape restoration – particularly of fenland features, historic hedges and woods etc • Biodiversity restoration associated with recreation of landscape features. Opportunities to provide habitat links to connect important wildlife sites • Public access along and across the valley <p>Restoration of historic landfill and mineral extraction sites to create new habitat or recreation opportunities</p> <p>Delivery of Thames Chase/ Land of the Fanns objectives e.g. creation of woods and landscape restoration as part of the LTC mitigation. There are opportunities to improve the historic landscape associated with Belhus Park and Country Park and to improve public access.</p> <p>Enhancement of the riverscape between Tilbury and Coalhouse Fort</p> <p>See attached document outlining GI work underway in Thurrock, which outlines relevant, emerging green and blue infrastructure proposals for Thurrock. Note that the GI strategy is still being developed, therefore these proposals have not been finalised.</p> |

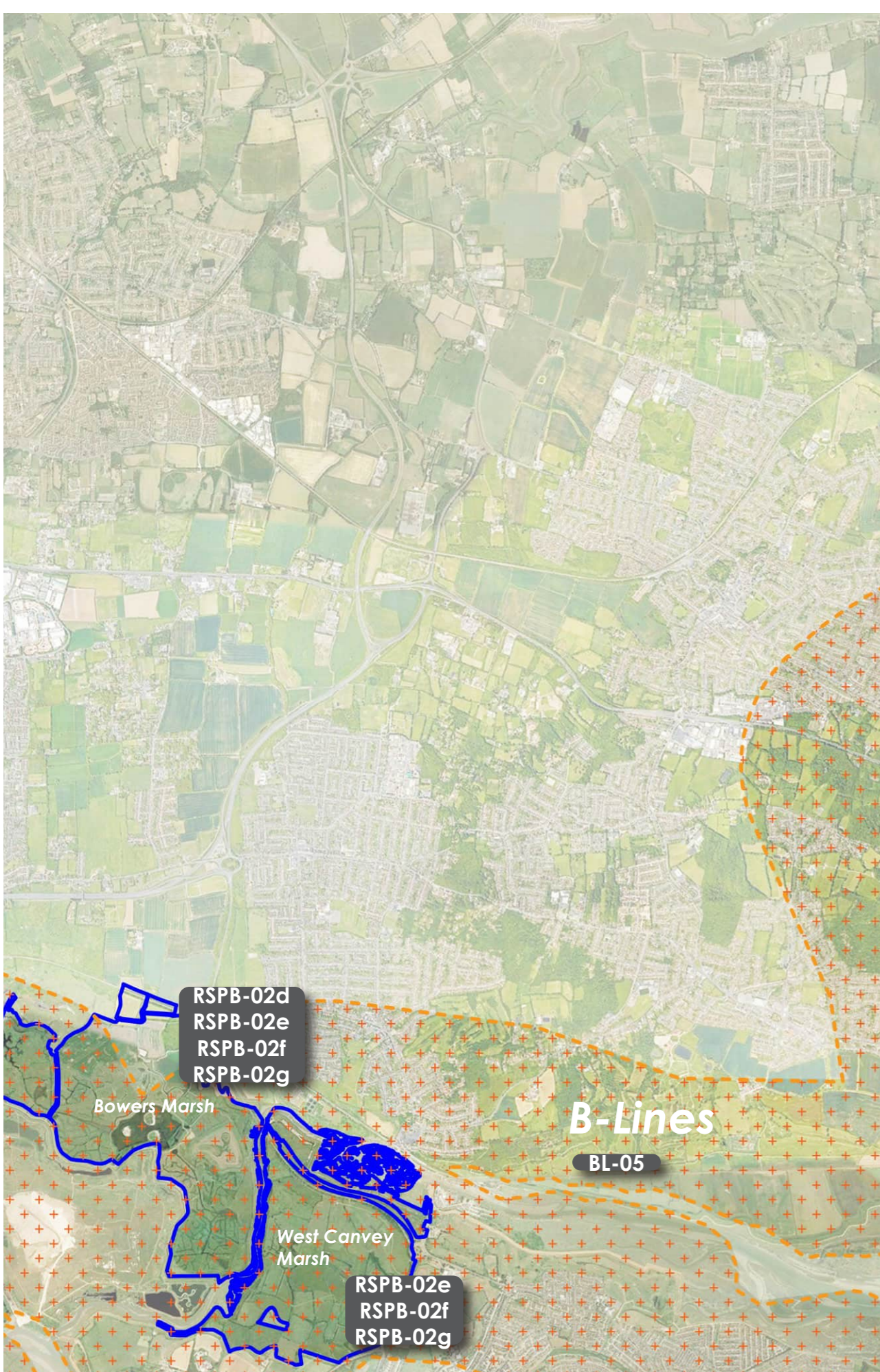
¹ Public Health England (2017), Health Profiles (Thurrock), [online] available at: [redacted], accessed: 19/4/18

| | |
|--|--|
| <p>Aim 4:</p> <p>Identification of Projects/Initiatives currently underway and which can be supported.</p> | <p>Thames Chase</p> <ul style="list-style-type: none"> • Aveley Forest Park • Wider landscape, biodiversity and access enhancements in accordance with the Thames Chase Plan. <p>Land of the Fanns</p> <ul style="list-style-type: none"> • Improved access to and management of Belhus Park historic landscape • Support for community based projects <p>South Essex Catchment Partnership (Mar Dyke)</p> <ul style="list-style-type: none"> • Channel enhancement • Wetland creation • Improved management of floodplain grassland • Improved public access including missing links in rights of way network <p>East Tilbury – Thameside Nature Park, East Tilbury Quarry and Coalhouse Fort</p> <ul style="list-style-type: none"> • Completion of the restoration of the former quarries and habitat creation and enhancement. • Improved public access <p>Rewetting of arable land west of Coalhouse Fort</p> <p>Little Belhus Country Park – site restoration nearing completion enabling opportunities to enhance [public access.</p> <p>Active Place and Travel</p> <ul style="list-style-type: none"> • The council is embarking on a programme of enhancing its parks and open spaces as resources permit. These include sites in South Ockendon, Tilbury and East Tilbury • Plans are being developed to achieve improved safe routes on foot and cycle to these parks. • Improvements to cycle network • Public Rights of Way Improvement Plan |
| <p>Aim 5: Key contacts and other studies</p> | <p>██████████ – Local Plan and Strategic Growth ██████████@thurrock.gov.uk</p> <p>██████████ – Land of the Fanns - http://www.landofthefanns.org/</p> <p>██████████ – Thames Chase and South Essex Catchment Partnership http://www.thameschase.org.uk/</p> |
| <p>Aim 6: Collation of data, mapping, size of areas and projects</p> | <p>In preparing a GBI strategy for Thurrock, LUC has collated mapped information and prepared maps of baseline information for the following topics:</p> <ul style="list-style-type: none"> • Landscape • Historic environment • Biodiversity • Designated open space |

| | |
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| | <ul style="list-style-type: none">• Active transport• Blue infrastructure• Cross boundary GI <p>Indicative maps for the Green and Blue Infrastructure opportunities identified through the study have also been prepared (including the map of Green Infrastructure Opportunities in the attached document).</p> |
| Aim 7: Identification of timescales and what is required to achieve targets | See attached document outlining GI work underway in Thurrock. Further detail will be available in the full report. |



| | KEY: Order Limits Project boundary NOTE: dashed line indicates approximate boundary Indicative project location | The Land of the Fanns Hoo Peninsula Making a Buzz for the Coast B-Lines | Out and About in Thames Chase and the Green Grid Forest Circle Strategy 'Link' Projects Proposed Cycling Network | ASELA ambitions, Thurrock Hatch Report (2021) and South Essex GBI Study Existing Primary Greenways Proposed Primary Greenways Existing Secondary Greenways Proposed Secondary Greenways Existing England Coast Path Proposed England Coast Path Short Term Proposed England Coast Path | <table border="1"> <thead> <tr> <th>Date</th> <th>Drawn By</th> <th>Drawn Date</th> <th>Checked By</th> <th>Checked Date</th> <th>Approved By</th> <th>Approved Date</th> <th>Revision Purpose</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | Date | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Purpose | | | | | | | | | | Scale 1:45 000@A1 Copyright *Contains Ordnance Survey data © Crown copyright and database right 2018 OS 100030649* Suitability For comment Information Status Information Revision P02 Drawing Number HE540039-CJV-GEN-GEN-DRA-LSC-00101 |
|---|--|--|---|---|---|------|----------|------------|------------|--------------|-------------|---------------|------------------|--|--|--|--|--|--|--|--|--|--|
| | | | | | | Date | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Purpose | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Project Title Lower Thames Crossing Stakeholder Projects Drawing Title STAKEHOLDER PROJECT IDENTIFICATION MAPPING (Sheet 1 of 2) | | | | | | | | | | | | | | | | | | | | | | | |



| Project ID | Project Name | Project Location |
|--|--|--|
| BL-01 | Tilbury Power Station | Tilbury |
| BL-02 | Orsett Camp Quarry/Orsett East Quarry | Orsett |
| BL-03a | Canvey Wick | Canvey Wick |
| BL-03b | West Thurrock Marshes | West Thurrock Marshes |
| BL-04 (a to i) | Important Invertebrate Areas | Across South Essex and North Kent |
| BL-05 | Bee-Lines | Essex and Kent |
| Wide area projects and initiatives without specific location- NOT MAPPED | | |
| | South Essex-wide brownfield and Thames terrace sites | South Essex-wide |
| | BeeWalk | UK wide |
| BBC-01 | Making a Buzz for the Coast | North Kent (Dartford to Deal 5km coastal strip) |
| Wide area projects and initiatives without specific location- NOT MAPPED | | |
| | Shrill Carder Bee Recovery Project | Tames Estuary - E.London to Foulness/Burnham in Essex; Hoo Peninsula in Kent |
| | Short-haired bumblebee reintroduction project | Romney Marsh landscape area (Dungeness) |
| | BeeWalk | UK wide |
| DFP-01 | Access and habitat enhancements to the Thames Chase Community Forest | Thames Chase Community Forest |
| DFP-02 | Landscape restoration along Mardyke Valley | River Mardyke Valley |
| DFP-03 | East Tilbury brown-field | East Tilbury |
| DFP-04 | Landscape mitigation in partnership with other major developments | Goshens Farm |
| DFP-05 | Enhancements at Tilbury Fort | Tilbury Fort |
| DFP-06 | Clay Spoil in Higham Creek | Higham Creek |
| DFP-07 | Management of water levels at SSSI | Shorne Marshes |
| DFP-08 | Ecological enhancements to flood defenses | Thames River |
| DFP-09 | A2 corridor enhancements | A2 corridor |
| DFP-10 | Multi-functional accessible green space | Fairland south of Riverview Park |
| DFP-11 | Living bridge to link Claylane Wood to Shorne Woods | Claylane Wood and Shorne Woods |
| DFP-12 | Remove the barrier of the widened A2 for non motorised users | Between Shorne and Cobham/ Jeskyns |
| DFP-13 | Woodland planting | South of A2, Cobham |
| DFP-14 | A2/ M2 widening | South of A2, Cobham |
| DFP-15 | Woodland creation | Great Crabbles and Randall Woods |
| DFP-16 | Making a Buzz for the Coast | North Kent (Dartford to Deal 5km coastal strip) |
| EWT-01a | The Lost Fens: Bulphan Fen | Bulphan TQ621847 |
| EWT-01b | The Lost Fens: Orsett Fen | Orsett TQ627833 |
| EWT-02 | Thurrock Thameside Nature Park | Wharf Rd, Stanford-le-Hope SS17 0EQ |
| EWT-03 | Ockendon landfill capping | TQ605836 South Ockendon |
| EWT-04 | Warley Place Nature Reserve | Warley Road, Great Warley, CM13 3HU |
| EWT-05 | Stanford Warren Nature Reserve | TQ 687 812, Mucking Wharf Road |
| Projects with various sites, specific locations not known- NOT MAPPED | | |
| | Local Wildlife Sites (LoWS) uplift | Various |

| | | | |
|--|--|--|--|
| Gravesham Borough Council | GBC-01 | Strategic Green Infrastructure Network | Gravesham, Kent |
| Forest Enterprise England | TCCF-01 | Thames Chase Community Forest | Broadfields (Thames Chase Forest Centre) |
| | TCCF-02 | Thames Chase Community Forest | Jeskyns Community Woodland |
| | TCCF-03 | Thames Chase Community Forest | Folkes Lane Community Woodland |
| Kent Downs | KD-01 | Improvements to NMU connectivity between existing GI network | Gravesend to Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park |
| | KD-02 | National Cycle Route 177 improvements | 177 along the north side of the A2 from the Henhurst roundabout in the west to J1 |
| Projects outside layout boundary- NOT MAPPED | | | |
| | | Pedestrian & cycle connection over/under the A2 near Guston, Dover | Guston, Dover |
| Kent Wildlife Trust | KWT-01 | Roadside Nature Reserves | A226 by the Church/Kent wide |
| Projects with various sites, specific locations not known- NOT MAPPED | | | |
| | | General work with Kent Highways and Gravesham over the years on road verge management | General work with Kent Highways and Gravesham over the years on road verge management/ Kent wide |
| Plantlife | PL-01 | Cobham Hall Registered Park and Garden | Medway |
| | PL-02 | Ranscombe Farm Plantlife Reserve and Country Park | Medway |
| Rural Arisings | RA-01 | Rural Arisings, habitat creation / re-mediation | South Ockendon |
| RSPB: Royal Society for the Protection of Birds | RSPB-01 | North Kent Marshes breeding wader project | Shorne Marshes, Higham Marshes, Cliffe Pools, Northward Hill and other sites on the Isle of Sheppey and Seasalter (Whitstable) |
| | RSPB-02a | Cliffe Pools Enhancement | nr Cliffe, Kent |
| | RSPB-02b | Bretts Alpha lake enhancement project | nr Cliffe, Kent |
| | RSPB-02c | Island creation at Vange Marsh for nesting and wintering waders | Vange, Essex |
| | RSPB-02d | Electrical supply and electric pumps to Bowers Marsh | Basildon, Essex |
| | RSPB-02e | Fencing at Bowers Marsh, Vange Marsh, West Convey Marsh and Canvey Wick | Basildon, Essex |
| | RSPB-02f | Anti Predator Fencing at Bowers Marsh and West Convey Marsh | Basildon, Essex |
| | RSPB-02g | Visitor infrastructure at Bowers Marsh, West Convey and Canvey Wick | Basildon/Canvey, Essex |
| | RSPB-03a | Rainham Marshes breeding wader project | Between Purfleet and Rainham |
| | RSPB-03b | Visitor infrastructure at Rainham Marshes | Between Purfleet and Rainham |
| | RSPB-04a | Shornmead Fort Interpretation | Shorne Marshes |
| | RSPB-04b | Hydrology at Cliffe Pools (Black Barn to Coast-guards) | Cliffe |
| RSPB- WH: Whose Hoo | RSPB-WH-01a | Gross Park Country Park | Allhallows |
| | RSPB-WH-01b | Bessie's Lane - an ancient royal thoroughfare | Allhallows |
| | RSPB-WH-01c | Slough Fort Visitor Cafe, Installation of Kitchen for a Cafe at Slough Fort | Allhallows |
| | RSPB-WH-01d | Reform and remodel the Glacis of Slough Fort | Allhallows |
| | RSPB-WH-01e | Create an interpretive display for the Hoo defences in the Slough Fort Wing Battery Magazine | Allhallows |
| | RSPB-WH-02 | Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham. | Higham |
| | RSPB-WH-03 | To develop wild flower meadow | High Halstow |
| | RSPB-WH-04a | Cliffe Village and its Hinterland | Cliffe |
| | RSPB-WH-04b | Steeping Stones; Dead End Paths - Cliffe cul-de-sac paths a destination not a dead end. | Cliffe |
| | RSPB-WH-05 | Re- discovering The Port Victoria Line and the Town that never was. | Grain |
| | RSPB-WH-06 | William Hogarth Walking Trail | Gravesend to Grain |
| | RSPB-WH-07 | Lapwing Liffeline at Cliffe Pools | Cliffe Pools |
| | RSPB-WH-08 | Increasing invertebrate food sources for lapwing chicks. | Northward Hill |
| | RSPB-WH-09a | Linking Denton and Shorne Mead Fort | Denton to Shorne coastal area |
| | RSPB-WH-09b | Ways to Wellbeing | Denton to Shorne coastal area |
| | RSPB-WH-09c | Young Persons interpretation of military heritage and connecting Denton | Denton to Shorne coastal area |
| | RSPB-WH-10 | Hydrology of Shorne Marshes to establish areas of open water and reed-bed | Shorne Marshes |
| Wide area projects and initiatives without specific location NOT MAPPED | | | |
| | | Operation Turtle Dove | Essex and Kent |
| | | Acts of Resistance | Hoo Peninsula |
| | | Art In Churches | Hoo Peninsula |
| | | Linear habitats for rare bumblebees | North coastal area of Hoo Peninsula |
| | | Mapping Skylarks | Hoo Peninsula |
| | | The Sound of Hoo | Hoo Peninsula |
| | | Celebration of local heritage by music, written and performed by the children of The Hoo. | Hoo Peninsula |
| | | Community volunteering - reducing rural isolation | Hoo Peninsula |
| | | Planting the Hoo | Hoo Peninsula |
| | | Recording and sharing soldiers' graffiti at Shornmead Fort | Hoo Peninsula |
| | | Changing Industries of the Peninsula | Hoo Peninsula |
| | | The Changing Defences of the Hoo Peninsula | Hoo Peninsula |
| | | The Hoo Stop Line | Hoo Peninsula |
| | | Great Expectations - The orchard Legacy | Hoo Peninsula |
| | | Yellow wagtail and corn bunting survey of the Hoo Peninsula | Hoo Peninsula |
| | | Fought to Fort - Palmerston's Follies | Hoo Peninsula |
| | | Project Management | Hoo Peninsula |
| | | Brown Hares on the Hoo Peninsula | Hoo Peninsula |
| | | Conserving Nightingales on the Hoo | Hoo Peninsula |
| | | Fairland advisory work | Hoo Peninsula |
| | | Wet grassland habitat restoration 1 NOT ON RSPB LAND | Hoo Peninsula |
| | | Wet grassland habitat restoration 2 NOT ON RSPB LAND | Hoo Peninsula |
| | | Histories of the Hoo Peninsula | Hoo Peninsula |
| | | The Trench | Hoo Peninsula |
| Thames & Medway Canal Association | TMCA-01 | Dredge canal from Mark Lane to Shorne | From Mark Lane, Gravesend to Church Street, Higham, Kent |
| | | Suggested location for TMCA building | Eastcourt Marshes |
| Thames Chase Trust (under Forestry Commission) | TCT-01 | Thames Chase Forest Centre | Upminster, RM14 3NS |
| | TCT-02 | Out and About in Thames Chase and the Green Grid | Thurrock and the LB Havering |
| | TCT-03 | The Forest Circle | Thurrock and the LB Havering |
| | TCT-04 | South Essex Catchment Partnership (Mardyke Valley) | Mardyke Valley |
| | TCT-05 | Roding, Beam & Ingrebourne Catchment Partnership (LB Havering and Brentwood) | LB Havering |
| The Land of the Fens (under Thames Chase Trust) | TLoF-01 | A1.2 - Community Tree Nursery | Potentially - Weald Country Park |
| | TLoF-02 | A2.2 - Low Nutrient Habitats | Tyers Common |
| | TLoF-03 | A3.2 - Connecting Historic Landscapes | Belhus Park Thorndon Country Park |
| | TLoF-04 | A3.1 - River Catchments | River Rom, River Ingrebourne, River Mardyke, Grenfell Park, Pages Wood |
| Wide area projects and initiatives without specific location- NOT MAPPED | | | |
| | A1.1 - Landscape Management Plan | The Land of the Fens | |
| | A2.1 - Woodland, Grassland and Hedgerows | The Land of the Fens | |
| | A2.3 - Rediscovering the Lost Fens | Location to be confirmed | |
| | D1.1 - Walking the Fens (via Thames Chase Stakeholder Group) | The Land of the Fens | |
| | D2.2 - Arts Festival | The Land of the Fens | |
| Woodland Trust | WT-01 | Ashenbank Wood | Ashenbank Wood |

| Project ID | Project Name | Project Location |
|--|---|--|
| GBC-01 | Strategic Green Infrastructure Network | Gravesham, Kent |
| TCCF-01 | Thames Chase Community Forest | Broadfields (Thames Chase Forest Centre) |
| TCCF-02 | Thames Chase Community Forest | Jeskyns Community Woodland |
| TCCF-03 | Thames Chase Community Forest | Folkes Lane Community Woodland |
| KD-01 | Improvements to NMU connectivity between existing GI network | Gravesend to Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park |
| KD-02 | National Cycle Route 177 improvements | 177 along the north side of the A2 from the Henhurst roundabout in the west to J1 |
| Projects outside layout boundary- NOT MAPPED | | |
| | Pedestrian & cycle connection over/under the A2 near Guston, Dover | Guston, Dover |
| KWT-01 | Roadside Nature Reserves | A226 by the Church/Kent wide |
| Projects with various sites, specific locations not known- NOT MAPPED | | |
| | General work with Kent Highways and Gravesham over the years on road verge management | General work with Kent Highways and Gravesham over the years on road verge management/ Kent wide |
| PL-01 | Cobham Hall Registered Park and Garden | Medway |
| PL-02 | Ranscombe Farm Plantlife Reserve and Country Park | Medway |
| RA-01 | Rural Arisings, habitat creation / re-mediation | South Ockendon |
| RSPB: Royal Society for the Protection of Birds | RSPB-01 | North Kent Marshes breeding wader project |
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| | RSPB-WH-01d | Reform and remodel the Glacis of Slough Fort |
| | RSPB-WH-01e | Create an interpretive display for the Hoo defences in the Slough Fort Wing Battery Magazine |
| | RSPB-WH-02 | Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham. |
| | RSPB-WH-03 | To develop wild flower meadow |
| | RSPB-WH-04a | Cliffe Village and its Hinterland |
| | RSPB-WH-04b | Steeping Stones; Dead End Paths - Cliffe cul-de-sac paths a destination not a dead end. |
| | RSPB-WH-05 | Re- discovering The Port Victoria Line and the Town that never was. |
| | RSPB-WH-06 | William Hogarth Walking Trail |
| | RSPB-WH-07 | Lapwing Liffeline at Cliffe Pools |
| | RSPB-WH-08 | Increasing invertebrate food sources for lapwing chicks. |
| | RSPB-WH-09a | Linking Denton and Shorne Mead Fort |
| | RSPB-WH-09b | Ways to Wellbeing |
| | RSPB-WH-09c | Young Persons interpretation of military heritage and connecting Denton |
| | RSPB-WH-10 | Hydrology of Shorne Marshes to establish areas of open water and reed-bed |
| Wide area projects and initiatives without specific location NOT MAPPED | | |
| | Operation Turtle Dove | Essex and Kent |
| | Acts of Resistance | Hoo Peninsula |
| | Art In Churches | Hoo Peninsula |
| | Linear habitats for rare bumblebees | North coastal area of Hoo Peninsula |
| | Mapping Skylarks | Hoo Peninsula |
| | The Sound of Hoo | Hoo Peninsula |
| | Celebration of local heritage by music, written and performed by the children of The Hoo. | Hoo Peninsula |
| | Community volunteering - reducing rural isolation | Hoo Peninsula |
| | Planting the Hoo | Hoo Peninsula |
| | Recording and sharing soldiers' graffiti at Shornmead Fort | Hoo Peninsula |
| | Changing Industries of the Peninsula | Hoo Peninsula |
| | The Changing Defences of the Hoo Peninsula | Hoo Peninsula |
| | The Hoo Stop Line | Hoo Peninsula |
| | Great Expectations - The orchard Legacy | Hoo Peninsula |
| | Yellow wagtail and corn bunting survey of the Hoo Peninsula | Hoo Peninsula |
| | Fought to Fort - Palmerston's Follies | Hoo Peninsula |
| | Project Management | Hoo Peninsula |
| | Brown Hares on the Hoo Peninsula | Hoo Peninsula |
| | Conserving Nightingales on the Hoo | Hoo Peninsula |
| | Fairland advisory work | Hoo Peninsula |
| | Wet grassland habitat restoration 1 NOT ON RSPB LAND | Hoo Peninsula |
| | Wet grassland habitat restoration 2 NOT ON RSPB LAND | Hoo Peninsula |
| | Histories of the Hoo Peninsula | Hoo Peninsula |
| | The Trench | Hoo Peninsula |
| Thames & Medway Canal Association | TMCA-01 | Dredge canal from Mark Lane to Shorne |
| | | Suggested location for TMCA building |
| Thames Chase Trust (under Forestry Commission) | TCT-01 | Thames Chase Forest Centre |
| | TCT-02 | Out and About in Thames Chase and the Green Grid |
| | TCT-03 | The Forest Circle |
| | TCT-04 | South Essex Catchment Partnership (Mardyke Valley) |
| | TCT-05 | Roding, Beam & Ingrebourne Catchment Partnership (LB Havering and Brentwood) |
| The Land of the Fens (under Thames Chase Trust) | TLoF-01 | A1.2 - Community Tree Nursery |
| | TLoF-02 | A2.2 - Low Nutrient Habitats |
| | TLoF-03 | A3.2 - Connecting Historic Landscapes |
| | TLoF-04 | A3.1 - River Catchments |
| Wide area projects and initiatives without specific location- NOT MAPPED | | |
| | A1.1 - Landscape Management Plan | The Land of the Fens |
| | A2.1 - Woodland, Grassland and Hedgerows | The Land of the Fens |
| | A2.3 - Rediscovering the Lost Fens | Location to be confirmed |
| | D1.1 - Walking the Fens (via Thames Chase Stakeholder Group) | The Land of the Fens |
| | D2.2 - Arts Festival | The Land of the Fens |
| Woodland Trust | WT-01 | Ashenbank Wood |

KEY:

- Order Limits
- Project boundary
- NOTE: dashed line indicates approximate boundary
- Indicative project location
- The Land of the Fens
- Hoo Peninsula
- Making a Buzz for the Coast
- B-Lines
- Out and About in Thames Chase and the Green Grid
- Forest Circle Strategy
- 'Link' Projects
- Proposed Cycling Network

ASELA ambitions, Thurrock Hatch Report (2021) and South Essex GBI Study

- Existing Primary Greenways
- Proposed Primary Greenways
- Existing Secondary Greenways
- Proposed Secondary Greenways
- Existing England Coast Path
- Proposed England Coast Path
- Short Term Proposed England Coast Path

| Rev | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Reason |
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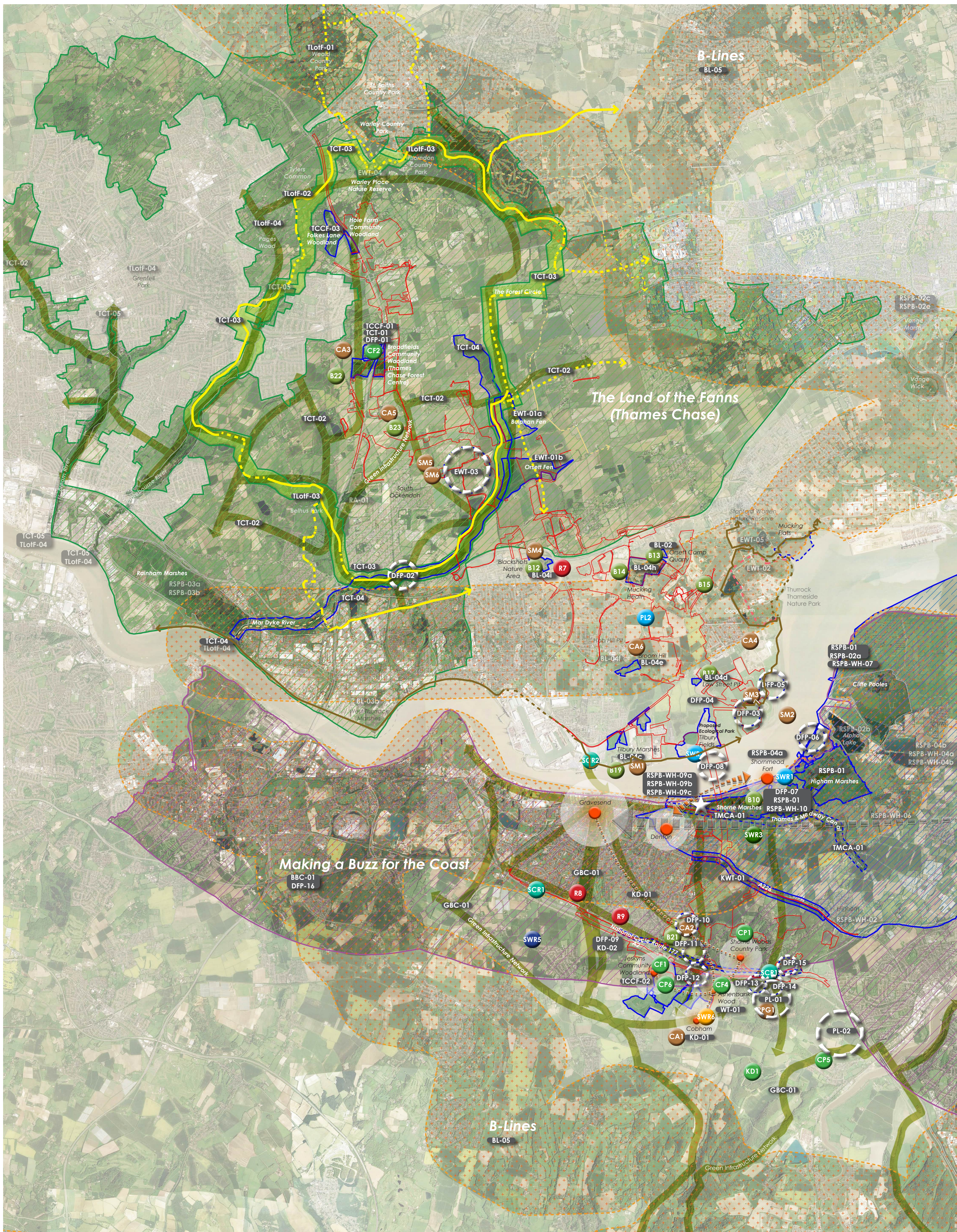
Project Title: Lower Thames Crossing Stakeholder Projects

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Drawing Title: STAKEHOLDER PROJECT IDENTIFICATION MAPPING (Sheet 2 of 2)

Status Information: For comment, Information, P02

Drawing Number: HE540039-CJV-GEN-GEN-DRA-LSU-00101



| Rev | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Purpose |
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|--|--|--|---|--|--|--|
| | KEY: Order Limits Project boundary NOTE: dashed line indicates approximate boundary Indicative project location | The Land of the Fanns Hoo Peninsula Making a Buzz for the Coast B-Lines | Out and About in Thames Chase and the Green Grid Forest Circle Strategy 'Link' Projects Proposed Cycling Network | ASELA ambitions, Thurrock Hatch Report (2021) and South Essex GBI Study Existing Primary Greenways Proposed Primary Greenways Existing Secondary Greenways Proposed Secondary Greenways Existing England Coast Path Proposed England Coast Path Short Term Proposed England Coast Path | Project Title: Lower Thames Crossing Stakeholder Projects Drawing Title: STAGE 3-NPS TIER 1 RECOMMENDED MITIGATION & TIER 2 OPPORTUNITIES (Sheet 1 of 2) | Scale: 1:45 000@A1 Copyright: *Contains Ordnance Survey data © Crown copyright and database right 2018 OS 100030649* Status: For comment Information Revision: PO2 Drawing Number: HE540039-CJV-GEN-GEN-DRA-LSC-03001 |
|--|--|--|---|--|--|--|

EXISTING GREEN INFRASTRUCTURE ASSETS

Parks and Open Space

- COUNTRY PARKS**
- CP1 Shorne Woods Country Park
 - CP2 Belhus Woods Country Park
 - CP3 Hornchurch Country Park
 - CP4 Thorndon Country Park
 - CP5 Ranscombe Farm Country Park
 - CP6 Jeskyns Country Park
 - CP7 Langdon Hills Country Park
- COMMUNITY FOREST**
- CF1 Jeskyns Community Forest
 - CF2 Thames Chase Community Forest
 - CF3 Harold Court Woods
 - CF4 Shorne and Ashenbank Woods
- VALLEY, PARK AND FARMLAND**
- V1 Ingrebourne Valley
 - V2 Shorne Village
 - F1 Ranscombe Farm
 - P1 Thong Lane Riverview Park
- AREA OF OUTSTANDING NATURAL BEAUTY**
- KD1 Kent Downs AONB
- FORMAL Recreation**
- R1 Stubbers Adventure Centre – Thames Community Centre
 - R2 Hornchurch Sports Centre
 - R3 Southern Valley Golf Course
 - R4 Upminster Golf Course
 - R5 Hartswood Golf Course
 - R6 Top Meadow Golf Course
 - R7 Ron Evans Memorial Field
 - R8 Cyclopark
 - R9 Roman Road open space

Recreation Corridors

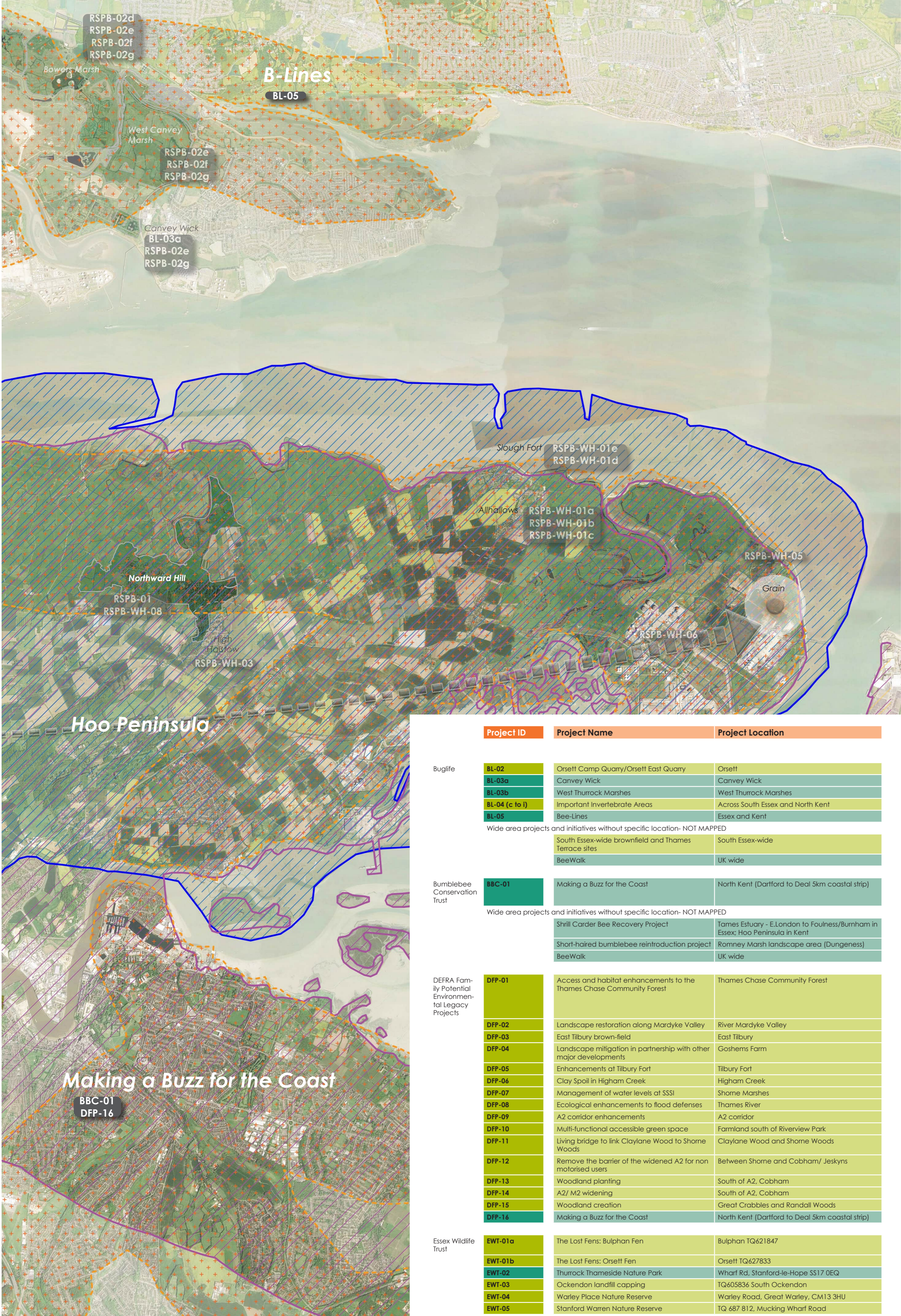
- STRATEGIC WALKING ROUTES**
- SWR1 Saxon Shore Way
 - SWR2 Thames Estuary Path
 - SWR3 Thames and Medway Canal
 - SWR4 London Loop
 - SWR5 Timeball and Telegraph Trail
 - SWR6 Damley Trail
- STRATEGIC CYCLING ROUTES**
- SCR1 National Cycle Route 177
 - SCR2 National Cycle Route 13
 - SCR3 National Cycle Route 1
 - SCR4 National Cycle Route 137
 - SCR5 National Cycle Route 136
 - SCR6 National Cycle Route 16
 - SCR7 National Cycle Route 125
 - SCR8 National Cycle Route 179
 - SCR9 National Cycle Route 17

Biodiversity

- INTERNATIONALLY DESIGNATED SITES**
- B1 Thames Estuary and Marshes Ramsar Site, Special Protection Area (SPA), and Site of Special Scientific Interest (SSSI)
- NATIONALLY DESIGNATED SITES**
- B2 River Thames/Thames Estuary recommended Marine Conservation (MCZ)
 - B3 Kent Downs Area of Outstanding Natural Beauty (AONB)
 - B4 Wangman's Wood and Benholes SSSI and Ancient Woodland
 - B5 Rainham Marshes SSSI and RSPB reserve
 - B6 Mucking Flats and Marshes SSSI
 - B7 Shorne and Ashenbank Woods SSSI, Ancient Woodland, Woodland Trust Reserve, and Country Park
 - B8 Cobham Woods SSSI and Ancient Woodland and Ranscombe Farm Plantlife reserve and Country Park
- COUNTY LEVEL DESIGNATED SITES**
- B10 Shorne and Higham Marshes Local Wildlife Site (LWS) and RSPB reserve
 - B11 Mar Dyke River corridor LWS
 - B12 Blackbats Nature Area LWS
 - B13 Orsett Camp Quarry LWS
 - B14 Orsett Golf Course and Mucking Heath LWS
 - B15 Littleton Pit and Low Street Pit LWSs
 - B16 Broom Hill and West Tilbury Hall LWSs
 - B17 Low Street Pit LWS
 - B18 Goshems Farms LWS
 - B19 Tilbury Marshes LWS
 - B20 Codham Hall Woods, Hobbs Hole and Warley Hall Wood LWSs and Ancient Woodlands
 - B21 Clay Lane Woods Ancient Woodland
 - B22 Cranham Marsh Nature Reserve (LNR) and Ancient Woodland
 - B23 North Ockendon Pit Metropolitan SIN

Heritage

- SCHEDULED MONUMENTS**
- SM1 Tilbury Fort
 - SM2 Coalhouse Fort
 - SM3 Coalhouse Battery
 - SM4 Crop Mark Complex, Orsett
 - SM5 Galehouse and moat of South Ockenden Old Hall
 - SM6 Roman barrow South Ockenden Hall
- REGISTERED PARK AND GARDENS**
- RPG1 Cobham Hall Registered Park and Garden
- CONSERVATION AREAS**
- CA1 Cobham
 - CA2 Thong
 - CA3 Cranham Conservation Area
 - CA4 East Tilbury
 - CA5 North Ockendon
 - CA6 West Tilbury



| Project ID | Project Name | Project Location |
|--|--|--|
| GBC-01 | Strategic Green Infrastructure Network | Gravesham, Kent |
| TCCF-01 | Thames Chase Community Forest | Broadfields (Thames Chase Forest Centre) |
| TCCF-02 | Thames Chase Community Forest | Jeskyns Community Woodland |
| TCCF-03 | Thames Chase Community Forest | Folkes Lane Community Woodland |
| KD-01 | Improvements to NMI connectivity between existing GI network | Gravesend to Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park |
| KD-02 | National Cycle Route 177 improvements | 177 along the north side of the A2 from the Henhurst roundabout in the west to J1 |
| Projects outside layout boundary- NOT MAPPED | | |
| | Pedestrian & cycle connection over/under the A2 near Guston, Dover | Guston, Dover |
| KWT-01 | Roadside Nature Reserves | A226 by the Church/Kent wide |
| Projects with various sites, specific locations not known- NOT MAPPED | | |
| PL-01 | Cobham Hall Registered Park and Garden | Medway |
| PL-02 | Ranscombe Farm Plantlife Reserve and Country Park | Medway |
| RA-01 | Rural Arisings, habitat creation / re-mediation | South Ockendon |
| RSPB-01 | North Kent Marshes breeding wader project | Shorne Marshes, Higham Marshes, Cliffe Pools, Northward Hill and other sites on the Isle of Sheppey and Seasalter (Whitstable) |
| RSPB-02a | Cliffe Pools Enhancement | nr Cliffe, Kent |
| RSPB-02b | Bretts Alpha lake enhancement project | nr Cliffe, Kent |
| RSPB-02c | Island creation at Vange Marsh for nesting and wintering waders | Vange, Essex |
| RSPB-02d | Electrical supply and electric pumps to Bowers Marsh | Basildon, Essex |
| RSPB-02e | Fencing at Bowers Marsh, Vange Marsh, West Canvey Marsh and Canvey Wick | Basildon, Essex |
| RSPB-02f | Anti Predator Fencing at Bowers Marsh and West Canvey Marsh | Basildon, Essex |
| RSPB-02g | Visitor infrastructure at Bowers Marsh, West Canvey and Canvey Wick | Basildon/Canvey, Essex |
| RSPB-03a | Rainham Marshes breeding wader project | Between Purfleet and Rainham |
| RSPB-03b | Visitor infrastructure at Rainham Marshes | Between Purfleet and Rainham |
| RSPB-04a | Shormead Fort Interpretation | Shorne Marshes |
| RSPB-04b | Hydrology at Cliffe Pools (Black Barn to Coast-guards) | Cliffe |
| RSPB-WH-01a | Gross Park Country Park | Allhallows |
| RSPB-WH-01b | Bessie's Lane - an ancient royal thoroughfare | Allhallows |
| RSPB-WH-01c | Slough Fort Visitor Cafe, installation of Kitchen for a Cafe at Slough Fort | Allhallows |
| RSPB-WH-01d | Reform and remodel the Glacis of Slough Fort | Allhallows |
| RSPB-WH-01e | Create an interpretive display for the Hoo defences in the Slough Fort Wing Battery Magazine | Allhallows |
| RSPB-WH-02 | Restoration of the Larkin Monument and surrounding area on Telegraph Hill, Higham. | Higham |
| RSPB-WH-03 | To develop wild flower meadow | High Halstow |
| RSPB-WH-04a | Cliffe Village and its Hinterland | Cliffe |
| RSPB-WH-04b | Steeping Stones; Dead End Paths - Cliffe cul-de-sac paths a destination not a dead end. | Cliffe |
| RSPB-WH-05 | Re-discovering The Port Victoria Line and the Town that never was. | Grain |
| RSPB-WH-06 | William Hogarth Walking Trail | Gravesend to Grain |
| RSPB-WH-07 | Lapwing Liffeline at Cliffe Pools | Cliffe Pools |
| RSPB-WH-08 | Increasing invertebrate food sources for lapwing chicks. | Northward Hill |
| RSPB-WH-09a | Linking Denton and Shorne Mead Fort | Denton to Shorne coastal area |
| RSPB-WH-09b | Ways to Wellbeing | Denton to Shorne coastal area |
| RSPB-WH-09c | Young Persons interpretation of military heritage and connecting Denton | Denton to Shorne coastal area |
| RSPB-WH-10 | Hydrology of Shorne Marshes to establish areas of open water and reed-bed | Shorne Marshes |
| Wide area projects and initiatives without specific location NOT MAPPED | | |
| | Operation Turtle Dove | Essex and Kent |
| | Acts of Resistance | Hoo Peninsula |
| | Art In Churches | Hoo Peninsula |
| | Linear habitats for rare bumblebees | North coastal area of Hoo Peninsula |
| | Mapping Skylarks | Hoo Peninsula |
| | The Sound of Hoo | Hoo Peninsula |
| | Celebration of local heritage by music, written and performed by the children of The Hoo. | Hoo Peninsula |
| | Community volunteering - reducing rural isolation | Hoo Peninsula |
| | Planting the Hoo | Hoo Peninsula |
| | Recording and sharing soldiers' graffiti at Shornemead Fort | Hoo Peninsula |
| | Changing Industries of the Peninsula | Hoo Peninsula |
| | The Changing Defences of the Hoo Peninsula | Hoo Peninsula |
| | The Hoo Stop Line | Hoo Peninsula |
| | Great Expectations - The orchard Legacy | Hoo Peninsula |
| | Yellow wagtail and corn bunting survey of the Hoo Peninsula | Hoo Peninsula |
| | Fought to Fort - Palmerston's Follies | Hoo Peninsula |
| | Project Management | Hoo Peninsula |
| | Brown Hares on the Hoo Peninsula | Hoo Peninsula |
| | Conserving Nightingales on the Hoo | Hoo Peninsula |
| | Farmland advisory work | Hoo Peninsula |
| | Wet grassland habitat restoration 1 NOT ON RSPB LAND | Hoo Peninsula |
| | Wet grassland habitat restoration 2 NOT ON RSPB LAND | Hoo Peninsula |
| | Histories of the Hoo Peninsula | Hoo Peninsula |
| | The Trench | Hoo Peninsula |
| TMCA-01 | Dredge canal from Mark Lane to Shorne | From Mark Lane, Gravesend to Church Street, Higham, Kent |
| | ★ suggested location for TMCA building | Eastcourt Marshes |
| TCT-01 | Thames Chase Forest Centre | Upminster, RM14 3NS |
| TCT-02 | Out and About in Thames Chase and the Green Grid | Thurrock and the LB Havering |
| TCT-03 | The Forest Circle | Thurrock and the LB Havering |
| TCT-04 | South Essex Catchment Partnership (Mardyke Valley) | Mardyke Valley |
| TCT-05 | Riding, Beam & Ingrebourne Catchment Partnership (LB Havering and Brentwood) | LB Havering |
| Tloaf-01 | A1.2 - Community Tree Nursery | Potentially - Weald Country Park |
| Tloaf-02 | A2.2 - Low Nutrient Habitats | Tyers Common |
| Tloaf-03 | A3.2 - Connecting Historic Landscapes | Belhus Park Thorndon Country Park |
| Tloaf-04 | A3.1 - River Catchments | River Rom, River Ingrebourne, River Mardyke, Grenfell Park, Pages Wood |
| Wide area projects and initiatives without specific location- NOT MAPPED | | |
| | A1.1 - Landscape Management Plan | The Land of the Fanns |
| | A2.1 - Woodland, Grassland and Hedgerows | The Land of the Fanns |
| | A2.3 - Rediscovering the Lost Fens | Location to be confirmed |
| | D1.1 - Walking the Fanns (via Thames Chase Walking Group) | The Land of the Fanns |
| | D2.2 - Arts Festival | The Land of the Fanns |
| WT-01 | Ashenbank Wood | Ashenbank Wood |

KEY:

- Order Limits
- Project boundary
- NOTE: dashed line indicates approximate boundary
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- Existing Primary Greenways
- Proposed Primary Greenways
- Existing Secondary Greenways
- Proposed Secondary Greenways
- Existing England Coast Path
- Proposed England Coast Path
- Short Term Proposed England Coast Path

highways england

Scale: 1:45 000@A1

Project Title: Lower Thames Crossing Stakeholder Projects

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Revision: P02

Revision History:

| No. | Drawn By | Drawn Date | Checked By | Checked Date | Approved By | Approved Date | Revision Reason |
|-----|----------|------------|------------|--------------|-------------|---------------|-----------------|
| | | | | | | | |

Drawing Title: STAGE 3-NPS TIER 1 RECOMMENDED MITIGATION & TIER 2 OPPORTUNITIES (Sheet 2 of 2)

Subsidiary For comment: Information

Drawing Number: HE540039-CJV-GEN-GEN-DRA-LSOC-0001

APPENDIX III: RECOMMENDATIONS



APPENDIX III - IMPLEMENTATION RECOMMENDATION TABLES

The following tables set out the Implementation Recommendations which demonstrate how and where each unique GI Project ID and GI Site which has been recommended as TIER 1 and TIER 2 mitigation has been implemented providing specific cross -reference to the relevant Environmental Masterplan figures and sections and Design Principle references which form part of the current LTC Project proposals.

| PROJECT ID/GI REFERENCE | GI PROJECT DESCRIPTION | LEAD ORGANISATION/ PROMOTER | PLANNED/ PROPOSED PROJECT WITHIN LTC SCHEME | DCO APPLICATION DOCUMENT REFERENCE |
|-------------------------|------------------------|-----------------------------|---|------------------------------------|
|-------------------------|------------------------|-----------------------------|---|------------------------------------|

TIER 1 PROJECTS

| | | | | |
|--|--|--|---|--|
| Shorne Woods Country Park (CP1) Semi-natural ancient woodlands and historic parkland within the Kent Down AONB. A popular Country park, featuring an eco-friendly visitor centre and café, space for leisure activities, and picnic and play areas | <p>Improvements to NMU Connectivity between existing GI Network & NCR 177. Kent Downs AONB – identified potential for a Continuous NMU path link between Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park, which ideally should link to easy off-road access to/ from Gravesham.</p> <p>Provide safe off-road cycleways which encourage direct access to Shorne Woods Country Park.</p> | Kent Country Council and Kent Downs AONB | <p>Where the LTC route potentially impacts on Shorne Woods Country Park, provision for environmental mitigation included within the development boundary.</p> <p>Green bridges crossing the A2 corridor are proposed to have enhanced NMU capability to provide better access to Shorne Country Park to the south and vice versa.</p> | <p>Design Principles</p> <p>PEO.09 Recreational looping routes between Shorne Woods Country Park, Ashenbank Wood and Jeskyns Community Woodland.</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S1.06 Reflect surrounding landscape character</p> <p>S1.08 New Woodland east of Shorne Woods Country park to provide links with Shorne Woods and Great Crabbles Wood.</p> <p>S1.09 Retaining structures and bridge abutments.</p> <p>S1.13 Planting of NCR177 visual screening from Shorne Woods</p> <p>S2.02 Looping walks connecting recreational areas – new Green Bridge</p> <p>S2.04 Thong Lane Green Bridge north</p> <p>S3.13 NG7 Diversions - recreational loop that connects Gravesend with Shorne Woods Country Park</p> <p>STR.08 Green bridges</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
|--|--|--|---|--|

| PROJECT ID/GI REFERENCE | GI PROJECT DESCRIPTION | LEAD ORGANISATION/ PROMOTER | PLANNED/ PROPOSED PROJECT WITHIN LTC SCHEME | DCO APPLICATION DOCUMENT REFERENCE |
|-------------------------|------------------------|-----------------------------|---|------------------------------------|
|-------------------------|------------------------|-----------------------------|---|------------------------------------|

TIER 1 PROJECTS

| | | | | |
|---|---|----------------------------|--|--|
| <p>Jeskyns Country Park (CP6) Public greenspace which includes areas for children's play and picnicking, as well as footpaths and cycleways through woodlands, meadows and orchards.</p> | <p>Opportunity to remove the 'barrier' of the widened A2 for non-motorised users between Shorne and Cobham/ Jeskyns.</p> | <p>Forestry Commission</p> | <p>Green Bridges across the A2 already part of the scheme along with an east- west route on a realigned NCR177 south of HS1.</p> | <p>Design Principles</p> <p>PEO.09 WCHs South of the Thames, enable recreational looping routes around the new junction S1.04 Brewers Road green bridge and Thong Lane green bridge south S1.05 NCR177 Realignment, improve the user experience, maintain east-west connectivity as both a recreational and commuter route for cyclists STR.08 Green Bridges</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |
| <p>Jeskyns Community Woodland (CF1) 360 acres of greenspace that has been specially created by the Forestry Commission. With woodlands, meadows, orchards and areas for wildflowers and shelters for birds.</p> | <p>Suitable habitat proposed to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.</p> | <p>Forestry Commission</p> | <p>Where the LTC route potentially impacts on Jeskyns Community Woodland provision for environmental mitigation included within the development boundary. The detailed scheme for ecological and landscape mitigation will form part of the integrated design for DCO.</p> | <p>Design Principles</p> <p>S1.08 New Woodland east of Shorne Woods Country Park. The design shall be developed through collaboration and engagement with Shorne Woods Country Park, Natural England, Kent Downs AONB and relevant local stakeholders.</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |

| PROJECT ID/GI REFERENCE | GI PROJECT DESCRIPTION | LEAD ORGANISATION/ PROMOTER | PLANNED/ PROPOSED PROJECT WITHIN LTC SCHEME | DCO APPLICATION DOCUMENT REFERENCE |
|-------------------------|------------------------|-----------------------------|---|------------------------------------|
|-------------------------|------------------------|-----------------------------|---|------------------------------------|

TIER 1 PROJECTS

| | | | | |
|---|---|---|---|--|
| <p>Thames Chase Community Forest – Centre and Broadfields. (TCCF-01, TCT-01, DFP-01) Broadfields is a community woodland surrounding the Thames Chase Forest Centre, Formerly called Broadfields Farm, the Forestry Commission site is home to a variety of surfaced trails, ponds, meadows and an orchard planted with traditional Essex apple and pear varieties.</p> | <p>Opportunities to improve site connectivity as the site becomes more fragmented – includes within site (as site is split in half with M25) and connections from site to wider recreation network. Explore opportunities to at least maintain the current size of Broadfields- the FC could potentially manage land adjacent to Broadfields that HE are required to purchase as part of the LTC works. Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required.</p> | <p>Thames Chase Trust (under Forestry Commission)</p> | <p>New footbridge planned to reconnect both sides of the Broadfields forest across the M25.</p> | <p>Design Principles</p> <p>PEO.10 WCHs North of the Thames: Recreational Loop</p> <p>STR.05 Project Enhanced Structures: Bridge Design</p> <p>STR.06 Project Enhanced Structures: Consistent Design approach</p> <p>S12.08 North Road WCH Route</p> <p>S14.03 Planting to Thames Chase Community Forest</p> <p>S14.04 Thames Chase Community Forest Bridge</p> <p>S14.05 Community Engagement at Thames Chase Community Forest</p> <p>S14.06 Earthworks within Thames Chase Community Forest</p> <p>S14.08 Path/Water main Diversion</p> <p>S14.11 Dennis Road WCH track</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
|---|---|---|---|--|

| PROJECT ID/GI REFERENCE | GI PROJECT DESCRIPTION | LEAD ORGANISATION/ PROMOTER | PLANNED/ PROPOSED PROJECT WITHIN LTC SCHEME | DCO APPLICATION DOCUMENT REFERENCE |
|-------------------------|------------------------|-----------------------------|---|------------------------------------|
|-------------------------|------------------------|-----------------------------|---|------------------------------------|

TIER 1 PROJECTS

| | | | | |
|--|--|---|---|--|
| <p>Shorne and Ashenbanks Woods (CF4)</p> <p>Important collection of veteran trees, high dead wood habitat interest which supports an obligate saproxylic beetle assemblage of national importance</p> <p>The whole wood is subject to a Tree Preservation Order.</p> | <p>Living bridge to link Claylane Wood to Shorne Woods</p> | <p>Kent Country Council and Kent Downs AONB</p> | <p>Appropriate planting and landscape design will be developed and integrated into the LTC design within the A2 junction area.</p> <p>To provide a high-quality experience for users crossing the bridges using vegetation and woodland planting. To establish and manage species that are suitable to the constrained growing conditions and soil depth on the green bridge. Variations in soil depth on the bridge can provide diversity in planting species and heights.</p> | <p>Design Principles</p> <p>PEO.09 WCHs South of the Thames</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S2.03 Woodland planting around slip road S2.04</p> <p>Thong Lane Green Bridge north</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
|--|--|---|---|--|

| PROJECT ID/GI REFERENCE | GI PROJECT DESCRIPTION | LEAD ORGANISATION/ PROMOTER | PLANNED/ PROPOSED PROJECT WITHIN LTC SCHEME | DCO APPLICATION DOCUMENT REFERENCE |
|-------------------------|------------------------|-----------------------------|---|------------------------------------|
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TIER 1 PROJECTS

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| Kent Downs AONB (KD-01) | Improvements to NMU connectivity between existing GI network at Gravesend to Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park. National Cycle Route 177 improvements along the north side of the A2 from the Henhurst roundabout in the west to Junction 1. | Kent Country Council and Kent Downs AONB | Planned as part of the non-motorised user (NMU) strategy, recreational loops around the A2/LTC junction and southern portal that link Gravesend with Jeskyns, Ashenbank Wood and Shorne Country Park. | <p>Design Principles</p> <p>STR.03 Project Enhanced Structures: Bridge Design</p> <p>STR.06 Project Enhanced Structures: Consistent design approach</p> <p>STR.08 Green Bridges</p> <p>S1.01 Woodland north of the A2/M2 Corridor</p> <p>S1.02 Planting to the South of the A2/M2 Corridor</p> <p>S1.03 Associated works in the A2/M2 Corridor</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S1.06 Reflect surrounding landscape character</p> <p>S1.07 Planting Palette within the Kent Downs AONB and its setting</p> <p>S2.02 Looping walks connecting recreational areas</p> <p>S2.10 Retaining Wall Materials</p> <p>S3.15 Woodland Planting North of Brummelhill Wood</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
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| Strategic Green Infrastructure Network (Gravesham) (GBC-01) Local Plan Policy | The Strategic Green Infrastructure Network shows existing and proposed long distance walking and cycling routes; movement corridors; and Biodiversity Opportunity Areas. The latter includes: major green spaces, e.g. Shorne Wood Country Park, Jeskyns; strategic green corridors, | Gravesham Borough Council | Planned as part of the NMU design and environment mitigation. to have a heavy green bridge at Thong Lane crossing the LTC mainline. Additional green bridges have also been proposed where Thong Lane and Brewers Road cross the A2. With improvements to a realigned NCR177. | <p>Design Principles</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S2.04 Thong Lane Green Bridge</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |
| Out and About in the Green Grid (Thurrock/ Havering/ Essex) (TCT-02) | Aims to connect green spaces to provide linkages for people and wildlife. Landscape-scale mitigation. | Thames Chase Trust (under Forestry Commission) | To be provided, as part of the non-motorised user (NMU) strategy | <p>Design Principles</p> <p>PEO.10 WCHs North of Thames: Recreational Loop</p> <p>S12.08 North Road WCH Route</p> <p>S12.09 Mardyke River Link</p> <p>S14.04 Thames Chase Community Forest Bridge</p> <p>S14.11 Dennis Road WCH track</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |

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| <p>Forest Circle – Thames Chase Trust (Thurrock/ Havering) (TCT-03) The forest circle is made up of strategic walking and cycling routes and valley, parks and farmland which provide habitats and biodiversity.</p> | <p>Landscape-scale mitigation response involving many TCCF partners- public access and connectivity.</p> | <p>Thames Chase Trust (under Forestry Commission) plus Thurrock Council and LB Havering</p> | <p>To be provided as part of the non-motorised user (NMU) strategy., LTC plans to improve access to the Forest Circle by improving the quality and connection of FP135/FP136 to the Mardyke (BR219) and some limited improvements to the Mardyke bridleway itself around the LTC alignment.</p> | <p>Design principles</p> <p>S12.08 North Road WCH Route</p> <p>S12.09 Mardyke River Link</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |
| <p>Land of the Fanns Mardyke Valley (TLoTF-01 - 05) Historic Fen landscape with woodland, lowland grassland and hedgerows, with improvements to better connect wildlife assets.</p> | <p>Multiply different projects with the Land of the Fanns, that all want to improve connection to these areas. List of projects below – A1.2-Community Tree Nursery A2.2- Low Nutrient Habitats A3.2- Connecting Historic Landscapes A3.1- River Catchments A1.1 Landscape Management Plan A2.1 Woodland, Grassland and Hedgerows A2.3 Rediscovering the Fens D1.1 Walking the Fanns (Via Thames Chase Walking Group)</p> | <p>The Land of the Fanns Landscape Partnership Scheme</p> | <p>Planned as part of the NMU strategy. to address severance and increase links to the Mardyke River and Forest Circle. Better access to the fenland and Mardyke by connecting existing PROW with new shared use tracks. See above.</p> | <p>Design principles</p> <p>S12.01 Mardyke Valley Landscape Approach</p> <p>S12.08 North Road WCH Route</p> <p>S12.10 Linear Woodland adjacent land fill site</p> <p>S12.09 Mardyke River Link</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |

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| <p>Thames Estuary Path (SWR2) Strategic walking route - 7 miles walk between Tilbury Town and East Tilbury Station, with multiply points of interest, for example, Tilbury and Coalhouse Fort.</p> | <p>Improvements to Thames Estuary Path – connections to South Essex Marshes Enhanced link between Tilbury Fort and Coalhouse Fort.</p> | <p>Thurrock Council</p> | <p>Interpretation boards and signage, coordinated with those for Tilbury Fields, shall be provided along Two Forts Way, highlighting the local heritage features and directions to the new placemaking features</p> | <p>Design Principles</p> <p>S9.05 Heritage interpretation along Two Forts Way</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |
| <p>Timeball and Telegraph Trail (SWR5) Strategic walking route. Trail is a 97 mile walk between Deal and Greenwich</p> | <p>Maintain connectivity and wider links to GI assets.</p> | <p>Gravesham Borough Council and Medway Council</p> | <p>Planned, green bridge at Thong Lane over A2/M2. Planned as part of the NMU strategy multiple links and improvements to the NCR177 realignment.</p> | <p>Design Principles</p> <p>S1.13 Planting of NCR177</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S1.05 NCR177 Realignment</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |

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| <p>Darnley Trail (SWR6) Strategic Walking route, linking Jeskyns with neighbouring sites and countryside.</p> | <p>Maintain connectivity and wider links to GI assets.</p> | <p>Thames Chase Community Forest – Jeskyns Community Woodland Forest Enterprises England</p> | <p>Planned as part of the NMU strategy multiple links and improvements to the NCR177 realignment. Includes upgrading route of existing footpath to shared surface standard.</p> | <p>Design Principles S1.13 Planting of NCR177 S1.05 NCR177 Realignment The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
| <p>NCR 177 (SCR1) Strategic cycling route -National Cycle Network is currently open in two sections: one between Northfleet and Rochester, and another between Downswood and the western edge of Mote Park.</p> | <p>Continuous NMU path link between Jeskyns, Ashenbank Wood, Cobham and Shorne Country Park, which ideally should link to easy off-road access to/ from Gravesham</p> | <p>Gravesham Borough Council, Medway Council and Kent Downs AONB</p> | <p>Planned as part of the NMU strategy multiple links and improvements to the NCR177 realignment.</p> | <p>Design Principles S1.13 Planting of NCR177 S1.05 NCR177 Realignment The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |

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| <p>Hoford Road (PL2) Protected lane, which has landscaping and historic values, with reduced traffic numbers, to preserve the historic operation of this lane.</p> | <p>Development proposals that would adversely affect the physical appearance of the protected lanes of historic or landscape value or give rise to a material increase in the amount of traffic using these lanes and roads will not be permitted.</p> | <p>Essex County Council and Thurrock Council</p> | <p>Planned green bridge at Hoford Road with Ecology, NMU, and Green Infrastructure benefits, for a joint mitigation response. Though an important NMU route, no widening or segregation for NMU's is recommended in order to maintain the historic lane's character.</p> | <p>Design Principles</p> <p>S10.03 Landscape Integration of Hoford Road Green Bridge</p> <p>S10.04 ScreenPlanting</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
| <p>Kent Downs Area of Outstanding Natural Beauty (AONB) Nationally Designated Site (B3)</p> | <p>New central reserve woodland planting to help with connectivity for mobile species and mitigate impacts to the Kent Downs AONB</p> | <p>Kent Downs AONB and Kent Country Council</p> | <p>Planned as part of the LTC environmental mitigation strategy, in this area which will focus on maintaining connectivity between habitats, whilst maintaining historic character and setting of the AONB. This will be achieved through an appropriate and coherent landscaping, planting and ecology mitigation scheme.</p> | <p>Design Principles</p> <p>STR.03 Project Enhanced Structures: Bridge Design</p> <p>STR.06 Project Enhanced Structures: Consistent design approach</p> <p>STR.08 Green Bridges</p> <p>S1.01 Woodland north of the A2/M2 Corridor</p> <p>S1.02 Planting to the South of the A2/M2 Corridor</p> <p>S1.03 Associated works in the A2/M2 Corridor</p> <p>S1.04 Brewers Road and Thong Lane Over A2 Overbridges</p> <p>S1.06 Reflect surrounding landscape character</p> <p>S1.07 Planting Palette within the Kent Downs AONB and its setting</p> <p>S2.02 Looping walks connecting recreational areas</p> <p>S2.10 Retaining Wall Materials</p> <p>S3.15 Woodland Planting North of Brummelhill Wood</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |

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| <p>Shorne and Ashenbank Woods SSSI, Ancient Woodland, Woodland Trust Reserve, and Country Park (B7)</p> <p>DFP-11: Living bridge to link Claylane Wood to Shorne Woods DFD-13: Woodland Planting, B7, B21</p> <p>Large area of ancient semi-natural broad-leaved forest, rich in flora and fauna, is set in the Kent Downs AONB and part of it is a SSSI</p> | <p>Adapt existing Thong Lane bridge to create light-weight green bridge to link Ashenbank Woods/ Jeskyns Community Woodland to Shorne Woods. (Gravesham)</p> | <p>Gravesham Borough Council and Kent Downs AONB</p> | <p>The proposed landscape and ecological mitigation include two light-weight green bridges crossing the A2 corridor at Brewers Road and Thong Lane.</p> <p>An additional heavy weight green bridge is proposed on Thong Lane to cross the LTC mainline, maintaining a link/ access between Riverside Park and Shorne and Ashenbank Woods SSSI.</p> | <p>Design Principles</p> <p>PEO.09 WCHs South of the Thames</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S2.03 Woodland planting around slip road</p> <p>S2.04 Thong Lane Green Bridge</p> <p>STR.08 Green Bridges</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
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| <p>Mardyke river corridor LWS (B11) River corridor comprises extensive riparian and grassland areas which form an important wildlife corridor and provide habitat for water vole and other noteworthy species.</p> | <p>Landscape restoration along Mardyke Valley</p> | <p>Thurrock Council</p> | <p>Planned as part of habitat and landscape enhancement along the Mardyke Valley.</p> | <p>Design Principles</p> <p>PEO.10 WCHs North of the Thames: Recreational Loop STR.04 Project Enhanced Structures: Bridge Design S12.01 Mardyke Valley Landscape Approach S12.03 Mardyke and Orsett Fen Viaduct Design S12.04 BR219: Mardyke Trail Under the Viaduct S12.05 Height of the Mardyke and Orsett Fen Viaducts S12.06 Wetland Habitat Creation and water vole habitat S12.07 Watercourse enhancements S12.09 Mardyke River Link</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
| <p>Blackshots Nature Area LWS (B12) A large area of rough grassland supporting an important invertebrate population, as well as providing potential nesting habitat for noteworthy bird species such as skylark.</p> | <p>Opportunity to identify key areas for mitigation works to best contribute to landscape-scale conservation of invertebrates</p> | <p>Thurrock Council</p> | <p>The Ron Evans Memorial Field (Blackshots Nature Reserve) and its vegetation shall be retained as far as reasonably practicable. To integrate new areas of planting into its setting, scrub and species-rich grassland shall be planted on the earthworks slopes and within islands of the A13 junction within the existing boundary of Blackshots Nature Reserve.</p> | <p>Design Principles</p> <p>S11.06 Ron Evans Memorial Community Field</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |

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| <p>Orsett Golf Course and Mucking Heath Local Wildlife Scheme (B14) Mucking Heath LWS covers the site of Orsett Golf course, which was constructed on the old heath.</p> | <p>Opportunity to identify key areas for mitigation works to best contribute to landscape-scale conservation of invertebrates</p> | <p>Thurrock Council</p> | <p>Planned green bridge proposed for Hoford Road, which runs adjacent to the Linford Pitt LWS and Orsett Golf Course. This would maintain a green connection over the LTC mainline site. In addition, specific measures such as installation of bat boxes in the local area has also been proposed.</p> | <p>Design Principles</p> <p>S10.03 Landscape Integration of Hoford Road Green Bridge</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
| <p>Linford Pit and Low Street Pit LWS (B15, B17) Brownfield site supports an important invertebrate fauna and lies within a very significant cluster of such sites. Low Street Pit is a disused, wooded, sand and gravel pit situated on the regionally important Thames terrace gravels.</p> | <p>Opportunity to identify key areas for mitigation works to best contribute to landscape-scale conservation of invertebrates</p> | <p>Thurrock Council</p> | <p>Planned mitigation proposals will seek to offset the losses at Low Street Pitt at a suitable alternative site.</p> <p>A green bridge is proposed for Hoford Road, which runs adjacent to the Linford Pitt LWS and Orsett Golf Course. This would maintain a green connection over the LTC mainline site. In addition, specific measures such as installation of bat boxes in the local area has also been proposed.</p> | <p>Design Principles</p> <p>S10.03 Landscape Integration of Hoford Road Green Bridge</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |

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| <p>Goshems Farms LWS (B18) This former landfill site supports two important species populations: the nationally rare Red Data Book plant Stinking Goosefoot and the hornet robberfly.</p> | <p>Opportunity to identify key areas for mitigation works to best contribute to landscape-scale conservation of invertebrates</p> | <p>Thurrock Council</p> | <p>The land will primarily be for ecological mitigation (to mitigate the loss of Goshems Farm LWS which hosted a nationally significant population of invertebrates) and the provision of a park/public open space.</p> | <p>Design Principles S9.02 Tilbury Fields The landscape shall be designed (in consultation with Natural England) so that public access to the informal footpaths and viewing points would be appropriately screened to prevent significant visual intrusion to waterbirds using the Thames estuary.</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan,</p> |
| <p>Codham Hall Woods, Hobbs Hole and Warley Hall Wood LWSs and Ancient Woodlands (B20) Fragmented blocks of ancient woodland at the northern end of the proposed scheme.</p> | <p>Brentwood Local Plan designation</p> | <p>Brentwood Borough Council</p> | <p>The detail design of nitrogen deposition compensation planting shall retain vistas from footpath 272_110 west of the B186 Great Warley Street above Hole Farm, towards distant hills within Kent AONB to the south-east and in the direction of Codham Hall Wood to the south-west. Refer to Viewpoint N-Dep-RV-10 on Figure 7.16</p> | <p>S14.17 Retention of vistas near Representative Viewpoint N-Dep-RV-10</p> <p>S14.18 Retention of vista near Representative Viewpoint N-Dep-RV-11</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan</p> |

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| Clay Lane Woods Ancient Woodland (B21) Block of ancient woodland and associated ground flora used for recreation. | Living bridge to link Claylane Wood and Shorne Woods with would also ensure the public right of way is maintained and help with landscape mitigation | Gravesham Borough Council | Planned as part of the environmental mitigation through landscaping, earthworks and ecology. Bridge also widened as part of NMU strategy to use it as a "hub" for linking routes around the junction and the portal. | Design Principles S2.04 Thong Lane Green Bridge STR.08 Green Bridges The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan. |
| Tilbury Fort (SM1) Schedule Monument | Joined opportunities with Historic England to deliver ecological (invertebrate), access (England coast path) and historic monument enhancements at Tilbury Fort | Thurrock Council and Heritage England | Wider opportunities as part of Tilbury Fields. Including new links via Two Forts Way. | Design Principles S9.02 Tilbury Fields The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan. |
| Coalhouse Fort (SM2) Schedule Monument | Enhancement of the riverscape between Tilbury and Coalhouse Fort. | Thurrock Council and Heritage England | Wider opportunities as part of Tilbury Fields. Including new links via Two Forts Way. | Design Principles As for SM1 |

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| Thong Village (CA2) Conservation Area | Designated Conservation Area within the Gravesham Local Plan | Gravesham Borough Council | <p>Planned as part of scheme environmental mitigation through landscaping, earthworks.</p> <p>Planned green bridges at each end of Thong Village.</p> | <p>Design Principles</p> <p>S1.04 Brewers Road green bridge and Thong Lane green bridge south</p> <p>S2.04 Thong Lane Green Bridge</p> <p>STR.08 Green Bridges</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
| North Ockendon Village (CA5) Conservation Area | Designated Conservation Area within the Thurrock Local Plan | Thurrock Council | <p>Planned as part of scheme environmental mitigation through landscaping and earthworks.</p> <p>Proposed green bridge over North Road.</p> | <p>Design Principles</p> <p>STR.08 Green Bridges</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |

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| The Lost Fens: Bulphan Fen & Orsett Fen (EWT-01a & 01b) | Restoration of area as an extensive wetland landscape. | Essex Wildlife Trust and the Land of Fanns (Under Thames Chase Trust) | Proposed as scheme development, further details to be developed as part of the EMP and Design Principles. Proposed creation of Fen Habitat on either side of LTC. Proposed creation of Fen Habitat on either side of LTC | <p>Design Principles</p> <p>S12.06 Wetland Habitat Creation including water vole habitat</p> <p>S12.07 Watercourse enhancements S12.09 Mardyke River Link</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
| Making a Buzz for the Coast (DFP-16, BBC-01) | Making a Buzz for the Coast North Kent (Dartford to Deal 5km coastal strip) | <p>Bumblebee Conservation Trust and Buglife</p> <p>Gravesham Borough Council and Thurrock Council</p> | <p>Proposed to include relevant pollinator species within planting mixes for grasslands within verges, cuttings, embankments and adjacent mitigation areas.</p> <p>Proposed to be included within the EMP and Design Principle.</p> | <p>Design Principles</p> <p>LSP.11 Planting Palettes</p> <p>LSP.20 Wildflower Planting on earthworks.</p> |

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| <p>B-Lines & wider connectivity through hedgerow planting (BL-05)</p> | <p>Bee-Lines Essex and Kent</p> | <p>Bumblebee Conservation Trust and Buglife</p> <p>Gravesham Borough Council</p> | <p>Proposed to include relevant pollinator species within planting mixes for grasslands within verges, cuttings, embankments and adjacent mitigation areas</p> <p>Proposed to be included within the EMP and Design Principle.</p> | <p>Design Principles</p> <p>LSP.11 Planting Palettes</p> <p>LSP.13 Hedgerow Reinstatement: Field and roadside boundaries LSP.14 Hedgerows: Highways Boundaries</p> <p>S1.06 Reflect surrounding landscape character</p> <p>S1.10 Old Watling Street Screening</p> <p>S3.09 Historic Hedgerow Planting</p> <p>S10.01 Landscape Integration of Muckingford Road Green Bridge</p> <p>S10.04 Screening Planting</p> <p>S11.11 Green Lane Bridge Landscape Integration</p> <p>S12.11 Hedgerow Screening North of the Project</p> <p>S12.13 Landscape Integration of North Road Green Bridge</p> <p>S12.14 Landscape Integration of FP136 Overbridge</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan.</p> |
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| Folkes Lane Community Forest (CF5) | Suitable habitat to enable site to become a receptor site for translocation of protected species, plus land available to potentially create new habitat required | Thames Chase Trust (under Forestry Commission), Thurrock Council and LB Havering | Planned as part of the environmental mitigation through landscaping, earthworks and ecology. | <p>Design Principles</p> <p>LSP.11 Planting Palettes</p> <p>LSP.20 Wildflower Planting on earthworks.</p> |
| A3.1- River Catchments (TLotF-04) | Identified Opportunities Work identified along the Mardyke through South Essex Catchment partnership could provide opportunity for mitigation as part of LTC | Essex Country Council and Thurrock Council | Proposed habitat improvement along the Mardyke River. Proposed landscaping and restoration of Fen land. | <p>Design Principles</p> <p>S12.06 Wetland Habitat Creation & Flood Storage</p> <p>S12.07 Watercourse enhancements</p> <p>S12.09 Mardyke River Link</p> <p>The location of relevant embedded mitigation measures are shown on Figure 2.4: Environmental Masterplan, Section 12 (Sheets 1, 2, 3, 7, 16).</p> |

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