The London Resort

Appendix 11.1: Landscape and Visual Impact Assessment Baseline

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On behalf of:
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Section 1
Introduction, Purpose and Methodology

Introduction

1.1 This Landscape and Visual Impact Assessment (LVIA) Baseline Report has been prepared by the Environmental Dimension Partnership Ltd (EDP), on behalf of The London Resort Company Holdings Ltd, to inform a proposed entertainment resort on land at Swanscombe Peninsula, Ebbsfleet Valley and Tilbury Docks (hereafter referred to as 'the Project Site'), which is to be the subject of a Development Consent Order (DCO) application.

1.2 EDP is an independent environmental planning consultancy with offices in Cirencester, Shrewsbury, Cardiff and Cheltenham. The practice provides advice to private and public sector clients throughout the UK in the fields of landscape, ecology, archaeology, cultural heritage, arboriculture, rights of way and masterplanning. Details of the practice can be obtained at our website (www.edp-uk.co.uk).

1.3 **Plan EDP 1** illustrates the location of the site and its boundaries. *"The Project Site is located approximately 30km east-south-east of central London on the south and north banks of the River Thames, in the counties of Kent and Essex. On the south side of the Thames the Project Site occupies much of the Swanscombe Peninsula, formed by a meander in the river, and includes a corridor for transport connections extending generally southwards to the A2(T) trunk road. On the northern side of the river the Project Site includes areas of land east of the A1089 Ferry Road and the Tilbury Ferry Terminal, which currently provides passenger services across the river to Gravesend and incorporates the London International Cruise Terminal."*

1.4 For clarity, the section of the Project Site to the south of the Thames is referred to in this report as the 'Kent Project Site' and that to the north of the river is identified as the 'Essex Project Site'. They are not contiguous and **Plan EDP 1** illustrates these areas.

Overview of the Proposed Development

1.5 The 2008 Act provides that development consent may be granted for both a Nationally Significant Infrastructure Project (NSIP), referred to as the 'Principal Development' in this document, and for 'Associated Development', which is development associated with the Principal Development. The Housing and Planning Act 2016 enabled DCO development to be accompanied by 'Related Housing', defined by functional need or geographical proximity, with a guideline maximum of 500 homes to be consented by this means.

1.6 In the description of development below, a distinction is made between the Principal Development, which comprises all works proposed within what would be the Entertainment Resort, and Associated Development, comprising other development that

has a direct relationship with the Principal Development and is required to support its construction or operation[1].

1.7 Certain works to the A2(T) might comprise a nationally significant infrastructure project in their own right under s.22 of the 2008 Act. Whilst these works are 'associated' with the Principal Development, they are referred to as the 'A2 Highways Works' for the sake of clarity.

1.8 In summary, the ***Principal Development*** includes:

- Land remediation works;
- The Leisure Core, comprising a range of events spaces, themed rides and attractions, entertainment venues, theatres and cinemas, developed in landscaped settings in two phases known as Gate One and Gate Two. The Gates will have entrance plazas offering ancillary retail, dining and entertainment facilities;
- Terrain remodeling, landscape works and planting;
- Car parks; and
- The A2 Highways Works comprising a signalised at-grade gyratory junction to replace two existing roundabouts at the A2(T)/B259 junction.

1.9 The ***Associated Development*** includes:

- Four hotels providing family, upmarket, luxury and themed accommodation totaling up to 3,550 suites or 'keys'. One or more of these hotels might be located within the leisure core. One hotel will incorporate a water park;
- A conference and convention centre with a floor area of up to 11,000 m2, capable of hosting a wide range of entertainment, sporting, exhibition and business events;
- A facility capable of hosting a range of e-sports, video and computer gaming events , with a total floorspace of up to 11,600 m^2;
- A 'Back of House' area accommodating many of the necessary supporting technical and logistical operations to enable the Entertainment Resort to function, including security command and crisis centre, maintenance facilities, costuming, employee administration, employee welfare, medical facilities, offices, storage, car parking and people mover interchange;
- A people mover and transport interchanges;

[1] Associated development is defined within Annex A of the Department for Communities and Local Government *Guidance on associated development applications for major infrastructure projects* (April 2013)

- A Resort access road;
- Local transport links,
- River transport infrastructure on both sides of the Thames, including floating jetty and ferry terminals and the repair or replacement of White's Jetty;
- Utility compounds, plant and service infrastructure;
- Flood defence and drainage works;
- Habitat creation and enhancement and public access;
- Security and safety provisions; and
- Data centres.

1.10 ***Related Housing*** comprising up to 500 apartments for Resort workers. The apartments will typically have 4-6 bedrooms, shared kitchen and lounge facilities.

Purpose

1.11 The purpose of this document is to identify the landscape and visual baseline conditions of the Project Site and its surrounding area, to inform the design and layout of the proposals and to establish an appropriate scope of work to facilitate an assessment of the effects predicted to arise from the development, as part of the Environmental Impact Assessment (EIA) process.

1.12 In compiling the assessment, EDP has undertaken the following key tasks:

- Reviewed the planning policy context for the site;
- Undertaken a desktop study and web search of relevant background documents and maps. EDP's study included reviews of aerial photographs, web searches, Local Planning Authority (LPA) publications and landscape character assessments. EDP has also obtained, where possible, information about relevant landscape and other designations such as Areas of Outstanding Natural Beauty (AONBs), conservation areas and gardens and parks listed on Historic England's 'Register of Historic Parks and Gardens of Special Historic Interest in England' (RPG);
- Undertaken a field assessment of local site circumstances, including a photographic survey of the character and fabric of the Project Site and its surroundings, using photography from a number of representative viewpoints. The field assessment was undertaken by qualified landscape architects; and

- Provided an analysis of the likely landscape and visual effects of the Proposed Development, which is determined by combining the magnitude of the predicted change with the assessed sensitivity of the identified receptors. The nature of any predicted effects is also identified (i.e. positive/negative, permanent/reversible).

1.13 A glossary of terms is contained within **Annex EDP 1**.

Methodology Adopted for the Assessment

1.14 Landscape and visual assessment is comprised of a study of two separate but inter-linked issues:

- Landscape character is the physical make up and condition of the landscape itself, and arises from a distinct, recognisable and consistent pattern of physical and social elements, aesthetic factors and perceptual aspects; and

- Visual amenity is the way in which the site is seen (views to and from the site, their direction, character and sensitivity to change).

1.15 **Section 3** addresses baseline landscape character issues, whilst visual amenity issues are addressed in **Section 4**.

1.16 Given the scale of the proposed development, a screening opinion has confirmed that the proposal is subject to an EIA. The LVIA will therefore be undertaken in accordance with the 'Guidelines for Landscape and Visual Impact Assessment – Third Edition (LI/IEMA, 2013)' (GLVIA3). The criteria referred to, but not defined within the guidelines, has been defined by EDP as set out in **Annex EDP 2**.

Study Area

1.17 To establish the baseline and potential limit of material effects, the study area has been considered at two geographical scales.

1.18 A broad study area of 6km was adopted, as shown on **Plan EDP 1**, enabling the geographical scope of the assessment to be defined and to provide the wider geographical context of the study. The search focussed on the local planning policy context, on identifying national and local landscape and other associated designations (e.g. Area of Outstanding Natural Beauty (AONB), historic parks and gardens) and providing a general geographical understanding of the site and its broader context (for example, in relation to landform, transport routes and the distribution and nature of settlement).

1.19 Following initial analysis and subsequent field work, and having an appreciation of the development proposed, a refinement of the study area has been undertaken that focuses on those areas and features that are likely to be affected by the proposals. A Zone of

Theoretical Visibility for the proposal was produced across the 6km study area to aid understanding of the potential geographical extent of visual effects and help define a more detailed study area. The extent of this detailed study area is 2km from the site boundary, although occasional reference may be made to features beyond this area where appropriate. This detailed study area is illustrated on **Plan EDP 1**.

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Section 2
Landscape Planning Policy and Designations

2.1 An appreciation of the 'weight' to be attributed to any landscape or visual effects arising from development starts with an understanding of the planning context within which any such development is to be tested for its acceptability. This Section appraises the relevant statutory policy context and guidance in regard to landscape and visual effects.

European Landscape Convention (2007)

2.2 The European Landscape Convention (ELC), which was signed by the UK in February 2006 and became binding in 2007, is the first international convention to focus specifically on landscape issues and aims to protect and manage landscapes in Europe and to plan positively for change within them. The ELC highlights the importance of developing landscape polices dedicated to protection, management and creation of landscapes, and establishing procedures for the general public and other stakeholders to participate in policy creation and implementation.

2.3 The ELC defines landscape as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Council of Europe, 2004).

National Policy Statements

2.4 National Policy Statements (NPS) set out the need for government's policies to deliver Nationally Significant Infrastructure Projects (NSIPs) in England. There is no NPS for business and commercial NSIP projects. However, to the extent that the project includes transport and highways infrastructure, regard will be had to relevant policy in the NPS for National Networks, including:

- Environmental and social impacts (NPS paragraphs 3.2 to 3.5);
- Criteria for "good design" for national network infrastructure (NPS paragraphs 4.28 – 4.35);
- Climate change adaptation (NPS paragraphs 4.36 – 4.47);
- Landscape and visual impacts (NPS paragraphs 5.143 – 5.161); and
- Land use including open space, green infrastructure and Green Belt (NPS paragraphs 5.162 – 5.185).

National Planning Policy Framework (2019)

2.5 At the heart of the National Planning Policy Framework (NPPF) is a presumption in favour of sustainable development, this being the underlying theme running throughout the policy statement.

Conserving and enhancing the natural environment

2.6 For landscape, this means recognising the intrinsic beauty of the countryside (paragraph 170) and balancing any 'harm' to the landscape resource with the benefits of the scheme in other respects. Paragraph 170 goes on to describe ways in which planning policies and decisions should contribute to the natural and local environment:

a) "protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

2.7 With regards to statutory landscape designations, paragraph 172 states *"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues"* and the *"scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest"*. As such, no part of the DCO boundary falls within or adjacent to the above specified statutory landscape designations.

2.8 In consideration of landscape and visual impacts of light pollution, paragraph 180 bullet point c) states that new development should *"limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation"*.

Achieving well-designed places

2.9 In terms of the requirements of good design for development proposals, paragraph 127 seeks to achieve high quality design in development and sets out a number of requirements which are as follows:

a) "will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;

b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;

c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);

d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;

e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and

f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience."

2.10 Furthermore, paragraph 128 states, as is generally good planning practice that *"Design quality should be considered throughout the evolution and assessment of individual proposals. Early discussion between applicants, the local planning authority and local community about the design and style of emerging schemes is important for clarifying expectations and reconciling local and commercial interests. Applicants should work closely with those affected by their proposals to evolve designs that take account of the views of the community. Applications that can demonstrate early, proactive and effective engagement with the community should be looked on more favourably than those that cannot."*

2.11 Paragraph 130 emphasises that development proposals should take the opportunities available to improve the *"character and quality of the area and the way that it functions"*.

Protecting Green Belt land

2.12 In consideration of Green Belt matters, as described below, the vast majority of the DCO is not located within Green Belt. However, the southern extent of the DCO boundary which primarily encompasses a section of the A2 and A296 main roads is located within the Metropolitan Green Belt which surrounds the fringes of London.

2.13 National planning policy in regard to the protection of Green Belt land is set out in Section 13 of the NPPF, with paragraph 133 stating that: *"The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence"*. Paragraph 134 goes on to describe the five purposes of Green Belt, which are:

a) "to check the unrestricted sprawl of large built-up areas;

b) to prevent neighbouring towns merging into one another;

c) to assist in safeguarding the countryside from encroachment;

d) to preserve the setting and special character of historic towns; and

e) to assist in urban regeneration, by encouraging the recycling of derelict and other urban land."

2.14 In terms of proposals affecting the Green Belt, paragraph 143 states that, "*Inappropriate development is, by definition, harmful to the Green Belt and should not be approved in very special circumstances"*.

2.15 However, paragraph 146 states *"Certain other forms of development are also not inappropriate in the Green Belt provided they preserve its openness and do not conflict with the purposes of including land within it. These are: [inter alia]*

c) "…local transport infrastructure which can demonstrate a requirement for a Green Belt location;…"

2.16 As such, the impact of the proposed new fly-over across the A2(T)/B259 junction and exit route to merge with the existing slip road onto the A2 on the openness of the Green Belt, will be considered within the LVIA.

National Planning Policy Guidance

2.17 The National Planning Policy Guidance (NPPG) is an online resource which supplements the NPPF. The following NPPG 'documents' are considered relevant in landscape and visual terms:

- Design: process and tools (last updated 01 October 2019) – Provides advice on the key points to take into account on design;

- Green Belt (published 22 July 2019) – Advice on the role of Green Belt in the planning system;

- Light Pollution (last updated 01 November 2019) – Advises on how to consider light within the planning system; and

- Natural Environment (last updated 21 July 2019 – Explains key issues in implementing policy to protect and enhance the natural environmental, including local requirements.

Local Planning Policy

2.18 The DCO site falls within three LPA areas, namely Dartford Borough Council (DBC), Gravesham Borough Council (GBC) and Thurrock Borough Council (TBC). A review of the local planning policy circumstances, including relevant supplementary planning documents, evidence base documents and associated guidelines relevant to this assessment, is contained below.

2.19 The following policies are considered relevant to this LVIA baseline, with extracts saved in **Annex EDP 3**.

Dartford Borough Council

Dartford Borough Core Strategy (Adopted 2011)

2.20 Policies within the Dartford Borough Core Strategy (Adopted 2011) of relevance to the DCO and landscape and visual amenity include the following:

- Policy CS4 – Ebbsfleet to Stone Priority Area;

- Policy CS5 – Ebbsfleet Valley Strategic Site;

- Policy CS6 – Thames Waterfront Priority Area; and

- Policy CS14 – Green Belt.

Dartford Borough Development Policies Plan (Adopted 2017)

2.21 Policies within the Dartford Borough Development Policies Plan (Adopted 2017) of relevance to landscape and visual amenity include the following:

- Policy DP22 – Green Belt in the Borough; and

- Policy DP25 – Nature Conservation and Enhancement.

Emerging Dartford Borough Local Plan 2036

2.22 The emerging Local Plan will guide future investment in Dartford and key planning and infrastructure decisions to 2036. A 'Preferred Options' public options consultation was held in January to February 2020 setting out the emerging proposals alongside alternative approaches. The plan is a long way off adoption at this stage and carries very limited weight in planning terms.

Gravesham Borough Council

Gravesham Borough Local Plan Core Strategy (Adopted 2014)

2.23 Policies within the Gravesham Borough Core Strategy (Adopted 2011) of relevance to the DCO and landscape and visual amenity include the following:

- Policy CS01 – Sustainable Development;
- Policy CS02 – Scale and Distribution of Development;
- Policy CS03 – Northfleet Embankment and Swanscombe Peninsula Opportunity Area;
- Policy CS06 – Ebbsfleet (Gravesham) Opportunity Area;
- Policy CS12 – Green Infrastructure; and
- Policy CS19 – Development and Design Principles;

Saved policies (2007) from Gravesham Borough Local Plan First Review (Adopted 1994)

2.24 There are no saved policies of relevance to landscape and visual amenity within this document.

Emerging Gravesham Borough Site Allocation and Development Management Policies Document

2.25 The emerging Site Allocation and Development Management Policies Document for Gravesham reviews the current strategic policy on the scale and distribution of development in Gravesham, and sets out detailed policies to guide decisions on planning applications. Once adopted, it will replace the remaining saved policies from Gravesham Local Plan First Review.

Thurrock Borough Council

Thurrock Borough Council Core Strategy and Policies for Managing Development (Adopted 2015)

2.26 Policies in the Thurrock Borough Council Core Strategy and Policies for Managing Development (adopted 2015) of relevance to landscape and visual amenity include the following:

- Policy CSTP18 – Green Infrastructure;
- Policy CSTP23 – Thurrock Character and Distinctiveness;
- Policy CSTP28 – River Thames; and
- Policy PMD2 – Design and Layout.

Saved policies (2012) from Thurrock Borough Council Local Plan (Adopted 1997)

2.27 There are no saved policies of relevance to landscape and visual amenity within this document.

Emerging Thurrock Borough Council Local Plan

2.28 Work on a new local plan for the Thurrock Borough began in 2014 and is currently aiming for adoption in October 2020.

Other Relevant Documents, Strategies and Initiatives

The Thames Gateway Parklands Vision[2]

2.29 The Thames Gateway Parklands Vision promotes regeneration, development of urban areas and rural open spaces which can be done so in a way in which they are well connected and provide a coherent landscape. Through focusing on environmental improvement, the vision aims to improve the quality of life for current and future residents by creating long term value through reconnecting communities to the exceptional landscapes of the Estuary, encouraging greater visitor numbers, employment opportunities and quality of life.

2.30 The long-term aim of the Thames Gateway Parklands Vision is to create *"an exceptional landscape that transforms the perceptions of place",* namely the estuary landscape by:

[2] Thames Gateway Parklands (East London Green Grid, South Essex Green Grid, Greening the Gateway Kent and Medway, 9th November 2010).

- *"Making a connected landscape via 'green grids', the Thames Estuary Path and visual and environmental improvements along major transport corridors;*

- *Improving access to urban and rural landscapes for new and existing neighbourhoods;*

- *Renewing and developing urban environments as places of culture and social interaction;*

- *Recognising the value of enhancing agricultural and 'blue' landscapes as key economic, environmental, recreational and cultural assets; and*

- *Promoting a clear identity and interest for each locality via investment in regenerated historic environments."*

2.31 The 'Greening the Gateway Kent and Medway' partnership has developed a vision and action plan to support delivery of a new network of multi-functional green spaces in conjunction with future development in the Ebbsfleet Valley and A2 Corridor, including the areas containing the DCO site.

Ebbsfleet Valley and A2 Corridor Green Cluster Study[3]

2.32 The Ebbsfleet Valley and A2 Corridor Green Cluster Study identifies the following 'Green Grid' projects within the study area:

- *"Swanscombe Peninsula (Black Duck Marsh, Botany Marshes and riverside public access and habitat enhancements);*

- *Swanscombe Heritage Park & Craylands Gorge (existing public open space enhancement);*

- *Ebbsfleet Valley West and East (new public open spaces, green grid links and habitat creation);*

- *Northfleet Embankment (new riverside promenade providing open space, footpaths and cycleways along waterfront);*

- *Blue Lake (new public open space and water-based recreation/leisure destination);*

- *Northfleet Urban Country Park/Springhead Linear Park (existing public open space enhancement and new linear park); and*

- *A2 Linear Park (new 24ha multi-functional outdoor activity park)."*

[3] Green Cluster Studies: Ebbsfleet Valley & A2 Corridor Technical Report (Greening the Gateway Kent & Medway Partnership, 2008).

Kent Thameside Green Grid Design Strategy and Guidelines[4]

2.33 The Kent Thameside Green Grid Design Strategy and Guidelines provide strategic guidance for landscape character areas within the study area, that is of relevance to the above stated 'Green Grid' projects.

Thames Strategy East[5]

2.34 The Thames Strategy East is the specific document which covers the DCO boundary and eastern extent of the River Thames. In accordance with the overarching Thames Gateway Parklands Vision, the document provides a landscape-led vision and strategic guidance in relation to the management of the River Thames corridor's existing biodiversity, history and cultural resources. The Thames Strategy East is to cover a 100-year period and aims to:

"Ensure that the influence of the River Thames and its hinterland will be respected and developed to create beautiful, connected places from often despoiled and degraded postindustrial riverscapes and landscapes - creating places where people will choose to live, work and play."

2.35 The strategic guidance set out within the document covers a number of relevant considerations in regard to the DCO site and landscape and visual effects. SG4 states that:

"Development within a Reach should protect and enhance the positive aspects of its character. Where parts of some Reaches are of poor quality, major interventions may be necessary to create a new character to reflect the Thames-side location."

2.36 In specific regard to strategic and local views, SG6 states:

"Development should protect strategic and local views by:

- *avoiding obstructing or cluttering views;*
- *providing opportunities for views across water;*
- *providing interpretation; and*
- *providing fully accessible elevated viewing points."*

2.37 In terms of lighting, SG7 states that *"Opportunities should be taken to implement co-ordinated lighting strategies, recognising the navigational requirements of the river and that light pollution should be minimised".*

[4] Kent Thameside Green Grid Design Strategy & Guidelines (LDA for Kent County Council, June 2004).
[5] Thames Strategy East (The Thames Estuary Partnership, 2008).

2.38 In relation to good design of new developments, SG9 states that *"New urban form and built infrastructure should be of the highest design quality and should contribute to a Reach's character and make a positive contribution to the river's character."*

2.39 In terms of riverside open spaces and links, SG10 states that "*Development proposals should protect and enhance the existing network of designated parks and open spaces and their links as well as essential river related infrastructure such as river related transport facilities".* SG22 encourages the installation of public art, based on interpretation of the Thames' local heritage *"Archaeological and historic references and public art based around historical and cultural assets should be used in development design to create a sense of place and pride in the heritage of an area"*.

The Kent Downs Area of Outstanding Natural Beauty Management Plan 2014 – 2019[6]

2.40 The DCO site is not located within the Kent Downs Area of Outstanding Natural Beauty (AONB), however it is located c.5.1km to the south-east of the DCO site.

2.41 Whilst not a local authority area, the Kent Downs AONB Unit is in charge of producing a Management Plan in periods of five years, as required by the Countryside and Rights of Way (CRoW) Act (2000). The Management Plan does not discourage new development within or near to the AONB, but instead set out a number of policies to steer development to respect the surrounding landscape. The Management Plan 2014 – 2019 highlights the potential for the *"loss of and damage to the quality of views in and out of the AONB through development"* as an issue in relation to protection of the importance, qualities and sensitivity of the AONB landscape. Policy MMP2 of the Management Plan requires high priority to be given to the Management Plan vision, policies and actions in development management decisions.

2.42 The Management Plan identifies in Section 4.4 that *"degradation of the setting and urban fringe impacts in certain Kent Downs landscape character areas through development, infrastructure, urbanisation and recreational pressure"* as a key issue for the AONB. It goes onto to state that *"the importance of the setting of the Kent Downs has been emphasised in policy and development management decisions which provides an opportunity to work with Local Planning Authorities to develop planning policy protection for the setting of the Kent Downs and to ensure that the setting is taken into account when Local Planning Authorities determine planning applications"*.

The Kent Downs Area of Outstanding Natural Beauty Setting Position Statement 2018[7]

2.43 The Position Statement produced by the Kent Downs AONB Unit is *"intended to provide further guidance on issues of setting for local planning authorities, land owners and other interested parties. It has been prepared in consultation with and approved by the Joint Advisory Committee for the Kent Downs AONB. The statement focuses on ensuring*

[6] Kent Downs Area of Outstanding Natural Beauty Management Plan 2014-2019 (Second revision April 2014, Kent Downs).

[7] Kent Downs Area of Outstanding Natural Beauty Setting Position Statement (Kent Downs Joint Advisory Committee, 2018).

avoidance of harm and the conservation and enhancement of the setting of the AONB, through good design and the incorporation of appropriate mitigation measures".

2.44 It outlines examples of adverse impacts on the Kent Downs AONB, which include:

- *"development which would have a significant impact on views in or out of the AONB;*
- *loss of tranquility through the introduction or increase of lighting, noise, or traffic movement or other environmental impact including dust, vibration and reduction in air quality;*
- *introduction of abrupt change of landscape character; loss or harm to heritage assets and natural landscape, particularly if these are contiguous with the AONB;*
- *development giving rise to significantly increased traffic flows to and from the AONB, resulting in erosion of the character of rural roads and lanes; and*
- *increased recreational pressure as a result of development in close proximity to the AONB".*

Landscape Designations

2.45 No part of the site lies within a national or regionally designated landscape. As discussed briefly above, the Kent Downs AONB is a nationally designated landscape, the boundary of which lies c.5.1km of the DCO boundary, as illustrated on **Plan EDP 2**.

Other Relevant Considerations

Green Belt

2.46 The vast majority of the DCO site is not located within the Green Belt, with the Swanscombe Peninsular entirely excluded from this designation, and has been long established as a priority for regeneration and zone of change within national and local planning policy.

2.47 The vast majority of the access corridor (A2 and A296 main roads) is also excluded from the Green Belt, however the southern part of the DCO boundary south of the A2 main road falls within the Green Belt (see **Plan EDP 2**).

2.48 The fundamental aim of the Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of green belts are their openness and their permanence. As such, green belt is a spatial planning policy designation rather than a landscape designation based on landscape character and value (i.e. green belts are not automatically of high landscape value). Whilst green belt has been used to control all development, the focus of the designation is essentially to control the sprawl and creep of

urban areas and settlements.

Other Environmental Considerations

2.49 **Plan EDP 3** illustrates other environmental considerations within the 6km broad study area. Whilst these may not be specifically landscape designations, features of heritage, ecology, arboricultural and rights of way and access value can influence the landscape or provide a receptor point from which the immediate and wider landscape is experienced.

2.50 For example, a nature reserve, local wildlife site or country park open to the public may not be designated for landscape purposes but are likely to be places in which people visit to take in nature, their surroundings including the landscape and seek recreation.

Heritage Matters

2.51 A separate Heritage Statement and ES chapter will consider the historic character and setting of designated and non-designated heritage assets within the study area. As mentioned above, while heritage assets are not landscape designations per se, they do, on occasion, serve to influence the character of the landscape and can inform landscape value, which are considerations within this report. Where this is the case, it is noted in the relevant assessment.

2.52 No part of the site lies within a registered park or garden (RPG) listed on English Heritage's Register of Parks and Gardens of Special Historic Interest. The closest RPG is 'Gravesend Cemetery', which is designated at Grade II* and located to the south of the B261 within Gravesend. Due to the distance from the Project Site, and the minimal intervisibility between the RPG and the site (as illustrated by **Plan EDP 3** and verified during the field visit) it is considered very unlikely that there will be any change to the landscape character or visual amenity of these assets as a result of the proposals. Further assessment of potential effects on the landscape character of, and visual amenity of visitors to, these asset as a result of the proposals is therefore scoped out of this assessment.

2.53 There are a number of Conservation Areas (CAs) located within the detailed 2km study area (17 in total) as illustrated in **Plan EDP 3**. The nearest is 'The Hill, Northfleet' CA located c.470m east of the Kent Project Site. 11 of the 17 CAs within 2km of the Project Site are located in close proximity to one another around Gravesend and Northfleet, south of the Essex Project Site and separated from it by the River Thames.

2.54 Numerous listed buildings are located within the 6km broad study area and 2km detailed study area, most of which are clustered around CAs or centrally within urban areas. Two Grade II listed buildings lie within the Kent Project Site, 'Swanscombe Cutting Footbridge Crossing A2 East of A296 Junction' is located along the A2 corridor, and the other, 'Boundary stone, Ingress Park, Lovers Lane' is located as the western end of the Swanscombe Peninsula. One Grade II* Listed Building is located within the Essex Project Site itself, being the 'Riverside Station, including floating landing stage'. Another Grade II* listed building, 'Church of All Saints' is situated adjacent to the Kent Project Site

just south of the Swanscombe Peninsula, whilst Grade II 'Garden Bridge, Ingress Park' is located adjacent to the western extent of the DCO boundary (Kent Project Site) on Swanscombe Peninsula.

2.55 There are three Scheduled Monuments (SM) which fall partially within the DCO boundary. They include 'Palaeolithic sites near Baker's Hole', 'Neolithic sites near Ebbsfleet' and 'Springhead Roman Site' all of which feature in the Ebbsfleet Valley area of the Kent Project Site which runs from Swanscombe Peninsula, southwards to the A2/B259 junction. 'Medieval woodland boundary in Darenth Wood' is located adjacent to the western edge of the A2 Corridor of the Kent Project Site, whilst 'Tilbury Fort' lies adjacent to the north-east corner of the Essex Project Site.

Ecology Matters

2.56 A separate Ecology Assessment prepared by EDP considers the ecological assets within the study area. While these are not landscape designations, as for the above referenced heritage assets, they do, on occasion, serve to influence the character of the landscape and can inform landscape value.

2.57 No part of the Project Site is covered by any international statutory designations. However, there is one statutory designations of international importance within c.3.4km of the Project Site, being the 'Thames Estuary and Marshes' SPA/Ramsar Site as illustrated on **Plan EDP 3**.

2.58 In terms of National Designations, within the Kent Project Sites lies the 'Bakers Hole' Site of Special Scientific Interest (SSSI) which is designated for its geological interest, is below ground and not publicly accessible. Other SSSIs within the detailed 2km study area include 'Swanscombe Skull Site', 'West Thurrock Lagoon & Marshes' and 'Darenth Wood' all of which have some form of public access. 'Lion Pit' and 'Grays Thurrock Chalk Pit' are located on the northern side of the Thames within Thurrock District and, contained by their quarried nature, share no inter-visibility with the Project Site.

2.59 One National Nature Reserve (NNR), 'Swanscombe Skull Site', is located c.750m from the DCO boundary (Kent Project Site). No Local Nature Reserves (LNR) are located within 2km of the Project Site.

2.60 Two Local Wildlife Sites (LWS) are located within or partially within the DCO boundary. One being 'Botany Marshes' LWS located within the Kent Project Site at the eastern end of the Swanscombe Peninsula, and the other being 'Ebbsfleet Marshes, Northfleet' LWS of which the southern part of the designation is within the Kent Project Site. In addition, a further LWS, 'Alkereden Lane Pit' falls adjacent to the west of the Kent Project Site.

Tree Preservation Orders and Ancient Woodland

2.61 There are four areas of Ancient Woodland within the southern part of the site, two of which fall between the A2 Main Road and A296, whilst the westernmost extent of the DCO boundary overlaps with two small sections of Darenth Wood. Two additional areas of

Ancient Woodland bound the southern DCO boundary and the A2 known as 'Stonewood' and 'The Thrift'. Generally, Ancient Woodland is located and more frequent within the southern areas and eastern areas of the broad study area, given the riverside and marsh habitats in the north.

2.62 A *BS 5837:2012 Trees in Relation to Design, Demolition and Construction* compliant survey of the trees in relation to the proposed development will be completed to inform the masterplan and assessment process.

Rights of Way and Access

National Trails

2.63 No National Trails pass through the Project Site, 2km detailed study area or 6km broad study area.

Public Rights of Way

2.64 The locations of Public Rights of Way (PRoW) have been obtained from Kent County Council (KCC) Definitive Map and Statement, provided by KCC to EDP on 16 March 2020. Similarly, the locations of PRoW have been obtained from TBC online on 05 May 2020 via their website as printed maps are no longer produced.

Promoted Routes

2.65 The 'Saxon Shore Way' starts in the town centre of Gravesend and follows a path along the southern bank of the River Thames and the north Kent coast. At its nearest point, it is located c.950m south of the DCO boundary (Essex Project Site) and c.2.6km east of the DCO boundary (Kent Project Site). Similarly, the Wealdway Path begins in the town centre of Gravesend but travels south 83 miles to Eastbourne. At its nearest point, the route is located c.950m south of the DCO boundary (Essex Project Site) and c.1.7km of the DCO boundary (Kent Project Site).

2.66 The 'Thames Path' promoted route (not to be confused with the 'Thames Path National Trail'), is located at its nearest point, c.6km to the north-west of the DCO boundary (Kent Project Site) at Crayford Ness. The route is an unofficial extension of the Thames Path National Trail and follows the south bank downstream from the Thames Barrier (at the Thames Path National Trail end point), to Crayford Ness.

2.67 The 'Darenth Valley Path' follows the course of the River Darenth from its source in the Greensand Hills, to where it joins the River Thames north of Dartford. The promoted route is located c.4.1km south-west of the DCO boundary (Kent Project Site).

Public Rights of Way, Bridleways, Byways Open to All Traffic (BOAT) and Restricted Byways

2.68 There are several PRoWs that pass through the broad study area, as illustrated on **Plan EDP 2**. A number cross or pass adjacent to the Project Site. In relation to the Kent Project Site, these include:

- Footpath DS1;
- Footpath DS2;
- Footpath DS3;
- Footpath DS5;
- Footpath DS12;
- Footpath DS17;
- Footpath DS20;
- Footpath DS30;
- Footpath DS31;
- Footpath NU1;
- Footpath NU7A;
- Footpath NU14;
- Footpath NU47;
- Footpath DR18;
- Footpath DR19;
- Footpath DR20;
- Footpath DR128;
- Restricted Byway DR129; and
- Footpath DR312.

2.69 In relation to the Essex Project Site, these include:

- Footpath 144 (Thurrock); and
- BOAT 98 (Thurrock).

2.70 There are also a number of PRoW within the local context of the Project Site, which generally provide links through existing urban areas or through countryside to other settlements and urban areas. Potential views from these PRoW, and others within the wider context are considered in **Section 4**.

National Cycle Routes

2.71 As illustrated on **Plan EDP 2**, sections of National Cycle Route (NCR) 1 pass through the Kent Project Site within Swanscombe Peninsula and the Ebbsfleet Valley, whilst NCR 177 passes through the A2/Pepperhill junction. In addition, NCR 13 passes through the Essex Project Site along Ferry Road and links to Tilbury Fort.

Open Access Land and Country Parks

2.72 There are seven country parks located within the broad study area as illustrated on **Plan EDP 2**. The nearest is Swanscombe Heritage Park, located c.25m from the DCO boundary near the Swanscombe Peninsula. Natural England recognises Country Parks as significant places that contribute to England's accessible natural green space; they are not necessarily created in recognition of, or to protect, landscape quality. However, the attractive, green, informal, accessible character of the Country Park means that it has a high local value.

2.73 Potential views from these Country Parks within the broad study area are considered in **Section 4**.

Section 3
Baseline Conditions: Landscape Resource

3.1 As advocated by GLVIA3, this section identifies the range of landscape resources with the potential to experience an effect. The analysis of the baseline also requires consideration of the sensitivity of the receptor, this being a function of the susceptibility to change of the receptor and its value.

3.2 EDP has undertaken a review of local landscape character, which included site visits by experienced Chartered Landscape Architects in 2020. Where necessary, the relevance of the published character assessments to the local landscape is commented on below. Extracts of key characteristics, to assist with understanding the various Council's accepted baseline positions, are contained in **Annex EDP 4**.

National Character Assessment

3.3 At the national level, the Project lies in a transitional area between National Character Areas (NCAs) as illustrated in **Plan EDP 4**.

Greater Thames Estuary

3.4 The Swanscombe peninsula area of the Kent Project Site is located within the 'Greater Thames Estuary' NCA (no. 81) which is described as (emboldening added by EDP where directly relevant to the Project Site and near context):

"Predominantly a remote and tranquil landscape of shallow creeks, drowned estuaries, low-lying islands, mudflats and broad tracts of tidal salt marsh and reclaimed grazing marsh that lies between the North Sea and the rising ground inland. It forms the eastern edge of the London Basin and encompasses the coastlines of South Essex and North Kent, along with a narrow strip of land following the path of the Thames into East London.

Despite its close proximity to London, the NCA contains some of the least settled areas of the English coast, with few major settlements and medieval patterns of small villages and hamlets on higher ground and the marsh edges. This provides a stark contrast to the busy urban and industrial areas towards London where population density is high and development pressures are increasing. Sea defences protect large areas of reclaimed grazing marsh and its associated ancient fleet and ditch systems, and productive arable farmland. Historic military landmarks are characteristic features of the coastal landscape."

3.5 The key characteristics of the 'Greater Thames Estuary' are broadly described as (emboldening added by EDP where directly relevant to the Project Site and near context):

- *"Predominantly flat, low-lying coastal landscape where extensive open spaces are dominated by the sky, and the pervasive presence of water and numerous coastal estuaries extend the maritime influence far inland;*

- *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;*

- *Geological contrast and variety along the coastline provided by Sheppey, a long, low island rising from a stretch of very flat marsh along the Swale Estuary in Kent with low, steep clay cliffs facing towards Essex, and Mersea Island in the Blackwater Estuary in Essex;*

- *Coastline of major geomorphological interest for its coastal processes. Accretion of material carried by the sea from the north recharges intertidal coastal habitats, which are subject to coastal squeeze from rising sea levels;*

- *Open grazing pastures patterned by a network of ancient and modern reed-fringed drainage ditches and dykes, numerous creeks and few hedges or fences, with tree cover a rarity;*

- *Traditional unimproved wet pasture grazed with sheep and cattle combined with extensive drained and ploughed arable land protected from floods by sea walls, with some areas of more mixed agriculture on higher ground;*

- *Strong* ***feelings of remoteness and wilderness persist on extensive salt marshes, mudflats and reclaimed farmed marshland****, which support internationally important plants, invertebrates and populations of breeding and overwintering birds, notably overwintering Brent geese;*

- *Open mosaic habitats on brownfield sites support nationally important invertebrate assemblages and key populations of rare invertebrate species;*

- ***Distinctive landmarks of coastal military heritage including Napoleonic military defences, forts and 20th-century pillboxes****;*

- *Some of the least settled parts of the English coast with numerous small villages and hamlets on higher ground and marsh edges reflecting medieval patterns and the coastal economy;*

- ***Highly urbanised areas within London and on marsh edges subject to chaotic activity of various major developments including ports, waste disposal, marine***

dredging, housing regeneration, mineral extraction and prominent power stations plus numerous other industry-related activities*;*

- ***Increasing development pressures around major settlements and especially towards London, with urban, industrial and recreational sites often highly visible within the low-lying marshes****; and*

- ***Major historical and current transport link to Inner London provided by the River Thames, with an extensive network of road and rail bridges spanning its reaches within the city****."*

North Kent Plain

3.6 The southern parts of the Kent Project Site are located within the 'North Kent Plain' NCA (no. 113) which comprises *"the strip of land between the Thames Estuary to the north and the chalk of the Kent Downs to the south. The area is open, low and gently undulating. It is a very productive agricultural area with predominantly high-quality, fertile loam soils characterised by arable use. Traditional orchards, soft fruits and other horticultural crops exist in central and eastern areas giving rise to the use of the title 'Garden of England'. There is an extensive area of ancient woodland around Blean, plus significant ancient woodlands further west. However, it is generally an open landscape: characteristic shelterbelts occur within the fruit-growing areas, but the agricultural land is mostly devoid of hedgerows".*

3.7 The key characteristics of the 'Kent North Plain' NCA are broadly described as (emboldening added by EDP where directly relevant to the Project Site and near context):

- *"An open, low and gently undulating landscape, characterised by high quality, fertile, loamy soils dominated by agricultural land uses;*

- *The area's geology is dominated by Palaeogene clays and sands, underlain by the Chalk;*

- *Geologically a chalk outlier – and historically an island separated from the mainland by a sea channel – Thanet forms a discrete and distinct area that is characterised by its unity of land use, arising from the high quality fertile soils developed in thin drift deposits over chalk;*

- ***A diverse coastline (both in nature and orientation), made up of cliffs, intertidal sand and mud, salt marshes, sand dunes and shingle beaches. Much of the coastal hinterland has been built on, and the coast itself has been modified through the construction of sea walls, harbours and piers****;*

- *Large arable/horticultural fields with regular patterns and rectangular shapes predominating, and a sparse hedgerow pattern;*

- *Orchards and horticultural crops characterise central and eastern areas, and are often enclosed by poplar or alder shelterbelts and scattered small woodlands;*

- *Woodland occurs on the higher ground around Blean and in smaller blocks to the west, much of it ancient and of high nature conservation interest;*

- *The Stour and its tributaries are important features of the eastern part of the NCA, draining eastwards into the North Sea, with associated wetland habitats including areas of grazing marsh, reedbeds, lagoons and gravel pits. The River Medway cuts through the NCA as it flows into the Thames Estuary;*

- *Other semi-natural habitats include fragments of neutral, calcareous and acid grassland, and also heathland;*

- *The area has rich evidence of human activity from the Palaeolithic period. Key heritage assets include Roman sites at Canterbury, Reculver and Richborough; the Historic Dockyard at Chatham; military remains along the coast; and historic parks and buildings; and*

- ***Large settlements and urban infrastructure (including lines of pylons) are often visually dominant in the landscape, with significant development around Greater London and the Medway Towns, as well as around towns further east and along the coast. Major rail and road links connect the towns with London**."*

Northern Thames Basin

3.8 Just north of the Essex Project Site, on the northern bank of the River Thames lies the 'Northern Thames Basin' NCA (no. 111) and is described as:

"The Northern Thames Basin is a diverse area which extends from Hertfordshire in the west to the Essex coast in the east. It is separated from the North Sea and Thames Estuary by a narrow band of land that makes up the Greater Thames Estuary National Character Area (NCA). Included within this NCA are the suburbs of North London and also historic towns and cities including St. Albans and Colchester, as well as new and planned towns such as Welwyn Garden City, Hatfield and Basildon. Although arable agriculture is a large industry in the area the soil quality ranges from good to poor quality. The London Clay provides a poor quality soil that becomes waterlogged in winter and cracks and shrinks in summer. Better quality soil is found in areas that contain alluvial deposits from the Thames and other rivers in the area as they formed and changed position over time.

The Northern Thames Basin is an area rich in geodiversity, archaeology and history and diverse landscapes ranging from the wooded Hertfordshire plateaux and river valleys, to the open landscape and predominantly arable area of the Essex heathlands, with areas of urbanisation mixed in throughout. Urban expansion has been a feature of this area since the 16th century when wealthy merchants who were conducting business in London built homes on its outskirts, mainly in the Hertfordshire area. This trend increased dramatically from the mid-19th century as infrastructure improved and people could travel to work in

London from the surrounding areas in an hour or less. This has put increased pressure on the area in terms of extra housing developments, schools and other necessities for expanding populations, with a consequential reduction in tranquillity."

3.9 The key characteristics of the 'Northern Thames Basin' NCA are broadly described as:

- *"The landform is varied with a wide plateau divided by river valleys. The prominent hills and ridges of the 'Bagshot Hills' are notable to the northwest and extensive tracts of flat land are found in the south;*

- *Characteristic of the area is a layer of thick clay producing heavy, acidic soils, resulting in retention of considerable areas of ancient woodland;*

- *Areas capped by glacial sands and gravels have resulted in nutrient-poor, free-draining soils which support remnant lowland heathlands, although these are now small. Areas that have alluvial deposits present are well drained and fertile;*

- *The water bearing underlying Chalk beds are a main source of recharge for the principal London Basin Chalk aquifer;*

- *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. Numerous springs rise at the base of the Bagshot Beds and several reservoirs are dotted throughout the area;*

- *The pattern of woodlands is varied across the area and includes considerable ancient semi-natural woodland. Hertfordshire is heavily wooded in some areas as are parts of Essex, while other areas within Essex are more open in character. Significant areas of wood pasture and pollarded veteran trees are also present;*

- *The field pattern is very varied across the basin reflecting historical activity. Informal patterns of 18th-century or earlier enclosure reflect medieval colonisation of the heaths. Regular planned enclosures dating from the Romano-British period are a subtle but nationally important feature on the flat land to the south-east of the area. In the Essex heathlands 18th- and 19th-century enclosure of heathlands and commons followed by extensive 20th-century field enlargement is dominant;*

- *Mixed farming, with arable land predominating in the Hertfordshire plateaux, parts of the London Clay lowlands and Essex heathlands. Grasslands are characteristic of the river valleys throughout. Horticulture and market gardening are found on the light, sandy soils of former heaths in Essex, particularly around Colchester, along with orchards, meadow pasture and leys following numerous narrow rivers and streams;*

- *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 including great crested newt, water vole, dormouse and otter;*

- *Rich archaeology including sites related to Roman occupation, with the Roman capital at Colchester and City of St Albans (Verulamium) and links to London. Landscape parklands surrounding 16th- and 17th-century rural estates and country houses built for London merchants are a particular feature in Hertfordshire;*

- *The medieval pattern of small villages and dispersed farming settlement remains central to the character of parts of Hertfordshire and Essex. Market towns have expanded over time as have the London suburbs and commuter settlements, with the creation of new settlements such as the pioneering garden city at Welwyn and the planned town at Basildon; and*

- *Brick-built dwellings are characteristic from the late 17th century onwards. Prior to this dwellings and farm buildings tended to be timber built with weatherboarding, now mainly painted white but traditionally black or tarred, and whitewashed plaster walls."*

North Downs

3.10 To the south of the Kent Project Site, lies the 'North Downs' NCA (no. 119). The North Downs *"forms a chain of chalk hills extending from the Hog's Back in Surrey and ending dramatically at the internationally renowned White Cliffs of Dover. The settlement pattern is characterised by traditional small, nucleated villages, scattered farms and large houses with timber framing, flint walls and Wealden brick detailing. Twisting sunken lanes, often aligned along ancient drove roads, cut across the scarp and are a feature of much of the dip slope. The Kent Downs and Surrey Hills Areas of Outstanding Natural Beauty designations are testament to the qualities and natural beauty of the area."* The key characteristics of the North Downs NCA are broadly described as:

- *"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;*

- *The broad dip slope gradually drops towards the Thames and the English Channel, affording extensive views across London and the Thames Estuary. The carved topography provides a series of dry valleys, ridges and plateaux;*

- *Chalk soils are predominant across the NCA but the upper part of the dip slope is capped by extensive clay-with-flint deposits. Patches of clay and sandy soils also occur with coombe deposits common in dry valleys;*

- *The North Downs end at the dramatic White Cliffs of Dover, one of the country's most distinctive and famous landmarks. Most of the coast between Kingsdown and Folkestone is unprotected, allowing for natural processes. The cliffs are home to internationally important maritime cliff-top and cliff-ledge vegetation;*

- *The area is cut by the deep valleys of the Stour, Medway, Darent, Wey and Mole. The river valleys cut through the chalk ridge, providing distinctive local landscapes which contrast with the steep scarp slope;*

- *The south-facing scarp is incised by a number of short, bowl-shaped dry valleys, cut by periglacial streams and often referred to as combes. The undulating topography of the dip slope has also been etched by streams and rivers, today forming dry valleys, some of which carry winterbournes that occasionally flow in the dip slope, depending on the level of the chalk aquifer;*

- *The footslope of the escarpment supports arable cropping, the dominant land use within the NCA. In the east, the richer, loamy soils of the lower dip slope support large tracts of mixed arable and horticultural production;*

- *Woodland is found primarily on the steeper slopes of the scarp, valley sides and areas of the dip slope capped with clay-with-flints. Well-wooded hedgerows and shaws are an important component of the field boundaries, contributing to a strongly wooded character. Much of the woodland is ancient;*

- *Tracts of species-rich chalk grassland and patches of chalk heath are important downland habitats and of international importance;*

- *Ancient paths, drove roads and trackways, often sunken, cross the landscape and are a distinctive feature of the dip slope. Defensive structures such as castles, hill forts and Second World War installations, and historic parks, buildings and monuments are found throughout;*

- *Small, nucleated villages and scattered farmsteads including oasts and barns form the settlement pattern, with local flint, chalk and Wealden brick the vernacular materials; and*

- *In the western part of the area, around and to the west of Sevenoaks and into Surrey, there is increased urban development."*

Summary of NCAs

3.11 Given the broad geographical areas covered by the NCAs, it is considered that the description of landscape character undertaken at the sub-regional level is more relevant in establishing the landscape resource baseline. Accordingly, while the above NCAs have been used to inform this LVIA baseline, they will not be carried forward to detailed assessment of effects, the focus being on local landscape character areas which have a greater level of detail relevant to the Project Site.

County and Borough Landscape Character Assessments

3.12 The following subsections discuss the county and borough published landscape character areas within the near vicinity of the Project Site, whilst a more detailed narrative is included within the LVIA baseline report. **Plan EDP 5** illustrates the location of Landscape Character Areas (LCAs) in relation to the Project Site. It should be noted that where borough level information is not present, the next best available data is used, i.e. county level.

3.13 The host LCAs will be considered for assessment within the LVIA at construction, on completion and at 15 years after completion of the proposed development.

Kent's Character Assessment (2004)

3.14 A review of the Kent Landscape Character Assessment (KLCA) finds that the Kent Project Site is located within four LCAs. The northern parts of the Kent Project Site (Swanscombe Peninsula) lie within the 'Western Thames Marshes' LCA, whilst the majority of the southern portions of the Kent Project Site are located within the 'Dartford and Gravesend Fringes' LCA, with sections of the A2 road within the DCO boundary partially lying within the 'Darenth Downs' LCA and 'Southfleet Arable Lands' LCA.

3.15 The key characteristics of the 'Western Thames Marshes' LCA are described as (emboldening added by EDP where directly relevant to the Project Site and near context):

- *"**Low-lying flat, open marshland, fragmented by built development**;*
- ***Urban/estuarine context**;*
- ***River uses**;*
- ***Remnant grazing marsh and arable farmland**; and*
- ***Some localised ditches, dykes, wetlands and scrub**."*

3.16 The key characteristics of the 'Dartford and Gravesend Fringes' LCA are described as (emboldening added by EDP where directly relevant to the Project Site and near context):

- *"**Contained by A2 and urban edges**;*
- *Some semi-natural heathland and woodland;*
- *Some farmland with remnant hedgerows and trees;*
- ***Landfill sites. Fragmentation by roads**; and*
- *Wide scale amenity uses."*

3.17 The key characteristics of the 'Darenth Downs' LCA are described as (emboldening added by EDP where directly relevant to the Project Site and near context):

- *"Smooth, open arable landscape on the chalk;*
- ***Crossed by major transport routes**;*
- *Scattered settlement; and*
- *Long views to the Kent Thames Gateway."*

3.18 The key characteristics of the 'Southfleet Arable Lands' LCA are described as (emboldening added by EDP where directly relevant to the Project Site and near context):

- *"Good quality soils developed on the Tertiary Beds overlying the chalk. A generally open arable landscape;*
- ***Open landscape allowing transport routes, pylons and settlement to dominate many areas**;*
- *Remnant unkept hedgerows, shelterbelts and woodland copses giving a scruffy and unmanaged feel; and*
- ***Long views to the busy A2 (T)** and Kent Thames-side beyond."*

3.19 The full details of the LCAs mentioned above are contained within **Annex EDP 4**, as are the other LCAs located within 2km of the Project Site.

Gravesham Landscape Character Assessment (2009)

3.20 A review of the Gravesham Landscape Character Assessment (GLCA) finds that the Kent Project Site overlaps with two LCAs. The eastern part of the Kent Project Site on Swanscombe Peninsula is located within the Botany Marshes LCA, whilst a small section of the A2 at the south-eastern extent of the Kent Project Site is located within 'Gravesend Southern Fringe' LCA. Within the 2km detailed study area is also the 'Istead Arable Farmland' LCA which falls within c.80m south of the Kent Project Site, shown on **Plan EDP 5**. Key characteristics of each of the LCAs are summarised below (emboldening added by EDP where directly relevant to the Project Site and near context):

Botany Marshes LCA:

- *"**Flat marshland with man-made sea wall on bank of River Thames**;*
- ***Divided by a network of ditches, meandering waterways and small lagoons into small parcels of land**;*

- ***Remnant of agricultural land on peninsula****;*
- ***Limited public access to marshland****;*
- ***Unified clumps of native vegetation****;*
- ***Strong network of wildlife corridors within ditches and waterways, mudflat on River Thames provide good habitat opportunities****; and*
- ***Visual detractors including electricity pylons running across marshland and large industrial building on character area boundary****."*

Gravesend Southern Fringe LCA:

- *"**Dominant settlement on urban edge of Gravesend****;*
- ***Very gently undulating topography rising from north to south****;*
- *Small arable fields historically part of Istead Farmlands landscape;*
- *Man-made golf course landscape acts as visual detractor;*
- *Limited tree cover mostly consisting of small clumps of non-native tree material on golf course;*
- ***Wire Fence lines and gappy native hedgerows****; and*
- ***Landscape dominated by large roads, Channel Tunnel Rail Link and associated infrastructure****."*

Istead Arable Farmland LCA:

- *"Gently undulating topography with open arable fields;*
- *Fields divided by tracks, roads and occasional hedgerows;*
- ***Orchards to the east****;*
- *Minor native woodland clumps;*
- *Few roads, which are open in character;*
- *Istead Rise modern housing development;*
- *Clusters of properties and farmsteads; and*

- ***Large pylons.**"*

3.21 The full details of the LCAs mentioned above are contained within **Annex EDP 4**, as are the other LCAs located within 2km of the Project Site.

Gravesham Townscape Appraisal (2008)

3.22 According to the Gravesham Townscape Appraisal (GTA), the Kent Project Site is partially within Townscape Character Area (TCA) 'Industrial Hinterland'. Elsewhere, the Kent Project Site also abuts the 'Northfleet' TCA and 'Modern Suburbs' TCA. Whilst the GTA does not list specific key characteristics for each TCA, the following 'key characteristics' have been extracted from the narrative for each relevant TCA:

Industrial Hinterland TCA:

- Heavy industrial use dominates the area;
- Predominantly flat topography with very little undulation;
- Greenspaces unkempt and overgrown, often covered in litter;
- Wide variety of industrial and commercial buildings varying in size and scale;
- Large amount of concrete and corrugated metal used throughout the sites with little softening from vegetation; and
- Chimney stacks from the cement works are a tall vertical element which rise high into the Northfleet skyline.

Northfleet TCA

- Land use comprises a mixture of both commercial and residential;
- There are limited areas of greenspace, which are generally unmanaged, derelict or in poor condition; and
- Development has been constrained by the physical landform of chalk quarries.

Modern Suburbs TCA

- Topography across the area is predominantly undulating;
- Land use is primarily residential comprising predominantly housing and a small number of blocks of flats;
- Small private garden spaces; and

- On the periphery of the main urban area.

3.23 The full details of the TCAs mentioned above are contained within **Annex EDP 4**, as are the other TCAs located within the 2km.

Thurrock Landscape Capacity Study (2005)

3.24 With regard to the Thurrock Landscape Capacity Study (TLCS), the Essex Project Site is determined as falling within the 'Tilbury and Docks Urban Area' LCA and 'Tilbury Marshes' LCA. The following 'key characteristics' have been extracted from the narrative for both LCAs (emboldening added by EDP where directly relevant to the Project Site and near context):

Tilbury and Docks Urban Area LCA:

- *"Tilbury is a nucleated settlement, which, although located in close proximity to the docks, is separated from the main waterfront industry by a main railway line;*

- *The docks, part of the Port of London, were built in the 1880's and contain large commercial warehouses and distinctive vertical cranes. From within the docks,* ***there are substantial cross-river views****. Housing development within Tilbury is predominantly post-war and includes some tower blocks and flat-roofed housing blocks;*

- ***Adjacent to the docks, a large industrial and commercial area*** *serves Tilbury and contains large warehouses and ASDA supermarket;*

- *There are several areas of publicly accessible greenspace within Tilbury, distributed within housing areas and to the north-east of the settlement (Karting Stadium) ; and*

- *The southern boundary is adjacent to Vange and Fobbing Marshes SSSI."*

Tilbury Marshes LCA:

- *"****Low lying, level landscape****;*

- ***Horizontal landform****;*

- *Large scale landscape;*

- *Network of linear ditches;*

- ***Southern skyline of dock cranes, chimneys, pylons and power lines****; and*

- *Close proximity of residential areas."*

3.25 The full details of the LCAs mentioned above are contained within **Annex EDP 4** as are the other LCAs located within the 2km.

River Thames Landscape Character Reaches (2008)

3.26 A review of the Thames Strategy East (TSE) confirms that the Kent Project Site lies within two Reach Character Areas (RCA), 'Long Reach and Fiddler's Reach' RCA and 'Northfleet Hope' RCA. The Essex Project is similarly located within two RCAs, being the 'Northfleet Hope' RCA and 'Gravesend Reach' RCA. The following 'key characteristics' have been extracted from the narrative for the relevant RCAs (emboldening added by EDP where directly relevant to the Project Site and near context):

Long Reach and Fiddler's Reach RCA:

- *"The Reach contains the **highly visible QEII Bridge**;*
- *This Reach **comprises a fragmented and disjointed patchwork of land uses including large-scale heavy industrial complexes, remnants of marshland giving a semi rural character and pockets of residential development**;*
- *The Reach is particularly important for its archaeological value; and*
- *The **landscape bears the large scars of chalk extraction**."*

Northfleet Hope Reach RCA:

- *"**Both banks of this Reach are dominated by shipping activity and its associated infrastructure and land uses**;*
- ***The chalk ridge that runs close to the river has been extensively quarried and the resulting chalk pits and cliffs are a characteristic feature of Northfleet**; and*
- *The main landmarks in the area are Tilbury Bulk Grain Terminal; **Tilbury Docks** Riverside Wharf; the **London International Cruise Terminal; chimneys at Northfleet**; and Church of Our Lady of the Assumption, Northfleet."*

Gravesend Reach RCA:

- *"This Reach **marks the eastern extent of the more or less continuously urbanised estuary**;*
- *The Reach is particularly important for its strategic defence position. **Tilbury Fort** and New Tavern Fort historically were part of the defences of the river route into London;*

- *Gravesend, a historic market town and former holiday resort, is positioned strategically on the first area of high ground in the Estuary, and characterised by church spires and piers; and*

- *The main landmarks in the Reach are **Tilbury Fort**, Tilbury Power Station, the Church at West Tilbury, Gravesend Town Pier, New Tavern Fort and the Church of St George, Gravesend."*

EDP Character Assessment

3.27 Whilst the above published assessments provide a helpful contextual appreciation of the wider landscape, none provide a sufficiently site-specific assessment to allow a full assessment to be made of the effects of the proposed development on the landscape. In particular, published assessments tend to miss more localised influences on the landscape, such as the effect of traffic or existing development on tranquillity and visual character. Similarly, the differing scales at which the relevant studies were undertaken and their age since publication (all over 10 years ago), results in some inconsistencies where character studies overlap or have changed considerably since publication.

3.28 Thus, EDP has undertaken an appropriately detailed assessment of the Project Site itself and its immediate surroundings, which is described below.

3.29 Site visits have taken place in 2020 in good to excellent weather conditions. The visits were complemented by a review of aerial photography, mapping and field assessments from publicly assessible locations (e.g. from local roads and PRoW).

3.30 This subsection identifies the variation in landscape across the Project Site and its immediate context. Due to the lack of local published landscape character assessments at the sub-county level (namely Dartford Borough) to assist with this LVIA, this LVIA baseline has identified nine Local Landscape Character Areas (LLCAs) as illustrated on **Plan EDP 6** and is in the process of producing a standalone LLCA document. These LLCAs have been based upon review of published national and county level landscape character assessments, EDP site visits and desk study exercises. The boundaries of these LLCAs are in reality, gradual and not fixed, and have been illustrated in line form on plan to provide an understanding of the broad changes in settlement and landscape local to the site. An overview of each LLCA is provided below including their key characteristics, value and sensitivity.

Marshland LLCA

3.31 The Marshland LLCA was found to be generally consistent with the character described in the 'Western Thames Marshes' LCA of the Kent Landscape Character Assessment and the 'Botany Marshes' LCA of the Gravesham Landscape Character Assessment.

3.32 This LLCA is contained entirely within the Kent Project Site and the Swanscombe Peninsula. The key characteristics are considered to be:

- Low-lying, largely open marshland, fragmented in part by built development and areas of higher ground where industrial waste has raised levels. Divided by a network of ditches, dykes, wetlands and scrub;
- Manmade sea wall on south bank of River Thames, variation in topography and scrub/tree colonisation creates some degree of containment across the area and partly restricts views;
- Disused jetties and wharfs on the riverfront, disused industrial buildings and open storage plots on vacant land give a sense of dereliction to the LCA*;*
- Salt marsh edge beyond the flood defence wall, Broadness inlet with associated boat sheds and moorings and jetties along waters edge, together with the presence of the River Thames itself provide a strong sense of place and history to the LCA*;*
- Ditches, marshland and scrub predominate, creating a well vegetated and relatively tranquil natural environment with a sense of detachment from the extensive urban environment in the surrounding area*;*
- Remnants of agricultural land on peninsula west of Botany Marshes;
- Limited public access to marshland restricted to public footpath use and occasional private vehicles for security purposes;
- Limited built form, most of which is abandoned and has been in part recolonised by vegetation; and
- Prominent visual detractors including high voltage electricity transmission lines and pylons including a 190m 'super pylon' LCA and large industrial building on character area boundary. Smaller scale detractors including functional and security fenced aeration lagoons, derelict wastewater treatment plant, HS1 tunnel portal and Port of London Authority radar beacon.

Chalk Pits LLCA

3.33 The majority of the Chalk Pits LLCA is not covered by a previously published LCA, whilst the Bamber Pit is covered by the high-level Kent LCA as being within the 'Dartford and Gravesend Fringes' LCA. Sandwiched between the Swanscombe Peninsula and the Ebbsfleet Valley of the Kent Project Site, the key characteristics of the Chalk Pits LLCA are considered to be:

- Former chalk quarries comprise an unoccupied area confined by chalk cliffs and have a sense of being 'apart' from the surrounding town and peninsula;

- Chalk spines (retained to maintain transport routes such as the A226 London Road and the integrity of the former chalk pits) form distinctive features and 'east-west' barriers in the landscape;

- Views are possible from the elevated chalk spines such as London Road, however, views from within the quarries are very limited due to containment by the cliffs; and

- Mature vegetation covers much of Bamber Pit, with a waterbody located at the bottom. The chalk pits are generally well vegetated along the cliff edges, with varying colonisation by vegetation on the pit floors. Bamber Pit is notably covered with mature vegetation and contains a water body.

Ingress Park LLCA

3.34 The area of Ingress Park LLCA has no previous published LCAs which covers its characteristics and features. The LLCA is located just west of the Swanscombe Peninsula of the Kent Project Site. The key characteristics of the Ingress Park LLCA are considered to be:

- High quality C20th residential area occupying the former Ingress Estate land;

- Ingress Abbey (dates from 1833) located centrally within the residential development, provides a strong sense of place and historic character to the area;

- Former quarrying has altered the landform in the area, with a heavily vegetated chalk cliff forming the southern boundary of the area and a green backdrop to the Ingress Park development;

- Generous areas of public open space; and

- A sense of separation from neighbouring residential areas due to a single access route and containment by the London Road chalk spine.

Northfleet Industrial LLCA

3.35 The Northfleet Industrial LLCA was found to be generally consistent with the character described in the 'Industrial Hinterland' TCA of the Gravesham LCA. The majority of the LLCA is located to the east of the Kent Project Site, whilst a section of it (Manor Way Industrial Estate) passes through between the Marshland LLCA and Chalk Pits LLCA. The key characteristics of the Northfleet Industrial LLCA which comprises Northfleet and Manor Way Industrial Estates and the Swanscombe Cement Works are considered to be:

- Industrial character dominated by industrial works, commercial units, functional architecture and hardstanding;

- Past quarrying excavations and HS1 have altered levels and created a distinctive southern 'chalk cliff' back drop to the western part of the area;

- The area is dis-jointed and lacks legibility due to the constraining factors of the southern chalk spine and HS1 which severs Manor Way, preventing through routes for vehicles and pedestrians*;*

- Views dominated by commercial warehouses and factories, security fencing and yards with limited to no amenity space or planting. Views of the Thames are limited but where they do occur, provide a sense of orientation and place to the LCA; and

- Vegetation is limited across the area with very little amenity planting but considerable tree and shrub colonisation in pockets where quarrying has ceased and/or land parcels have become redundant or disused. This is more prevalent towards the western end of Manor Way Industrial Estate.

Northfleet LLCA

3.36 The Northfleet LLCA was found to be generally consistent with the character described in the 'Northfleet' TCA of the Gravesham LCA. The LLCA is located to the east of the Kent Project Site and is separated from it by the North Kent railway line. The key characteristics of the Northfleet LLCA are considered to be:

- Land use comprises a mixture of both commercial and residential;

- The LCA has a 'linear form' principally created the constraining factor of the chalk spine that runs north-west to south-east through the area and contains the route of the B2175. This chalk spine feature defines the area topographically, creating a physical barrier between 'high level' Northfleet and the 'low level' 'Industrial Northfleet' on the southern bank of the Thames*;*

- The historic core of Northfleet, centred around St. Boltoph Church has a varied architecture but with a number of architectural features present throughout which are typical of the 'Kentish style' such as weather boarding and hanging tiles. This gives a 'sense of place' to the LCA which is largely absent from the architecture of the Northfleet Industrial LCA*;*

- Quarried land to the south and west provides a dramatic drop in elevation. Connectivity is poor and restricted to tunnels through the chalk spine for north-south movement. A caged, high level footbridge over the quarries along Church Path provides a pedestrian link east to west but is restrictive and somewhat daunting for users;

- There are limited areas of greenspace, which are generally unmanaged, derelict or in poor condition; and

- Development has been constrained by the physical landform of chalk quarries, with some areas disused and others currently being redeveloped.

Swanscombe LLCA

3.37 The Swanscombe LLCA falls south of the Chalk Pits LLCA, west of the International LLCA and north of the Ebbsfleet LLCA. The LLCA also falls just west of the Kent Project Site and the key characteristics of the Swanscombe LLCA are considered to be:

- Mixture of mainly Victorian, Edwardian, Inter-war terraced and semi-detached housing centred around the historic centre of St Peter's and St Paul's Church;

- More modern, late 20th century dwellings are located to the south of the railway;

- Public open space is planned and centralised and includes, two recreation grounds and the extensive, Swanscombe cemetery; and

- Broadly, the areas slopes north towards the peninsula from c. 50m above Ordnance Datum (aOD) in the south, to c. 28m aOD in the north, with some local variation.

International LLCA

3.38 The International LLCA falls within the bounds of the Kent Project Site. The key characteristics of the International LLCA are considered to be:

- Baker's Hole Landfill sits within the Ebbsfleet Valley, across land between Swanscombe and the HS1 line/Ebbsfleet International. It comprises two sloping mounds which create a dramatic change to the landform that varies from 6m aOD in the east, to 30m aOD in the west and are predominantly short managed grassland in nature;

- Route of HS1 passes centrally, north to south through the area, with road infrastructure bounding the area to the west and south and the North Kent railway line bounding the area to the north-east. Roads generally cross much of the area;

- Located centrally within the area is Ebbsfleet International train station, a modern steel framed and glazed structure with a large indoor and outdoor concourse and station amenities and car parks, which are very well maintained;

- Towards the south of the area is the River Ebbsfleet and its floodplain which comprises wet woodland, grassland and scrub and a Nursery premises in the far south, adjacent the A2; and

- Wooded vegetation is generally prevalent throughout the area.

Springhead LLCA

3.39 The Springhead LLCA falls adjacent to the east of the Kent Project Site with some minor areas of overlap on the periphery. The key characteristics of the Springhead LLCA are considered to be:

- Topography across the area is predominantly flat;
- Contained by transport infrastructure, being the HS1 line to the west, North Kent Line to the north and a disused railway line which now forms a public path with mature vegetation lining its banks;
- Land use is primarily residential estates with heavy industrial and commercial use dominating the central part the area as well as an extensive sewage works;
- The 'estate' character of the residential and industrial areas lacks architectural diversity and any strong sense of place with few distinguishing characteristics or features;
- Amenity provision in the area is large scale with Northfleet Urban Country Park, a major open space in the area, and Blue Lake located in a former chalk pit being publicly accessible along its northern edge; and
- Wooded vegetation and tree planting is generally prevalent throughout the area.

Ebbsfleet LLCA

3.40 The Ebbsfleet LLCA was found to be broadly consistent with the character described in the 'Dartford and Gravesend Fringes' LCA of the Kent LCA, however it does not account for the considerable development that has taken since the assessment was undertaken. As such, the LLCA has been subject to substantial residential development and repurposing, including provision of public access to lakes in former quarrying works and cliffsides. The key characteristics of the Ebbsfleet LLCA are considered to be:

- An extensive area of regeneration within former chalk quarries bordered by the A2 to the south, B259/South Fleet Road to the east, B255 to the west and existing development at Swanscombe and Greenhithe to the north;
- Residential development is interspersed with lakes and extensive green routes and public open space creating a new 'sense of place' within this transformed landscape;
- Dramatic variation in topography, with housing located on high ground towards the south-east corner of the area, whilst other residential areas are located on much lower ground within former chalk pits to the north and west;

- The Observatory is a prominent angled, modern building that has wide views to the north; and

- Large waterbodies formed by former quarrying are fed by groundwater.

Tilbury Docks LLCA

3.41 The Tilbury LLCA was found to be generally consistent with the character described in the 'Tilbury and Docks Urban Area' LCA of the Thurrock LCA. The key characteristics of the Tilbury Docks LLCA are considered to be:

- A low-lying and level landscape;

- Large commercial warehouses, cranes and dockland buildings front onto the Thames and dominate views within the area;

- Substantial cross-river views to Swanscombe Peninsula from within the docks;

- Where not developed for warehousing, the port is mostly hard surfaced to accommodate the storage and movement of vehicles, containers and bulk materials;

- Four wind turbines located at the southern edge of the docks at the water's edge and form a distinctive feature in the riverscape;

- Tilbury Ferry Terminal, London International Cruise Terminal and floating landing stage feature within the LLCA and are all Grade II* listed for architectural and historic interest; and

- The area is well contained by the River Thames to the south and the London, Tilbury and Southend Railway line defines the northern boundary of the area.

Bluewater LLCA

3.42 The Bluewater LLCA is located to the west of the Ebbsfleet LLCA. The key characteristics of the Bluewater LLCA are considered to be:

- An area of flat land, enclosed by vegetated chalk cliffs created from past quarrying;

- A large retail park with substantial areas of car parking is located within the former quarry;

- A series of lakes surround the Bluewater Shopping Centre and car parks, separating it from the chalk cliffs. Many mature trees also enclose the area and soften the views of built form; and

- Tree, shrub planting and areas of grassland breakup the utilitarian appearance of car parks and built form.

Darenth Downs LLCA

3.43 The Darenth Downs LLCA was found to be generally consistent with the character described in the 'Darenth Downs' LCA of the Kent LCA. The key characteristics of the Darenth Downs LLCA are considered to be:

- An undulating landscape of downland;
- Numerous large blocks of ancient woodland are located throughout the area;
- Beacon Wood Country park and a number of PRoW provide substantial public access across the area;
- Far-reaching views are curtailed by mature woodland which creates, enclosed more intimate areas;
- The area is crossed by major transport route of the A2; and
- Scattered pockets of settlement.

Swanscombe Heritage Park LLCA

3.44 The Swanscombe Heritage Park LLCA is located just west of the Swanscombe LLCA and south-west of the Swanscombe Peninsula. The key characteristics of the LLCA are considered to be:

- An area designated as a Country Park, National Nature Reserve, Local Wildlife Site and geological SSSI, which is associated with well known discoveries of human remains and tools dating back 400,000 years ago;
- Built form is generally absent;
- Semi-natural area between Swanscombe and Greenhithe;
- Area comprises a mixture of small expanses of grassland, dense scrub and woodland;
- Views towards the surrounding areas are limited by mature vegetation within the Heritage Park; and
- The superpylons by the River Thames to the north can be seen from more elevated areas of the park.

Southfleet and Istead Arable Lands LLCA

3.45 The Southfleet and Istead Arable Lands LLCA was found to be generally consistent with the character described in the 'Southfleet Arable Lands' LCA of the Kent LCA and the 'Istead Arable Farmland' LCA of the Gravesend LCA. The key characteristics of the LLCA are considered to be:

- Gently undulating topography with open arable fields;
- Good quality soils developed on the Tertiary Beds overlying the chalk. A generally open arable landscape;
- Open landscape allowing transport routes, pylons and settlement to dominate many areas. Long views to the busy A2 (T) and Kent Thames-side beyond;
- Remnant unkept hedgerows, shelterbelts and woodland copses giving a scruffy and unmanaged feel;
- Fields divided by tracks, roads and occasional hedgerows;
- Orchards north-east of Southfleet;
- Istead Rise modern housing development; and
- Clusters of properties and farmsteads.

Gravesend Southern Fringe LLCA

3.46 The Gravesend Southern Fringe LLCA was found to be consistent with the character described in the 'Gravesend Southern Fringe' LCA of the Gravesend LCA. The key characteristics are:

- Dominant settlement on urban edge of Gravesend;
- Very gently undulating topography rising from north to south;
- Small arable fields historically part of Istead Farmlands landscape;
- Man-made golf course landscape acts as visual detractor;
- Limited tree cover mostly consisting of small clumps of non-native tree material on golf course;
- Wire Fence lines and gappy native hedgerows; and

- Landscape dominated by large roads, Channel Tunnel Rail Link and associated infrastructure.

Wombwell Park LLCA

3.47 The Wombwell Park LLCA was found to be generally consistent with the character described in the 'Inter/Post War Suburbs', 'Modern Suburbs' and 'Industrial Hinterland' TCAs of the Gravesend Townscape Landscape Appraisal. The key characteristics of the Wombwell Park LLCA are considered to be:

- Located on the periphery of the main urban area of Gravesend;
- Predominantly flat topography with very little undulation;
- Land use is primarily residential comprising predominantly housing with a combination of terraced and semi-detached housing and a small number of blocks of flats;
- Residential character a mixture of inter/post war to modern;
- Variety of industrial and commercial buildings varying in size and scale; and
- Small private garden spaces.

Summary of the Character of the Project Site Itself

3.48 Taking the above LLCAs into account, the Project Site and its surrounding varies considerably in character and cannot be ascribed an overarching character, value or sensitivity. Landscape Character will therefore be considered and assessed at the local level as described above.

3.49 The below paragraphs provide a brief narrative summary of the Project Site itself, informed by the character area study and site visits conducted by EDP.

Kent Project Site

3.50 The majority of the Kent Project Site on the Swanscombe Peninsula, which is one of the largest area of open land along the low-lying riverside landscape, on either bank of the River Thames, between the Queen Elizabeth II bridge and Gravesend.

3.51 The Peninsula has a long industrial history relating to the manufacture of cement and the majority of the area is a brownfield site comprising previously developed land, some of which is contaminated. Other parts of the Kent Project Site on the Swanscombe Peninsula that are characteristic of industrial uses include the existing Manor Way, Northfleet and Kent Kraft industrial estates.

3.52 The Swanscombe Peninsula is predominantly a medium to large scale landscape with a generally open, low-lying and windswept character, supporting extensive areas of marshland including Black Duck Marsh, Botany Marsh and Broadness Marsh. Broadness Marsh at the northern tip of the Peninsula was historically a saltmarsh, but now has a raised terrain as a result of Cement Kiln Dust (CKD) tipping and the deposition of river dredging's. A number of drains, filtration systems, aeration lagoons and other features are also present across the peninsular, whilst Broadness and Botany Marshes are bordered in part by industrial uses.

3.53 As such, the landscape fabric across the Swanscombe Peninsular is extremely varied and includes extensive areas of marsh and grassland, semi-mature woodland and scrub, grassed embankments which act as flood defences, and some industrial premises, with public access limited to a small number of public footpaths, including the Saxon Way, which runs along the western flood embankment. Much of the peninsula has re-vegetated naturally across former industrial areas and spoil heaps, but some limited areas of bare ground remain.

3.54 Due to the range of former and current land uses, the Peninsula has an irregular topography because of historical CKD tipping activities and the deposition of dredging's from the River Thames. Notably, two raised areas of tipped material rise to over 12-13m aOD.

3.55 In terms of vertical elements, the skyline is dominated by overhead power lines and pylons in many views which cross the Peninsula on a south-east to north-westerly alignment, and also include a 190m tall 'super pylon' that lifts the transmission lines over the Thames to a similar tower on the northern bank. These lattice towers are the UK's tallest electricity pylons (3rd largest in Europe) and are prominent local landmarks.

3.56 Another notable feature on the Kent Project Site and the Swanscombe Peninsula, includes the HS1 railway which crosses the Peninsula on a south-east to north-westerly alignment. The southern section is in cutting and the remainder in a tunnel. A pumping station that serves to lower ground water adjacent to the tunnel is located to the north-east of the tunnel portal.

3.57 Considering the Peninsular/River Thames interface of the Kent Project Site, the banks of the Peninsula feature occasional jetties and inlets, some of which are used for the mooring and landing of boats. An inlet at the northern end of the Peninsula, known as Broadness Creek, has a number of boat sheds varying in character and maintenance. A small number of public footpaths cross the Kent Project Site.

3.58 The Kent Project Site does not contain any international or national wildlife designations. Part of the Ebbsfleet Marshes Local Wildlife Site (LWS TQ 619738), which includes wet woodland and reed beds, is located in the Ebbsfleet Valley section of the Kent Project Site.

3.59 The Ebbsfleet Valley part of the Project Site is south of the Swanscombe Peninsula, and is an area that has been subject to major change in the last few centuries, primarily through industrial development and quarrying activities which have shaped its character and

identity. The unusual landform comprises a number of 'chalk spines', left over from former quarrying and the land-fill uses, with the distinctive steep, and high rising chalk cliffs an indication the scale of past operations.

3.60 Major infrastructure such as the A2(T), A2260, HS1 and the North Kent Line railway cut across the valley landscape, providing visual and audible disruption. HS1 connects to Ebbsfleet International Station within the Kent Project Site and includes a number of extensive areas of car parks (hardstanding), roads, landscaping and security fencing.

Essex Project Site

3.61 Tilbury is London's primary operational port and offers over 10 km of quayside. The port handles a range of cargoes including ro-ro, container, wood and paper products, grain and liquid and dry bulk materials. Where not developed for warehousing, the port is mostly hard-surfaced to accommodate the storage and movement of vehicles, containers and bulk materials. Located along the Thames bank, at the southern edge of the port stand four wind turbines. As such the character appears entirely industrial and man-made.

3.62 The Essex Project Site itself includes the Tilbury Ferry Terminal, London International Cruise Terminal, floating landing stage (all Grade II* listed) and an extensive area of level-hard surfaced land approximately 11.75 hectare (ha) in area, currently used for vehicle storage.

3.63 It is bounded by railways on its northern and western sides, and a drainage channel to the east. Road access is gained from Fort Road at the south-eastern corner of the site. To the south lies Tilbury Railport, a large logistics shed with railway sidings operated by Maritime Transport Limited.

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Section 4
Baseline Conditions: Visual Amenity

Introduction

4.1 This section identifies those visual receptors that may be able to obtain views to the site, their distribution, character and sensitivity to change.

4.2 Using landform data within a Geographical Information System (GIS), EDP has prepared an initial Zone of Theoretical Visibility (ZTV). The initial ZTVs (**Annex EDP 5** and **6**) are generated using landform height data only and does not take into account other landscape features that may limit the extent of theoretical visibility, such as vegetation and built form. The ZTVs are based on:

- The Project Site in its current form. See **Annex EDP 5**; and
- The Project Site with proposed development at a height parameter across the Project Site. See **Annex EDP 6**.

4.3 With regards to the latter, a ZTV based on the proposed parameters will be included in the assessment once the height parameters across the Project Site are fixed. However, at this stage an initial ZTV is based upon the following indicative broad parameters in order to gain an understanding of the likely spread of intervisibility across the broad study area. The indicative height parameters include, building heights (32m), structures/themed mountain (60m), rollercoasters and rides (40m) and hotels, staff accommodation and multi-storey car park (32m). For the road infrastructure, including assumed improvements to the A2 and introduction of link road to the resort, a figure of 25m has been used.

4.4 This ZTVs illustrates the theoretical visibility based on a 5m digital terrain model (DTM) topographical data (OS Terrain 5), assuming excellent visibility with no atmospheric attenuation. In reality, other components of the landscape such as built form and vegetation will introduce screening effects which, coupled with the atmospheric conditions, will reduce this visibility in some instances. The ZTVs will be reviewed as the development parameters are explored further and refined as the masterplan develops.

4.5 For its size, the visual influence of the Project Site in its current form is relatively limited given the extent of varying topography and built form in the local vicinity. As **Annex EDP 6** demonstrates, the visual influence of the Project Site will increase with development. The visual assessment process will determine the extent of the increase in visual influence as well as the magnitude of any visual effects that arise.

4.6 The ZTV was visited by walking and driving (as appropriate) local roads, PRoW and other publicly accessible viewpoints. Through this exercise the main visual receptors predicted to have actual visibility to the site were identified and the Zone of Primary Visibility (ZPV) was established.

Representative Viewpoints

4.7 The main receptor groups have been identified and described below and are represented by the photoviewpoints presented in **Table EDP 4.1**. Based on fieldwork observations and the findings of the data trawl, these photoviewpoints have been selected to represent the variety of views available from public vantage points towards the site.

4.8 **Plan EDP 8** includes 50 representative viewpoints that have been identified in the ZTV for the Project Site in its current form and of the proposed parameters. These viewpoints are at locations where there are likely to be sensitive visual receptors, including receptors in designated landscapes such as Kent Downs AONB and those on PRoW and at residential properties. These viewpoints will form the basis of the visual assessment, the significance of any effect being assessed in terms of the magnitude of change in the view and the sensitivity of the visual receptor. The location of these views is set out in the table below, however, in keeping with good practice, the proposed viewpoint, photomontage and night-time viewpoints locations for assessment will be agreed with Dartford Borough Council, Gravesham Borough Council and Thurrock Borough Council and reviewed as the project evolves.

Table EDP 4.1: Summary of Representative Photoviewpoints.

PVP. No.	Location	Grid Reference	Distance	Borough	Reason(s) for Selection
1	Footpath DS1 Swanscombe Peninsula	560043, 175925	0m;	Dartford	Recreational users;
2	Footpath DS1, Black Duck Marsh	559507, 175419	15m;	Dartford	Recreational users;
3	Footpath DS1 and NU1, Green Manor Way	560763, 175814	0m;	Dartford/ Gravesham	Recreational users;
4	Footpath DS2, Swanscombe Peninsula	560399, 176033	0m;	Dartford	Recreational users;
5	Galley Hill Way/ Pilgrim's Road	560574, 174879	0m;	Dartford	Road users; Recreational users; Residents;
6	St Peter and St Paul Church Swanscombe	560366, 174004	504m;	Dartford	Recreational users; Residents;
7	Leonard Avenue	560195, 173769	743m;	Dartford	Residents;
8	Rear of Leonard Avenue	560318, 173705	657m;	Dartford	Recreational users; Residents;
9	Swanscombe Heritage Park	559681, 174390	496m;	Dartford	Recreational users;
10	Knockhall Road	559593, 174893	216m;	Dartford	Residents;
11	Ingress Abbey	559129, 175077	390m;	Dartford	Residents;

PVP. No.	Location	Grid Reference	Distance	Borough	Reason(s) for Selection
12	Greenhithe Riverfront, Sara Crescent	558597, 175225	893m;	Dartford	Residents;
13	A2260 looking south	561420, 173368	0m;	Dartford	Road users;
14	A2260 looking north	561402, 173374	0m;	Dartford	Road users;
15	Bakers Hole SSSI and Scheduled Monument near Ebbsfleet International	561349, 174055	0m;	Dartford	Road users; Railway users;
16	Ebbsfleet International Car Park	561222, 174164	0m;	Dartford	Road users;
17	Rosherville Quays, Gravesend Riverfront	563707, 174481	721m;	Gravesham	Recreational users;
18	North Kent Avenue	562092, 174170	162m;	Gravesham	Residents;
19	Northfleet Lighthouse/ Bevan's War Memorial	562221, 174787	697m;	Gravesham	Recreational users; Employees;
20	Opposite Rosherville Primary School	563050, 174075	1km;	Gravesham	Road users; Residents; Students;
21	Stonebridge Road B2175	561570, 174605	200m;	Gravesham	Road users; Residents;
22	Footpath NU1 Botany Marshes near Britannia Refined Metals Ltd	561163, 175615	3m;	Gravesham	Recreational users; Employees;
23	Footpath NU1, Botany Marshes near CEMEX	561169, 175799	15m;	Gravesham	Recreational users; Employees;
24	Thames Path Promoted Route near Charles Park	557883, 175300	1.6km;	Dartford	Recreational users; Employees;
25	High House, Production Park, Purfleet	556435, 178079	3.87km;	Thurrock	Employees; Recreational users;
26	Footpath 170 south of Proctor and Gamble	559266, 177023	1km;	Thurrock	Recreational users;
27	Footpath 141 Stone Ness	558780, 176348	956m;	Thurrock	Recreational users;

PVP. No.	Location	Grid Reference	Distance	Borough	Reason(s) for Selection
28	Opposite Devonshire Place, Devonshire Road	560223, 178167	1.36km;	Thurrock	Road users; Residents;
29	The Promenade, Grays	560533, 177531	697m;	Thurrock	Residents;
30	Timber Court and Coal Court	561216, 177456	761m;	Thurrock	Recreational users; Residents;
31	Grays Beach Riverside Park	561641, 177222	807m;	Thurrock	Recreational users;
32	Footpath 186, Tilbury and Grays	562501, 177474	1.62km;	Thurrock	Recreational users;
33	Chadwell Bypass	563892, 178502	2.7km;	Thurrock	Road users; Residents;
34	St. Mary's Church, Chadwell St. Mary	564635, 178435	2.5km;	Thurrock	Residents;
35	Coalhouse Fort	569143, 176627	4.4km;	Thurrock	Recreational users; Visitors of local attraction;
36	Footpath 68, West Tilbury	566014, 177878	2.3km;	Thurrock	Recreational users;
37	Byway 98, Tilbury Fort	564812, 175217	140m;	Thurrock	Recreational users; Visitors of local attraction;
38	Footpath 146, Tilbury	565088, 175793	282m;	Thurrock	Recreational users;
39	London International Cruise Terminal	564503, 175208	0m;	Thurrock	Recreational users; Commuters; International Cruise Ship passengers; Visitors of local attraction;
40	Railway Street, Northfleet	561515, 174545	141m;	Gravesham	Residents;
41	Footpath NS177, Cobham, Kent Downs AONB	566811, 168939	5.26km;	Gravesham	Recreational users;
42	A227 Wrotham Road	564006, 170460	2.12km;	Gravesham	Road users; Recreational users;
43	New Barn Road, Scadbury Manor	561996, 171519	666m;	Dartford	Road users;
44	Footpath DR126, Park Corner Road, Northend	560702, 172012	523m;	Dartford	Recreational users; Employees;
45	Restricted Byway DR129	561320, 171977	498m;	Dartford	Recreational users; Road users;
46	Candy Dene	561083, 173372	0m	Dartford	Residents;
47	Hall Road Bridge, B262	562127, 172293	0m	Dartford/ Gravesham	Road users;

PVP. No.	Location	Grid Reference	Distance	Borough	Reason(s) for Selection
48	A2260, Ebbsfleet International	561655, 173769	0m	Dartford	Road users;
49	Windmill Hill Park	564849, 173390	1.63km;	Gravesham	Recreational users;
50	Gravesend to Tilbury Ferry	564637, 174786	222m;	Gravesham/ Thurrock	Commuters; International Cruise Ship passengers

Zone of Primary Visibility

4.9 The ZPV is where the proposed development would be visible to the casual observer on foot, cycling, driving or travelling by train where the views would normally be close-ranging and open, the proposal would be an obvious element of the view. Beyond this area, there is a zone of visibility that is less open, being either partly-screened or filtered. Views from within this zone would include the proposal, although it may not be immediately noticeable, but once recognised, would be a perceptible addition to the view. The extent of the proposal within such views would vary, and in some cases, it would be almost indistinguishable as a consequence of both increasing distance and intervening visual screening.

4.10 The visual appraisal will follow the assessment and will illustrate the main determinants of visibility to the Project Site. Some of the likely receptors and Photoviewpoints expected to fall within the ZPV are discussed below.

Visual Receptors

PRoW, Open Access Land and Country Parks

4.11 There are a number of PRoWs within the Project Site and study area, which afford clear views of the site. The location of PRoWs surrounding the Project Site are shown on **Plan EDP 2**. Views of the main body of the site from PRoWs and Open Access Land are generally limited to those within the surrounding 2km.

4.12 **Photoviewpoints EDP 1**, **2**, **3**, **4, 5**, **22** and **23** represent views from the PRoW network within or adjacent to the Project Site boundary and generally have open views over much of Kent Project Site at Swanscombe Peninsula.

4.13 West of the Kent Project Site are a number of PRoWs within 2km with the potential to experience visual effects as a result of the proposed development including Footpath DR4 (**Photoviewpoint EDP 24**), located on the Thames Path Promoted Route near Charles Park. However, existing built form in combination with the predominantly flat topography limit views towards the Project Site, whilst some cross-water views are possible to the northern tip of the Swanscombe Peninsula on the Kent Project Site.

4.14 To the north, there are a number of PRoW on the northern bank of the River Thames, and areas of public open space as well as an 'Other Route with Public Access' (ORPA) with the potential for views towards the Kent Project Site cross water. **Photoviewpoint EDP 26**, **27**, **29**, **30**, and **31** are all taken looking southwards directly towards Swanscombe Peninsula and the Kent Project Site and consist of open, bankside cross water views. The inner parts of the Swanscombe Peninsula of the Kent Project Site are filtered and screened by mature vegetation, whilst further south within the Kent Project Site, there is little to no intervisibility with the Ebbsfleet LLCA/Ebbsfleet Valley. Views from these Photoviewpoints towards the Essex Project Site are screened by the considerable number of industrial and commercial warehouses north-west of the Essex Project Site at Tilbury Docks. On slightly elevated ground is **Photoviewpoint EDP 32** on Footpath 186 between Tilbury and Grays, where the super pylon on Swanscombe Peninsula within the Kent Project Site can be distinguished in the view due to its tall vertical nature. The rest of the Project Site (Kent and Essex Project Sites) is generally screened by built form. Beyond 2km, **Photoviewpoint EDP 36** (Footpath 68, West Tilbury) illustrates views from PRoW on elevated ground to the north-east of the Kent Project Site and north of the Essex Project Site. Views are distant and in part screened by large built form at Tilbury Docks.

4.15 To the east of the Essex Project Site, views would be possible from within close range as represented by **Photoviewpoint EDP 37** (Byway 98, Tilbury Fort) which has open views from near Tilbury Fort to the Essex Project Site. Similarly, **Photoviewpoint EDP 38**, taken from Footpath 146 has relatively open views west towards the Essex Project Site. Views from these two locations towards the Kent Project Site are limited by the large-scale built form associated with Tilbury Docks which serve to screen views. Further east beyond 2km, views become far more limited due to the predominately flat topography associated with the edges of the Thames, such that representative **Photoviewpoint EDP 35**, (taken from an informal footpath which connects to the nearby PRoW network) has little intervisibility due to mature vegetation and built form interrupting views. **Photoviewpoint EDP 49** is taken east of the Kent Project Site, and south of the Essex Project Site from a public park on elevated ground at Windmill Hill. Views west towards the Kent Project Site are filtered by mature vegetation, whilst views to the Essex Project Site on the northern bank of the Thames are far more open. **Photoviewpoint EDP 19** is taken from a footpath passing Northfleet Lighthouse and Bevan's War Memorial and looks north-west towards the Kent Project Site. However, views are characterised by the immediate industrial/commercial uses and views are interrupted by large-scale built form and subtle undulations in topography.

4.16 To the south, **Photoviewpoint EDP 43**, **44** and **45** represent views from the PRoW network south of the A2. The context these PRoW are set within is far more agricultural in character and have fairly open views northwards to the A2 section of the DCO boundary and beyond. Views further north are limited by a combination of subtle variations in topography, mature vegetation and the built form of the A2 itself. Further south, **Photoviewpoint EDP 41** is taken from Footpath NS177 within Jeskyns Country Park and the Kent Downs AONB and provides elevated views northwards, however a combination of distance, topography and mature vegetation screens visibility with the Project Site.

4.17 **Photoviewpoint EDP 6** represents available views from the recreation ground associated with St Peter and St Paul's Church Swanscombe. Views northwards to Swanscombe Peninsula are predominantly screened by built form and vegetation, whilst the super pylon located on the Kent Project Site can be distinguished in the view. **Photoviewpoint EDP 8** represents views from a recently completed park between the new Castle Hill development and Leonard Avenue. Elevated open views over development are available from this location east to the Ebbsfleet Valley, whilst southward views to the A2 sections of the Kent Project Site are hindered by undulating topography from former quarrying, in combination with mature vegetation. In terms of users of Swanscombe Skull Site and National Nature Reserve, views are represented by **Photoviewpoint EDP 9** which look north to Swanscombe Peninsula, where the super pylon on the Kent Project Site dominates as a vertical feature.

4.18 It is considered that, due to the focus on the surrounding landscape and interest in the local area, users of local PRoW throughout the study area, although with some de-sensitisation where views are possible of existing built form and large man-made features, are considered to be high sensitivity receptors.

Road Users

4.19 Although there are a number of minor roads within the study area, with the exception of those immediately adjacent to the site, only a few, if any, afford clear views of the Project Site. Due to a combination of existing built form, mature landscape features and localised changes in topography, views from roads are frequently contained to the immediate setting.

4.20 Roads passing through the Project Site itself will have close range, predominantly open views of some form of the proposed development in close proximity. Representative views from Photoviewpoints within the DCO boundary include **Photoviewpoint EDP 5** (Galley Road), **13**, **14** (A2260), **15**, **16** (International Way), **39** (Ferry Road), **47** (Hall Road Bridge, B262 and A2) and **48** (A2260).

4.21 The B2175 runs from Gravesend to Northfleet on a remnant chalk spine. **Photoviewpoint EDP 20** illustrates views from this route looking north-west towards Swanscombe Peninsula and the Kent Project Site, of which views are limited by large scale urban form, topography and mature vegetaion, whilst the super pylon features prominantly above all of these. Further west the route drops in elevation to Northfleet Industrial Estate and Stonebridge Road provides elevated, funnelled views in the direction of the main body of Swanscombe Peninsula and Kent Project Site as illustrated by **Photoviewpoint EDP 21**.

4.22 To the south, **Photoviewpoint EDP 43**, **44** and **45** represent views from the local road network south of the A2. These routes have a more rural context than the majority in the near vicinity of the Project Site which are generally confined to the urban area. These routes have oblique, glimpsed views northwards to the A2 section of the DCO boundary and beyond. Views further north are limited by a combination of subtle variations in topography, mature vegetation and the built form of the A2 itself.

4.23 On the northern side of the River Thames, **Photoviewpoint EDP 28** represents elevated, funnelled views in a southerly direction towards the Kent Project Site. In comparison, **Photoviewpoint EDP 38** represents lower views on more level ground along Fort Road which links Tilbury Docks to Tilbury and West Tilbury to the north. Views from this route are relatively open towards the Essex Project Site in the west, although views towards the Kent Project Site are screened by the large scale built form associated with Tilbury Docks. Further north on more elevated ground, distant views are available from Chadwell Bypass (**Photoviewpoint EDP 33**) to the Project Site.

Residential Dwellings/Groups

4.24 This assessment has focused on views from publicly accessible locations. Views from private residential properties, although likely to be of high to very high sensitivity to changes in the view, are not protected by national planning guidance or local planning policy. However, to inform good site masterplanning of the development site and limit unnecessary impacts, the visual amenity of domestic dwellings in close proximity to the proposals is considered as part of this assessment.

4.25 Some groups of residential receptors remain likely to experience some views towards the Project Site from within the curtilages of their properties. However, due to the distribution and orientation of residential properties and intervening vegetation and urban form within the landscape surrounding the Project Site, the number of private residential properties with potential views of the proposed development is limited, particularly as the vast majority of views have a reduced susceptibility (and sensitivity) through prevalance of urban form. Representative views from resdidential areas include **Photoviewpoints EDP 5**, **6**, **7**, **8**, **11**, **12**, **18**, **20**, **21**, **23**, **28**, **29**, **30**, **33**, **34**, **40**, **42** and **46**. The sensitivity of residential receptors is dependent, to some extent, on the room(s) and the activities of people in those rooms, from which the site is visible. Residents with visibility from rooms normally occupied in waking hours will generally have a very high sensitivity, with a lower sensitivity from bedrooms and rooms from which there may be no expected view, for example bathrooms.

Proposed Wireline Photomontage Selection

4.26 25 of the representative photoviewpoints have been selected for wireline photomontage production and agreement to this will be sought through consultation with TBC, GBC and DBC as part of the design development and assessment process. These locations are indicated by orange markers on the Photoviewpoint Location Plan (**Plan EDP 8**). These locations have been selected based on the following criteria:

- Coverage of views from north, south, east and west towards the Project Site;
- Coverage of a range of receptors, e.g. walkers on PRoW, road users; and
- Coverage of identified sensitive receptors, e.g. users of listed buildings, viewers within country parks, conservation areas.

Night Photoviewpoint Selection

4.27 10 of the representative photoviewpoints have been selected for night time views to capture baseline light during dark hours. Similarly, agreement to these locations will be sought through consultation with TBC, GBC, and DBC as part of the design development and assessment process. These locations are indicated by black markers on the Night Photoviewpoints Plan (**Plan EDP 9**). These locations have been selected based on the coverage of views from north, south, east and west into the site and the majority are taken where receptors are likely to be at night (roads, settlements and dwellings).

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Section 5
Predicted Effects and Mitigation

Introduction

5.1 This report has outlined the scope and methodology that has been adopted for the assessment of landscape and visual effects of the proposed development.

5.2 The assessment follows industry standard guidelines (GLVIA3) and has been scoped based on the reduced potential for effects with distance from the site. An initial 6km study area provided a comprehensive basis for further refinement, once data trawls and ZTV's had identified the extent of sensitive receptors and likelihood of significant impact. Given the visual containment in a variety of directions and strong pre-existing urban context, a 2km detailed study area was identified to focus the assessment on the receptors most likely to experience significant change.

Predicted Effects

5.3 The landscape and visual assessment will examine the current landscape and visual baseline conditions within the site and evaluate the site in its broader context, including landscape and landscape related designations, as illustrated on **Plan EDP 2**.

5.4 The assessment process will involve an iterative analysis of the likely landscape and visual effects of the evolving development proposals. Where likely significant adverse effects cannot be avoided through design, additional mitigation measures will be considered.

5.5 The most notable landscape effect as a result of the development would be the change in character from a mosaic of marshland, scrub, cleared brownfield land, former quarries, industrial works and disused industrial works to an Entertainment Resort and associated infrastructure across much of the Project Site. Other potential effects include the removal of sections of hedgerow and trees to allow for access and layout, together with the planting of new hedgerows and trees to strengthen the structure of the landscape.

5.6 The main potential likely significant landscape and visual effects of the proposed development during construction are anticipated to include:

- Security set-up activities;
- Removal of trees/scrub vegetation associated with site clearance and construction works throughout the Project Site;
- Ground treatment and CKD remediation activities as well as soil investigation work and treatment;

- Land re-profiling and re-grading;
- Tunnel construction through chalk spines and vehicular haulage route construction;
- Laydown, storage compound and welfare area construction;
- Establishment of batching plant on-site;
- Identification, relocation and re-provision of utility infrastructure, including potential diversion of some existing drainage features and new drainage works;
- Construction of transport infrastructure elements, events spaces, attractions, hotels, parking structures, other buildings and hard landscaped areas; and
- Creation of a new jetty on the River Thames to facilitate access by boat for the delivery of construction materials.

5.7 The main potential likely significant landscape and visual effects of the proposed development once completed, irrespective of any mitigation measures, are summarised below.

- Potential landscape impacts caused by the operational development would generally be localised in scale and restricted to the change in land use and character across the Project Site itself and change in character in the immediate environs as a result of changes in views;
- Changes to the character of the landscape of the Project Site, through alteration of land use introduction of new temporary and permanent built features and infrastructure would give rise to permanent, long-term impacts on landscape character. A permanent, long-term impact on landscape character would occur due to physical impact on landscape within the Project Site including ground remodelling, tunnelling and the introduction of new built and natural features within existing scrub, marsh and former and existing industrial land. Whilst the scale of change in built form and the loss of some natural habitat is likely to give rise to adverse landscape and visual impacts across some parts of the site, the change in character from run-down former industrial site/industrial dump to a vibrant entertainment resort would be beneficial in others. There would also be additional beneficial effects such as the creation of new habitats and enhancement of existing habitats across the peninsula and within the wider DCO boundary;
- The increase in movement of vehicles and people within the Project Site and surrounding area including an increase in river traffic as well as an increase in the volume of light pollution from both street lighting, floodlighting and internal lighting of buildings are also likely to give rise to adverse visual, noise and landscape character impacts during the hours of darkness as well as during the day;

- There would be adverse and beneficial physical impact on landscape elements and features within the Project Site caused by the localised removal of existing landscape features such as marshland, scrub as well as removal of disused and run-down built elements within the site;

- Similarly there would be adverse and beneficial effects of the geological and hydrological features within the Project Site caused through land re-profiling and regrading, with redirection and enhancement of waterbodies; and

- Potential adverse visual effects upon close proximity views from roads include (but are not limited to) the A2, A226, A296, A2260, B259, B262, Galley Hill Road and Ferry Road; National Cycle Routes, PRoW, Swanscombe Heritage Park (Country Park) Botany Marshes, river traffic, HS1 and North Kent Line and residential receptors due to visibility of the completed scheme (including built development, traffic and lighting).

Potential Effects upon the Metropolitan Green Belt

5.8 With regard to the Metropolitan Green Belt, given the small area of land potentially affected and the limited nature of the works, effects upon the spatial nature of this designation are expected to be limited.

5.9 The anticipated works to the A2 access corridor are likely to experience minor changes due to the A2(T)/B259 junction improvement works. Considered alongside landscape and visual mitigation strategies, it is anticipated that the proposed access corridor and junction improvements would be successfully integrated into the landscape with limited significant adverse effects and similar in nature to the baseline scenario. Similarly, the effects upon the openness and permanence of the Green Belt are not expected to be affected to a notable degree.

Potential Mitigation

5.10 A number of opportunities exist to improve and enhance the structure of the landscape across the area, which has been partially degraded and fragmented by quarrying, industrial use and decline. A strong framework of green infrastructure across the site will be delivered incorporating hedgerow and woodland planting as well as enhancements to marshland and saltmarsh. Creation of public open space that will include connectivity to the landscape beyond the Project Site will also bring a number of biodiversity, landscape and recreational connectivity benefits. As stated within *Green Infrastructure: An integrated approach to land use* (Landscape Institute):

"Green Infrastructure is the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect villages, towns and cities. Individually, these elements are GI assets, and the roles that these assets play are GI functions. When appropriately planned, designed and managed, the assets and functions have the potential to deliver a wide range of benefits – from providing sustainable transport links to mitigating and adapting the effects of climate change."

5.11 As such, a preliminary landscape strategy is currently being conceptualised, identifying constraints and opportunities to protect and enhance green infrastructure across the Project Site. Key opportunities to improve the green infrastructure network include:

- Provision of high quality public open space and community routes, utilising the Project Site's riverside landscape framework where possible;
- Enhancement of biodiversity corridors within the Project Site, particularly areas of wet marshland and saltmarsh, seeking opportunities to extend these areas where feasible;
- Retention of existing ecologically important features and habitats within the Project Site where possible, particularly where these relate to marshland areas;
- Enhancement of pedestrian/cycle connections through the site;
- Provision of Sustainable Drainage Systems;
- Delivery of a net gain in tree planting across the site to address climate change; and
- Development of a sensitive lighting strategy which follows key parameters designed to limit light spill such as maximum heights, directional units and specific light sources.

Section 6
Summary and Conclusions

6.1 The Environmental Dimension Partnership Ltd (EDP) has been commissioned by The London Resort Company Holdings Ltd to undertake a Landscape and Visual Baseline Assessment to inform the design of a proposed entertainment resort and associated infrastructure at Swanscombe Peninsula, Ebbsfleet Valley and Tilbury Docks, which is to be the subject of a DCO application.

Summary

6.2 The findings show that in landscape terms:

- The site is not covered by any statutory landscape designations and will be designed and developed in accordance with national and local landscape planning policy;
- The Project Site is located across numerous published LCAs, TCAs and RCAs. EDP has conducted its own Landscape Character Assessment based on published information, site visits and desktop research; and
- The Project Site features a number of other considerations that add some landscape value to it:
    - Black Duck, Broadness and Botany marshes all located within the Swanscombe Peninsula of the Kent Project Site;
    - Ancient Woodland bounding and partially within the DCO boundary along the A2 corridor;
    - A number of PRoW that provide access across the site; and
    - Swanscombe Skull Site, Country Park and National Nature Reserve adjacent to the southwest of the Swanscombe Peninsula are of the Kent Project Site.

6.3 In terms of visual amenity:

- The generally flat vale landscape character that the Project Site is contained within contributes towards the relative visual containment of the Project Site;
- PRoW that pass through the Project Site have open views of the site, whilst those in close proximity have open to screened views;
- Beyond 2km, views from PRoW are generally filtered by the combination of intervening trees, hedgerows, built form and gently undulating topography;

- Views from the local road network are similarly limited to the road network which passes through the Project Site, and from within the surrounding 2km;

- Views from the rail network are limited to the stretch of railways of the HS1 line and North Kent Line which pass through the DCO boundary; and

- There are a number of individual and groups of dwellings within the visual envelope of the Project Site, primarily within 2km from the Project Site or on more distant, elevated ground to the north and south.

Conclusions

6.4 The site is not covered by any statutory landscape designations and could be designed and developed in accordance with national and local landscape planning policy.

6.5 There are no significant constraints to development in landscape, visual and arboricultural terms. However, development of the site in the manner proposed would alter the character of the landscape in the local area.

6.6 Whilst the landscape is not subject to a protective designation, it is crossed by PRoW and is visible to a variety of receptors locally. Detractors such as the noise and movement from the adjacent residential and industrial areas, main roads and railway lines strongly 'urbanise' the landscape in perceptual and sensory terms such that the Project Site does not have the character of open rural countryside.

6.7 Opportunities exist to improve and enhance the structure of the landscape across the area, which has been partially degraded and fragmented with the intensification of industrial and commercial practices. A strong framework of green infrastructure across the Project Site is likely to be required as mitigation and, incorporating hedgerow and woodland planting and connectivity to the landscape beyond the Project Site.

Annex EDP 1
GLVIA Glossary of Terms

TERM AND DEFINITION
Baseline
The existing (pre-development) landscape and visual context of a study area, including landscape fabric, landscape character and existing views. The landscape baseline is not static and may be changing for various reasons. The landscape baseline can also consider such factors and describe the likely future landscape character of the landscape, without the proposed development.
Effects
A predicted change in the environmental baseline as a result of the proposed development. Effects can be positive or negative.
Field Pattern
The pattern of hedges and walls that define fields in farmed landscapes (LI/IEMA 2002).
Intervisibility
Two points on the ground or two features are described as intervisible when visible from each other.
Landscape
Landscape results from the way that different aspects of our environment (physical, social, aesthetic and perceptual) interact together and are perceived by us: • Physical elements – e.g. geology, landform, soils, flora and fauna; • Social elements – e.g. land use, enclosure patterns, and the patterns, form and scale of settlements and other built development; • Aesthetic factors – e.g. colour, form, visual texture and pattern, sounds, smells and touch; and • Perceptual factors – e.g. memories, associations, stimuli and preferences.
Landscape Capacity
The degree to which a particular landscape character type or area is able to accommodate change without significant effects on its character. Capacity is likely to vary according to the type and nature of change being proposed.
Landscape Character
Landscape character arises from a distinct, recognisable and consistent pattern of physical and social elements, aesthetic factors and perceptual aspects in the landscape.
Landscape Character Areas (LCAs)
Single unique areas that are discrete geographical areas containing one or more landscape types.
Landscape Character Types (LCTs)
Generic units of landscape that display a distinct, consistent and recognisable landscape character.
Landscape Condition
Description of the maintenance and condition of landscape elements and the degree to which landscape elements are representative of the landscape character area.
Landscape Element
A physical component (both natural and manmade) of the landscape.
Landscape Fabric
The elements and features that constitute the physical components of the landscape, including ground vegetation, hedgerows, trees, shrubs, walls, fences and vernacular structures.
Landscape Units
An umbrella term for landscape character areas and landscape character types.

TERM AND DEFINITION
Landscape Value
The importance or value of the landscape to society, usually based on landscape designations or policies as indicators of recognised value.
Mitigation
Measures, including any process, activity or design that will avoid, reduce, remedy or compensate for the predicted effects of a development on the environmental baseline.
Public Access
• **Definitive rights of way** – public footpaths, bridleways, cycle routes, Byways Open to All Traffic (BOATS) and highways. Shown on Definitive Rights of Way maps held by the Local Authority; • **Permissive paths and bridleways** – routes where there is public access with the permission of the landowner. Such routes are usually closed at least one day a year to prevent establishment of a public right of way; • **Public open space** – areas designated for specified public uses, usually in the ownership of the Local Authority. Includes parks and recreation grounds. Shown on Local Development Plans; • **Beaches** – the public have permitted access to much of the foreshore (intertidal zone – between high and low tide marks) owned by the Crown Estate, and on land above high water mark owned by the Local Authority. Some beaches above high tide mark are privately owned and some beaches and foreshore have restricted access for military purposes; • **Access land** – land where public access is currently permitted with the permission of landowners. Includes land outlined in purple on the OS Explorer (1:25,000) sheets and with: o No symbol – land open to public with permission of owners; o White oak leaf in purple box – National Trust, always open; o Purple oak leaf in white box – National Trust limited access; o Tree symbols in purple box – Forestry Commission; o Single leaf in purple box – Woodland Trust; and o White "AL" in purple box – other access land. • **Open access land** – areas of mountains, moor, heath, down, common land and coastal foreshore that have been designated under Section 2 of the Countryside and Rights of Way Act 2000. The right of access is for walkers only and does not extend to cycling, horse riding or driving a vehicle, nor does the right of access apply to developed land, gardens or cultivated land. Under the CRoW Act 2000, there was a process of consultation that allowed the right of appeal for those with a legal interest in the land, and for sensitive ecological or archaeological sites to be excluded. Conclusive maps showing the areas designated as open access land (Registered Common Land and Open Country) are now available from Natural England (in England) and the Countryside Council for Wales (in Wales).
Viewing Distance
That distance that a viewpoint illustration should be held from the eye in order for the illustration to match the scale of the actual view when used in the field to identify the location and scale of the proposed development.
Visibility
Visibility is a measure of the distance that can be seen by the human eye at any one time. Daylight visibility will depend on several factors, including: • Atmospheric transparency (governed by the solid and liquid particles held in suspension in the atmosphere); • Degree of contrast between an object and the background against which it is observed; • Position of the sun; and • Observer's visual acuity.
Visual Receptor(s)
An individual observer or group of observers who are capable of experiencing a change in the view.

TERM AND DEFINITION
Zone of Theoretical Visibility (ZTV)
The ZTVs consider the 'bareground' situation and assume excellent visibility with no atmospheric attenuation. The ZTVs therefore represent the maximum potential, theoretical visibility i.e. the worst-case situation. In reality, other components of the landscape such as forestry, trees, buildings etc. will introduce screening effects which, coupled with the atmospheric conditions, will reduce this visibility, in some instances to a considerable extent.

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Annex EDP 2
Assessment Methodology

Introduction

A2.1 This section provides a methodology for landscape and visual impact assessment as used by EDP.

Methodology

A2.2 The assessment methodology for assessing landscape and visual effects prepared by EDP is based on the following best practice guidance:

- Guidelines for Landscape and Visual Impact Assessment – Third Edition (LI/IEMA, 2013); and
- An Approach to Landscape Character Assessment (Natural England, October 2014).

A2.3 Other reference documents used to understand the baseline position in landscape terms comprise published landscape character assessments appropriate to the Project Site's location and the nature of the proposed development.

A2.4 The nature of landscape and visual assessment requires both objective analysis and subjective professional judgement. Accordingly, the following assessment is based on the best practice guidance listed above, information and data analysis technique, it uses quantifiable factors wherever possible and subjective professional judgement where necessary, and is based on clearly defined terms (see Glossary, **Annex EDP 1**).

Landscape Assessment

A2.5 Landscape effects derive from changes in the physical landscape fabric that may give rise to changes in its character and how this is experienced. These effects need to be considered in line with changes already occurring within the landscape and which help define the character of it.

A2.6 Effects upon the wider landscape resource, i.e. the landscape surrounding the development, requires an assessment of visibility of the proposals from adjacent landscape character areas, but remains an assessment of landscape character and not visual amenity.

Visual Assessment

A2.7 The assessment of effects on visual amenity draws on the predicted effects of the development, the landscape and visual context, and the visibility and viewpoint analyses,

and considers the significance of the overall effects of the proposed development on the visual amenity of the main visual receptor types in the study area.

Identifying Landscape and Visual Receptors

A2.8 This assessment has sought to identify the key landscape and visual receptors that may be affected by the changes proposed.

A2.9 The assessment of effects on landscape as a resource in its own right draws on the description of the development, the landscape context and the visibility and viewpoint analysis to identify receptors, which, for the proposed development may include, but not be limited to, the following:

- The landscape fabric of the Project Site;
- The key landscape characteristics of the local context;
- The 'host' landscape character area that contains the proposed development;
- The 'non-host' landscape character areas surrounding the host character area and may be affected by the proposals (where relevant); and
- Landscape designations on a national, regional or local level (where relevant).

A2.10 The locations and types of visual receptors within the defined study areas are identified from Ordnance Survey maps and other published information (such as walking guides), from fieldwork observations and from local knowledge provided during the consultation process. Examples of visual receptors may include, but not be limited to, the following:

- Settlements and private residences;
- Users of National Cycle Routes and National Trails;
- Users of local/regional cycle and walking routes;
- Those using local rights of way – walkers, horse riders, cyclists;
- Users of open spaces with public access;
- People using major (motorways, A and B) roads;
- People using minor roads; and
- People using railways.

Assessment of Landscape and Visual Effects

A2.11 The assessment of effects on the landscape resource includes consideration of the potential changes to those key elements and components that contribute towards recognised landscape character or the quality of designated landscape areas; these features are termed landscape receptors. The assessment of visual amenity requires the identification of potential visual receptors that may be affected by the development. As noted, following the identification of each of these various landscape and visual receptors, the effect of the development on each of them is assessed through consideration of a combination of:

- Their overall sensitivity to the proposed form of development, which includes the susceptibility of the receptor to the change proposed and the value attached to the receptor; and

- The overall magnitude of change that will occur - based on the size and scale of the change, its duration and reversibility.

Defining Receptor Sensitivity

A2.12 A number of factors influence professional judgement when assessing the degree to which a particular landscape or visual receptor can accommodate change arising from a particular development. Sensitivity is made up of judgements about the 'value' attached to the receptor, which is determined at baseline stage, and the 'susceptibility' of the receptor, which is determined at the assessment stage when the nature of the proposals, and therefore the susceptibility of the landscape and visual resource to change, is better understood.

A2.13 Susceptibility indicates "*the ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences*"[8]. Susceptibility of visual receptors is primarily a function of the expectations and occupation or activity of the receptor. A degree of professional judgement applies in arriving at the susceptibility for both landscape and visual receptors and this is clearly set out in the technical appendices to this assessment.

A2.14 A location may have different levels of sensitivity according to the types of visual receptors at that location and any one receptor type may be accorded different levels of sensitivity at different locations.

A2.15 **Table EDP A2.1** provides an indication of the criteria by which the overall value of a landscape receptor is judged within this assessment. **Table EDP A2.2** provides an indication of the criteria by which the overall susceptibility of the landscape in relation to the type of development proposed, in this case, Commercial and Transport Infrastructure.

[8] Landscape Institute and Institute of Environmental Management and Assessment (2013) Guidelines for Landscape and Visual Impact Assessment, Third Edition Page 158.

Table EDP A2.1: Assessment of Landscape Value.

Landscape Character Area Value				
Very Low	**Low**	**Medium**	**High**	**Very High**
Undesignated countryside and landscape features; absence of distinctive landscape characteristics; despoiled/-degraded by the presence of many landscape detractors.	Undesignated countryside and landscape features; few distinctive landscape characteristics; presence of landscape detractors.	Undesignated countryside and landscape features; some distinctive landscape characteristics; few landscape detractors.	Locally designated/valued countryside (e.g. Areas of High Landscape Value, Regional Scenic Areas) and landscape features; many distinctive landscape characteristics; very few landscape detractors.	Nationally/internationally designated/valued countryside and landscape features; strong/distinctive landscape characteristics; absence of landscape detractors.
Consideration of Other Value Criteria				
Condition/Quality				
A landscape with no or few areas intact and/or in poor condition.	A landscape with few areas that are intact and/or in a reasonable condition.	A landscape with some areas that are intact and/or in reasonable condition.	A landscape with many areas that are intact and/or in a reasonable condition.	A landscape with most areas intact and/or in good condition.
Scenic Quality				
A landscape of little or no aesthetic appeal.	A landscape of low aesthetic appeal.	A landscape of some aesthetic appeal.	A landscape of high aesthetic appeal.	A landscape of very high aesthetic appeal.
Rarity and Representativeness				
A landscape that does not contain rare landscape types or features.	A landscape that contains few distinct landscape types or features.	A landscape that contains distinct but not rare landscape types or features.	A landscape that contains one or more rare landscape types or features.	A landscape that is abundant in rare landscape types or features.
Conservation Interests				
A landscape with no or very limited cultural, geological and/or nature conservation content.	A landscape with limited cultural, geological and/or nature conservation content.	A landscape with some cultural, geological and/or nature conservation content.	A landscape with rich cultural, geological and/or nature conservation content.	A landscape with abundant cultural, geological and/or nature conservation content.
Recreation Value				
A landscape with no or very limited contribution to recreational experience.	A landscape with no or limited contribution to recreational experience.	A landscape that provides some contribution to recreational experience.	A landscape that provides a good contribution to recreational experience.	A distinct landscape that forms a strong contribution to recreational experience.

Landscape Character Area Value				
Perceptual Aspects				
A landscape with prominent detractors, probably part of the key characteristics.	A landscape with landscape detractors, and is not particularly wild, tranquil or unspoilt.	A landscape with few detractors that also retains some perceptual values.	A landscape with very few detractors that has a relatively wild, tranquil or unspoilt landscape.	A wild, tranquil or unspoilt landscape without noticeable detractors.
Cultural Associations				
A landscape without recorded associations.	A landscape with few recorded associations.	A landscape with some and/or moderately valued associations.	A landscape with numerous and/or highly valued associations.	A landscape of rich and/or very highly valued associations.
Overall Judgement of Landscape Value				
Very Low value – receptor largely reflects very low value criteria above.	**Low value** – receptor largely reflects low value criteria above.	**Medium value** – receptor largely reflects medium value criteria above.	**High value** – receptor largely reflects high value criteria above	**Very High value** – receptor largely reflects very high value criteria above.

Table EDP 2.2: Assessment of Landscape Susceptibility to Commercial and Transport Infrastructure Development.

Very Low Susceptibility to Change	**Low Susceptibility to Change**	**Medium Susceptibility to Change**	**High Susceptibility to Change**	**Very High Susceptibility to Change**
Pattern, Complexity and Physical Susceptibility to Change from Commercial and Transport Infrastructure Development				
A simple, monotonous and/or degraded landscape with common/indistinct features and minimal variation in landscape pattern.	A landscape with an occasionally intact pattern and/or with a low degree of complexity and with few features in reasonable condition.	A landscape with some intact pattern and/or with a degree of complexity and with features mostly in reasonable condition.	A landscape with mostly patterned/-textured or a simple but distinctive landscape and/or with high value features and essentially intact.	A strongly patterned/-textured or a simple but distinctive landscape and/or with high value features intact.

Very Low Susceptibility to Change	Low Susceptibility to Change	Medium Susceptibility to Change	High Susceptibility to Change	Very High Susceptibility to Change
Visual Susceptibility to Change from Commercial and Transport Infrastructure Development				
A very enclosed landscape that contains or strongly filters views, with an absence of visual landmarks and a lack of intervisibility with designated landscapes.	A predominantly enclosed landscape that contains or at filters most views, with very few views of visual landmarks or intervisibility with designated landscapes.	A partially enclosed landscape with some visual containment and filtering, possible limited intervisibility with visual landmarks and designated landscapes.	An open landscape with intervisibility and limited visual filtering or enclosure. Prominent visual landmarks may be present, and/or intervisibility with designated landscapes may occur.	An open or exposed landscape with extensive intervisibility and no or very limited visual filtering or enclosure. Prominent visual landmarks are present, and/or intervisibility with designated landscapes occurs.
Experiential Susceptibility to Change from Commercial and Transport Infrastructure Development				
A landscape with prominent visual and/or aural intrusion and close relationship with large scale built development/-infrastructure. A landscape that contains many light sources and essentially suffers from widespread light pollution.	A busy landscape with frequent visual and/or aural intrusion and nearby relationship with large scale built development/-infrastructure. A landscape that contains frequent light sources and suffers from light pollution.	A partially tranquil landscape with limited visual and/or aural intrusion, some relationship with built development/ infrastructure may be present. A landscape that contains some light sources.	A tranquil landscape with limited visual and/or aural intrusion, some relationship with built development/-infrastructure may be present. A landscape that contains few light sources.	A very tranquil, wild or remote landscape with little or no sense of visual or aural intrusion. A landscape that contains very few light sources and provides dark skies.
Overall Judgement of Susceptibility to Change from Commercial and Transport Infrastructure Development				
Very Low susceptibility – receptor largely reflects very low criteria above.	**Low susceptibility** – receptor largely reflects low criteria above.	**Medium value** – receptor largely reflects medium criteria above.	**High susceptibility** – receptor largely reflects high criteria above.	**Very High susceptibility** – receptor largely reflects very high criteria above.

A2.16 **Table EDP A2.3** provides an indication of the criteria by which the overall sensitivity of the landscape resource is judged within this assessment and considers both value and susceptibility independently.

Table EDP A2.3: Assessment of Landscape Sensitivity.

		Susceptibility of Landscape Receptor				
		Very High	**High**	**Medium**	**Low**	**Very Low**
Receptor Value	**Very High**	Very High	Very High/High	High	High/Medium	Medium
	High	Very High/High	High	High/Medium	Medium	Medium/Low
	Medium	High	High/Medium	Medium	Medium/Low	Low
	Low	High/Medium	Medium	Medium/Low	Low	Low/Very Low
	Very Low	Medium	Medium/Low	Low	Low/Very Low	Very Low

A2.17 For visual receptors, judgements of susceptibility and value are closely interlinked considerations. For example, the most valued views are those that people go and visit because of the available view, and it is at those viewpoints that their expectations will be highest and thus most susceptible to change.

A2.18 **Table EDP A2.4** provides an indication of the criteria by which the overall sensitivity of a visual receptor is judged within this assessment and considers both value and susceptibility independently.

Table EDP A2.4: Visual Receptor Sensitivity.

Category	Visual Receptor Criteria
Very High	Designed view (which may be to or from a recognised heritage asset or other important viewpoint), or where views of the surroundings are an important contributor to the experience. Key promoted viewpoint, e.g. interpretative signs. References in literature and art and/or guidebooks tourist maps. Protected view recognised in planning policy designation. Examples may include views from residential properties, especially from rooms normally occupied in waking or daylight hours; national public rights of way, e.g. National Trails and nationally designated countryside/landscape features with public access, which people might visit purely to experience the view; and visitors to heritage assets of national importance.
High	View of clear value but may not be formally recognised, e.g. framed view of high scenic value, or destination hill summits. It may also be inferred that the view is likely to have value, e.g. to local residents. Examples may include views from recreational receptors where there is some appreciation of the landscape, e.g. golf and fishing; local public rights of way, access land and National Trust land, also panoramic viewpoints marked on maps; road routes promoted in tourist guides for their scenic value.

Category	Visual Receptor Criteria
Medium	View is not promoted or recorded in any published sources and may be typical of the views experienced from a given receptor. Examples may include people engaged in outdoor sport other than appreciation of the landscape, e.g. football and rugby, or road users on minor routes passing through rural or scenic areas.
Low	View of clearly lesser value than similar views experienced from nearby visual receptors that may be more accessible. Examples may include road users on main road routes (motorways/A roads) and users of rail routes or people at their place of work (where the place of work may be in a sensitive location). Also views from commercial buildings where views of the surrounding landscape may have some limited importance.
Very Low	View affected by many landscape detractors and unlikely to be valued. Examples may include people at their place of work, indoor recreational or leisure facilities or other locations where views of the wider landscape have little or no importance.

A2.19 The tables above offer a template for assessing overall sensitivity of any landscape or visual receptor as determined by combining judgements of their susceptibility to the type of change or development proposed, and the value attached to the landscape as set out at paragraph 5.39 of GLVIA3. However, the narrative in this report may demonstrate that assessment of overall sensitivity can change on a case-by-case basis.

A2.20 For example, a high susceptibility to change and a low value may result in a medium overall sensitivity, unless it can be demonstrated that the receptor is unusually susceptible or is in some particular way more valuable. A degree of professional judgement applies in arriving at the overall sensitivity for both landscape and visual receptors.

Magnitude of Change

A2.21 The magnitude of any landscape or visual change is determined through a range of considerations particular to each receptor. The three attributes considered in defining the magnitude are:

- Scale of change;
- Geographical extent; and
- Duration and reversibility/proportion.

A2.22 Receptor locations from which views of the proposed development are not likely to occur will receive no change and therefore no effect. With reference to the ZTV and site survey, the magnitude of change is defined for receptor locations from where visibility of the proposed development is predicted to occur.

A2.23 **Table EDP A2.5** provides an indication of the criteria by which the size/scale of change at a landscape or visual receptor is judged within this assessment.

Table EDP A2.5: Landscape and Visual Receptor Magnitude of Change Criteria.

Category	Landscape Receptor Criteria	Visual Receptor Criteria
Very High	Total loss of or major alteration to key elements/features/characteristics of the baseline condition. Addition of elements which strongly conflict with the key characteristics of the existing landscape.	There would be a substantial change to the baseline, with the proposed development creating a new focus and having a defining influence on the view.
High	Notable loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that are prominent and may conflict with the key characteristics of the existing landscape.	The proposed development will be clearly noticeable and the view would be fundamentally altered by its presence.
Medium	Partial loss or alteration to one or more key elements/features/characteristics of the baseline condition. Addition of elements that may be evident but do not necessarily conflict with the key characteristics of the existing landscape.	The proposed development will form a new and recognisable element within the view which is likely to be recognised by the receptor.
Low	Minor loss or alteration to one or more key elements/features/characteristics of the baseline landscape. Addition of elements that may not be uncharacteristic within the existing landscape.	The proposed development will form a minor constituent of the view being partially visible or at sufficient distance to be a small component.
Very Low	Barely discernible loss or alteration to key elements/features/characteristics of the baseline landscape. Addition of elements not uncharacteristic within the existing landscape.	The proposed development will form a barely noticeable component of the view, and the view whilst slightly altered would be similar to the baseline situation.

A2.24 **Table EDP A2.6** provides an indication of the criteria by which the geographical extent of the area affected is judged within this assessment.

Table EDP A2.6: Geographical Extent Criteria

	Landscape Receptors	**Visual Receptor Criteria**
Largest ↕ **Smallest**	Large scale effects influencing several landscape types or character areas.	Direct views at close range with changes over a wide horizontal and vertical extent.
	Effects at the scale of the landscape type or character areas within which the proposal lies.	Direct or oblique views at close range with changes over a notable horizontal and/or vertical extent.
	Effects within the immediate landscape setting of the site.	Direct or oblique views at medium range with a moderate horizontal and/or vertical extent of the view affected.
	Effects at the site level (within the development site itself).	Oblique views at medium or long range with a small horizontal/vertical extent of the view affected.
	Effects only experienced on parts of the site at a very localised level.	Long range views with a negligible part of the view affected.

A2.25 The third, and final, factor, in determining the predicted magnitude of change is duration and reversibility. Duration and reversibility are separate but linked considerations. Duration is judged according to the defined terms set out below, whereas reversibility is a judgement about the prospects and practicality of the particular effect being reversed in, for example, a generation. The categories used in this assessment are set out below:

Duration:

- Long term (20 years+);
- Medium to long term (10 to 20 years);
- Medium term (5 to 10 years);
- Short term (1 year to 5 years); or
- Temporary (less than 12 months).

Reversibility:

- Permanent with unlikely restoration to original state, e.g. major road corridor, power station, urban extension, etc.;
- Permanent with possible conversion to original state, e.g. agricultural buildings, retail units;
- Partially reversible to a different state, e.g. mineral workings;

- Reversible after decommissioning to a similar original state, e.g. wind energy development; or

- Quickly reversible, e.g. temporary structures.

Significance of Effect

A2.26 The purpose of the EIA process is to identify the significant environmental effects (both beneficial and adverse) of development proposals. Schedule 4 to the EIA Regulations specifies the information to be included in all environmental statements, which should include a description of:

"The likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development".

A2.27 In order to consider the likely significance of any effect, the sensitivity of each receptor is combined with the predicted magnitude of change to determine the significance of effect, with reference also made to the geographical extent, duration and reversibility of the effect within the assessment. Having taken such a wide range of factors into account when assessing sensitivity and magnitude at each receptor, the significance of effect can be derived by combining the sensitivity and magnitude in accordance with the matrix in **Table EDP A2.7**.

Table EDP A2.7: Level of Effects Matrix.

Overall Sensitivity	**Overall Magnitude of Change**				
	Very High	**High**	**Medium**	**Low**	**Very Low**
Very High	**Substantial**	**Major**	**Major/-Moderate**	**Moderate**	Moderate/-Minor
High	**Major**	**Major/-Moderate**	**Moderate**	Moderate/-Minor	Minor
Medium	**Major/-Moderate**	**Moderate**	Moderate/-Minor	Minor	Minor/-Negligible
Low	**Moderate**	Moderate/-Minor	Minor	Minor/-Negligible	Negligible
Very Low	Moderate/-Minor	Minor	Minor/-Negligible	Negligible	Negligible/-None

A2.28 In certain cases, where additional factors may arise, a further degree of professional judgement may be applied when determining whether the overall change in the view will be significant or not and, where this occurs, this is explained in the assessment.

Definition of Effects

A2.29 Taking into account the levels of effect described above, and with regard to effects being either adverse or beneficial, the following table represents a description of the range of effects likely at any one receptor.

Table EDP A2.8: Definition of Effect.

Category	Definition of Adverse Effects	Definition of Beneficial Effects
Substantial	Typically, the landscape or visual receptor is highly sensitive with the proposals representing a high adverse magnitude of change. The changes would be at complete variance with the landscape character and would permanently diminish the integrity of a valued landscape or view.	The removal of substantial existing incongruous landscape or visual elements and the introduction or restoration of highly valued landscape elements or built form which would reinforce local landscape character and substantially improve landscape condition and visual amenity.
Major	Typically, the landscape or visual receptor has a high to medium sensitivity with the proposals representing a high to medium adverse magnitude of change to the view or landscape resource. Changes would result in a fundamental change to the landscape resource or visual amenity.	The removal of existing incongruous landscape/visual elements and the introduction or restoration of some valued landscape or visual elements would complement landscape character and improve landscape condition, and improve the local visual amenity.
Moderate	Typically, the landscape or visual receptor has a medium to low sensitivity with the proposals representing a high to medium magnitude of change. The proposals would represent a material but non-fundamental change to the landscape resource or visual amenity.	The removal of some existing incongruous landscape elements and/or the introduction or restoration of some potentially valued landscape elements which reflect landscape character and result in some improvements to landscape condition and/or visual amenity.
Minor	Typically, the landscape or visual receptor has a low sensitivity with the proposals representing a medium to low magnitude of change. The proposals would result in a slight but non-material change to the landscape resource or visual amenity.	Some potential removal of incongruous landscape features or visual amenity, although more likely the existing landscape and/or resource is complemented by new landscape features or built features compliant with the local landscape and published landscape character assessments.
Negligible	Typically, the landscape or visual receptor has a low or very low sensitivity with the proposals representing a very low magnitude of change. There would be a detectable but non-material change to the landscape resource of visual amenity	The proposals would result in minimal positive change to the landscape or visual resource, either through perceptual or physical change, and any change would not be readily apparent but would be coherent with ongoing change and process, and coherent with published landscape character assessments.
None	Typically, the landscape receptor has a very low sensitivity with the proposals resulting in no loss or alteration to the landscape resource or change to the view. There would be no detectable change to the landscape resource or visual amenity.	There would be no detectable positive or negative change to the landscape resource or visual amenity.

A2.30 Effects can be adverse (negative), beneficial (positive) or neutral. The landscape effects will be considered against the landscape baseline, which includes published landscape strategies or policies if they exist. Changes involving the addition of large scale man-made objects are typically considered to be adverse as they are not usually actively promoted as part of published landscape strategies. Accordingly, the assessment of landscape effects as a result of these aspects of the proposed development will be assumed to be adverse, unless otherwise stated within the assessment.

A2.31 Visual effects are more subjective as people's perception of development varies through the spectrum of negative, neutral and positive attitudes. In the assessment of visual effects, the assessor will exercise objective professional judgement in assessing the level of effects and, unless otherwise stated, will assume that all effects are adverse, thus representing the worst-case scenario.

Cumulative Effects

A2.32 Cumulative effects generally occur where there may be simultaneous or sequential visibility of two or more developments of the same type and scale, or where the consideration of other schemes would increase an effect identified. Where other similar schemes are in the planning system and made known to the applicant, or are under construction, these are considered in conjunction with the proposed scheme.

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Annex EDP 3
Relevant Extracts from Local Policy

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CSTP18 – GREEN INFRASTRUCTURE

Introduction

5.115 The *Thurrock Green Infrastructure Plan* is a key delivery document for the Sustainable Community Strategy. Its principle puts natural environment features and processes at the centre of land use management and development of both private and public land. Green Infrastructure assets include both large and small scale, natural and developed land, such as rivers and flood plains, road and railway corridors, civic spaces, private gardens, street trees, green roofs, cemeteries and churchyards, productive land, vacant and derelict land.

5.116 Thurrock's approach is to ensure the provision of a multi-functional landscape and maximise connections between assets. It will deliver a network of green assets and green links to serve and connect the urban and rural areas and their communities, enhance local landscape character and promote a sense of place for Thurrock. A key element of the Green Infrastructure approach is the use of green assets for multiple functions. Green Infrastructure has a wider approach than open space and aims to influence private land holdings as well as public land.

Green Infrastructure provides a number of 'ecosystem services':

- **Supporting services:** soil formation, photosynthesis, primary production, nutrient cycling and water cycling.
- **Provisioning services:** food, fuel (especially low-carbon/renewable resources), genetic resources, ornamental resources and fresh water.
- **Regulating services:** air quality regulation, climate regulation (e.g. reducing urban 'heat island' effects, providing shade and windbreaks), improved water resource and waste management, storm water surcharge and flood risk reduction and erosion control.
- **Cultural services:** spiritual enrichment, landscape values such as heritage interpretation, recreation and aesthetic experiences.

Thurrock Plans and Strategies

5.117 The *Greengrid Strategy 2006-2011* recognises that improved green access links between green assets is key to maximising the benefits derived from green assets for residents, workers and visitors to the Borough.

5.118 The *Green Infrastructure Plan for Thurrock 2006-2011*, sits within the Thurrock *Greengrid Strategy 2006-2011* along with the *Thurrock Open Spaces Strategy 2006-2011* and the Thurrock *Biodiversity Study 2006-2011*. It identifies green assets as having the potential to perform multiple functions and details the appropriate Green Infrastructure to be delivered to address deficiencies and meet the needs of the growing population. There is a need to enhance existing provision to ensure that it meets the standards set out in the Council's *Community Spaces*

and Open Spaces Study (2005). It also identifies many examples of Green Infrastructure assets in addition to potential sites for creation or enhancement of green infrastructure assets including:

- the creation of a new, multi-functional country park at the Cory Landfill site, Mucking;
- enhancement of multifunctional greenspace at Belhus Park, sports hub and associated woods complex, East Thurrock Marshes and Blackshots sports hub; and
- flood management opportunities within the Mardyke valley, and Fobbing and Mucking Marshes areas.

5.119 A *Landscape Strategy for Thurrock 2002-2017* confirms the Council's commitment to conserving and enhancing the landscape character of the Borough, and sets out specific features to be preserved and enhanced. Within this there are opportunities to improve the quality of the urban fringe through the provision of new woodland planting, hedgerow planting and other habitat improvements. This may also come through allowing appropriate uses in the countryside, such as informal recreation and access, which is further addressed in the Well-Being: Leisure and Sports policy.

5.120 *The Thurrock Landscape Capacity Study* (2005) sets out the landscape character areas for Thurrock. This informs the policy which aims to ensure that:

- The landscape character types which give Thurrock its sense of place are identified and valued;
- Key characteristics which contribute to each character type and create local distinctiveness are recognised;
- Key landscape qualities desirable to safeguard are identified; and
- Key landscape conditions and options for sustainable development are identified.

CSTP18 – GREEN INFRASTRUCTURE

1. Green Infrastructure Network

I. The Council, with its partners, will restore, protect, enhance and where appropriate create its green assets. The Green Infrastructure seeks to address the connectivity between urban and rural areas in the Borough and ensure that such green assets are multi-functional in use. Green assets can be those in public or private ownership and can be legally protected or covered by non-statutory designations.

2. A net gain and New Development

I. The Council will require a net gain in Green Infrastructure. This will contribute to addressing the existing and developing deficiencies, ensuring connectivity and relieving pressure on designated biodiversity sites such as SSSI's.

II. Alongside the requirements for biodiversity set out in Policy CSTP19, development must contribute to the delivery of Green Infrastructure, including the acquisition, planning, design and ongoing management consistent with the emerging Greengrid SPD. A key element of this will

be connectivity and the integrity of the network; sites should not be considered in isolation.

III. Opportunities to increase Green Infrastructure will be pursued in new developments through the incorporation of features such as green roofs, green walls and other habitat/wildlife creation and also innovative technology.

IV. Green Infrastructure assets will be identified, enhanced and safeguarded through:
   i. Not permitting development that compromises the integrity of green and historic assets and that of the overall Green Infrastructure network;
   ii. Using developer contributions to facilitate improvements to the quality, use and provision of multi-functional green assets and green linkages; and
   iii. Investment from external funding sources.

3. Deficits

Where there is an identified deficit the Council will require the creation of green assets including parks and gardens; natural and semi-natural spaces; amenity greens; children's play space; and outdoor sports facilities. Developments in areas of deficiency should provide for the supply and ongoing management of new areas of high quality natural and semi-natural space to address the new demand for green infrastructure. The guidance for provision of Green Infrastructure will be identified in the Greengrid SPD.

4. Programmes

I. The Council will work with partners to develop and implement Green Infrastructure through an area-based Greengrid Improvement Zones at a local level as necessary in order to deliver the green infrastructure in accordance with the overarching objectives of the Greengrid Strategy.

II. The Council will lead in Green Infrastructure management through developing best practice biodiversity enhancement throughout both urban-amenity and infrastructure land. This will be coordinated by programmes of education and community engagement and will support the development of environmental skills training in the region.

III. Allocations for new Green Infrastructure for Lakeside will be identified in other relevant Development Plan Documents.

IV. The Council will identify projects to enhance the network further by improving the quality of existing provision and create new facilities to address existing deficiencies and serve the increasing population and to improve links between sites.

Key Diagram and Maps
Map 3: Location of Greengrid Map 5: Location of Strategic Biodiversity Sites Green Infrastructure proposals will be included in the Adopted Sites Specific Allocations and Policies DPD and identified on the Proposals Map.

CSTP23 – THURROCK CHARACTER AND DISTINCTIVENESS

Introduction

5.139 The character of a place or area is derived from the recognisable and consistent patterns of natural, historic and built elements within it, which make it different or distinct from another place or area. Thurrock recognises that protecting and promoting the best elements of the Borough's character and strengthening its sense of place provides benefits for community cohesion, the quality of life, and economic growth.

5.140 Thurrock is broadly characterised into areas of coastal marshes, the Thames terrace, rolling hills and rural villages in the north and larger residential and industrial areas in the south and east. Thurrock's landscape includes large scale landmarks and fragmented but highly valued areas of historic interest, biodiversity and amenity value. The resulting character is of surprising contrast and juxtaposition of local and micro-character areas.

5.141 Thurrock's proximity to London and its position as a transport gateway is reflected in its historical land-use features, as well as the existing pressures created by its busy road and rail network. The transport and energy infrastructures have resulted in the physical and visual subdivision of the Borough and significant decline in amenity and tranquillity values. Waste management and mineral working combined with incremental change in urban and rural areas has degraded the quality and cohesion of the Borough's character.

5.142 The requirement for increased housing in Thurrock exerts pressure on both the industrial river frontage of the Thames and the central swathe of rural Green Belt, while the transport agenda also remains central and will have major implications for the character and sense of place of the Borough. Residential areas are subject to proposals for infill and backland development but some of these areas have distinctive characters which would be degraded by such development. Thurrock character studies identify five broad types: Fenland, Rolling Farmland / Wooded Hills, Marsh, Urban Fringe and Urban which are distributed into 23 distinct landscape character areas, 14 urban character areas and 7 villages. The purpose of the policy is to ensure that the character of Thurrock is preserved and improved.

Thurrock Plans and Strategies

5.143 The Urban *Character Study (2005)* assesses the features of each settlement. Other Studies include, *Thurrock Landscape Capacity Study (2005),* Essex County Council's *Thurrock Unitary Historic Environment Characterisation Study (2009)*, *Landscape Character Assessment* and *Thurrock Urban Character Study- Recognising the sense of place (2007).*

5.144 *Thurrock Thames Gateway Development Corporation's (TTGDC) Spatial Plan (2007)* reiterates the Council's commitment to promoting the success of Thurrock through development of high quality, which reinforces local community identities.

CSTP23 – THURROCK CHARACTER AND DISTINCTIVENESS

The Council will protect, manage and enhance the character of Thurrock to ensure improved quality and strengthened sense of place.

I. The Council identifies the following key areas where character is a key issue:
   i. Regeneration Areas
   ii. Lakeside Basin
   iii. Strategic Employment Hubs
   iv. High volume transport networks
   v. Urban Fringe
   vi. Town/Village centres
   vii. Historically Sensitive Areas
   viii. Strategic Natural and Semi- Natural Spaces
   ix. Strategic Multifunctional Green Space
   x. Rural landscapes
   xi. Green Belt
   xii. Wooded Hills
   xiii. Residential Precincts comprising distinctly spacious residential areas and the intensively developed Homesteads ward
   xiv. Small scale sites where development may contribute to cumulative degradation.

II. The Council requires the retention and enhancement of significant natural, historic and built features which contribute to the character of the Borough as defined by their value, quality, cultural association and meaning or their relationship to the setting and local context.

III. The Council requires the retention and enhancement of strategic and local views, which contribute to a distinctive sense of place. Where development will affect these views, their sensitivity and capacity for change must be adequately assessed and the effect of the development on them appropriately tested.

In order to assess the sensitivity and capacity for change of Thurrock's character, the Council will require an assessment based on *The Guidelines for Landscape and Visual Impact Assessment*, or other methodology supported by the Council.

The Council will provide further guidance in the Design and Sustainability SPD.

Key Diagrams and Maps

Map 4: Location of Landscape Character Areas
Residential Precincts are identified on the Interim Adopted Proposals Map.

improvements that will be realised for the future through the policies in this Core Strategy.

CSTP28 – RIVER THAMES

I. The Council and Partners will ensure that the economic and commercial function of the river will continue to be promoted through:

i. Priority being given to allocating riverside development sites to uses that require access to the river frontage, especially those which promote use of the river for passenger transportation purposes.
ii. Safeguarding port-related operational land.
iii. Safeguarding additional adjacent land required for further port development, including expansion. For port development onto additional land to be acceptable however, it will be necessary to substantiate the need for it over and above land that is already available for operational port uses.
iv. To safeguard existing and promote new jetties and wharves facilities where appropriate for transport of goods and materials.

II. New development will provide new or enhanced sustainable, safe and equitable access to and along the river foreshore, especially using natural and semi-natural corridors and other elements of the Greengrid.

III. Development Proposals will be required to undertake appropriate level of flood risk assessment as set out by the NPPF and take account of the need for flood mitigation measures and to accommodate any necessary flood defence measures.

IV. New development will also maintain or enhance views, particularly of key features including heritage and landscapes, and will improve recreational interaction with the river and its setting. Critical elements include:

i. The Thames Path through Thurrock, a designated National Trail.
ii. National Cycle Network Route 13, which overlaps with the Thames Path through much of Thurrock.
iii. Safeguarding of strategic and locally important views.

V. The following exceptions to this may apply:

i. Where industrial/commercial development requires use of the river and its foreshore and needs to restrict public access for operational or safety reasons.
ii. Where unrestricted public access is likely to result in unacceptable adverse impacts on riverside habitat or biodiversity.

In both cases, reasons for access restrictions will need to be substantiated and justified with supporting evidence. In addition, the expectation will be that opportunities will still be sought to enable views of the river and its setting, such as through the design of development.
The proposed power generation plant at Tilbury will require controlled and

secure access to the waterside including using the river as its water supply source.
Key Diagrams and Maps
Key Diagram – Where applicable. Sites will be identified in the forthcoming Thurrock Local Plan and on the Proposals Map

PMD2 - DESIGN AND LAYOUT

Introduction

6.11 Thurrock has an environment of surprising contrast of industry, housing, infrastructure, farming and wildlife habitats. In some cases this has led to fragmented character and poor quality of physical and visual linkages. To rectify these deficiencies, the Council considers it essential that new schemes are built to appropriate design and layout standards to protect and enhance the quality and value of the built environment, natural assets and amenity on and around the development site. The NPPF states that good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people. It further states that it is important to plan positively for the achievement of high quality and inclusive design for all development including individual buildings, public and private spaces and wider area development schemes. Development should function well and add to the quality of the area, not just for the short term but over the lifetime of the development. Thurrock Council fully embraces these objectives. This policy sets out the criteria that will be assessed when considering schemes to ensure that their design and layout contributes to a high quality accessible environment in Thurrock.

Thurrock Plans and Strategies

6.12 Thurrock Council has commissioned a number of studies which appraise the characteristics of the Borough, including seven Conservation Area Appraisals, the *Landscape Capacity Study* (2005), the *Urban Character Study (2005)* and the *Thurrock Unitary Historic Environment Characterisation Project* (2009). These studies form a basis for good design in Thurrock by providing developers with initial information and guidance on how to approach the design of individual sites. The Council's forthcoming *Design and Sustainability SPD* and *Layout and Standards SPD* will provide guidance in securing high quality designs in Thurrock.

PMD2 - DESIGN AND LAYOUT
1. The Council requires all design proposals to respond to the sensitivity of the site and its surroundings, to optimize the potential of the site to accommodate development, to fully investigate the magnitude of change that would result from the proposals, and mitigate against negative impacts. All development proposals must satisfy the following criteria: i. **Character** – Development must contribute positively to the character of the area in which it is proposed, and to surrounding areas that may be affected by it. It should seek to contribute positively to local views, townscape, heritage assets and natural features, and contribute to the

creation of a positive sense of place.

ii. **Continuity** – Development proposals must promote continuity of street frontages and provide active ground floor frontages as far as reasonably possible.

iii. **Public Realm** – New development should contribute to improvements in the public realm by contributing sensitive planting, street furniture, appropriate lighting and public art where appropriate. The quality of the design and detailing of all development, including interfacing elements such as facades, steps and walls should be robust, engaging and contribute positively to the public realm.

iv. **Public and Private Amenity space** – Development proposals must provide adequate public and private amenity space in accordance with Thurrock's relevant adopted standards, particularly in areas with identified deficiencies. It should be attractive, safe, uncluttered, readily accessible and should promote play.

v. **Accessibility** – Development proposals must allow easy and safe access for all members of the community. Development must also integrate land uses and all modes of transport but pedestrians and cyclists must be given priority over traffic in scheme design.

vi. **Permeability and Legibility** – Development should promote connections between places that people wish to use, including public transport links, community facilities and the Greengrid. Development should be designed to help people find their way and must be legible for all members of the community, providing recognisable routes using landmarks and signage where appropriate.

vii. **Safety and Security** – Development proposals must create safe and secure environments and reduce the scope for crime and fear of crime. Where appropriate, proposals should adopt the principles of *Designing Out Crime* set out in the Police Service's publication *'Secured by Design'.*

viii. **Landscape** – Features contributing to the natural landscape in the Borough, such as woods, hedges, specimen trees, unimproved grassland, ponds and marshes, will be protected and where appropriate enhanced to maintain their landscape and wildlife value. Provision and enhancement of landscape features will also be required to contribute to multiple uses and/or eco-system services, including amenity, recreation, flood alleviation and Sustainable Urban Drainage Systems.

ix. **Diversity** – Development proposals must promote variety and choice through a mix of mutually compatible developments and uses.

x. **Utilities** – Development proposals must accommodate public services and utilities without compromising design and layout. This includes providing suitable access to maintenance, waste and emergency service vehicles.

xi. **Energy and Resource use** – Development should be designed to minimise energy and resource use. This includes integrating sustainable construction techniques, siting and orientation of buildings to maximise energy and water efficiency.

xii. **Layout –** The layout of all development should optimise the assets of the site, while conforming to the appropriate standards for layout, design and access set out in the Layout and Standards SPD.

2. In the interests of encouraging good design the Council will require residential developers to carry out robust assessments of their proposals using the *Building for Life 12* questions, where the questions are relevant to the development being proposed, and submit such assessments in support of planning applications. The Council will use these questions as the basis for discussions with intending developers both before and after submission of planning applications. The objective will be to arrive at a mutually agreed assessment of proposals prior to a decision being made where there are no 'red' outcomes and where the only 'amber' outcomes are those where the characteristics of the site and its circumstances are such as to make 'green' outcomes unachievable.

3. The Council will encourage pre-application discussions and design review of development proposals by the Commission for Architecture and the Built Environment (CABE) and/or other relevant bodies, and in relation to proposals having a wider impact, will wish to see that developers have worked closely with local communities to arrive at proposals that take account of their views.

4. Where the Council has produced a design brief for a site or sites, developers will be obliged to meet its detailed requirements.

Key Diagrams and Maps

Not Applicable

Policy DP22: Green Belt in the Borough

1. Dartford's Green Belt is shown on the Policies Map, and its essential characteristics are its openness and permanence. Inappropriate development in the Green Belt will be resisted in accordance with national planning policy.

2. Inappropriate development is by definition harmful to the Green Belt and will only be approved in very special circumstances. Very special circumstances will not exist unless potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

3. In assessing other harm, the Local Planning Authority will use the following criteria:

    a) the extent of intensification of the use of the site;

    b) the impact of an increase in activity and disturbance resulting from the development, both on and off the site, including traffic movement and parking, light pollution and noise;

    c) the impact on biodiversity and wildlife;

    d) the impact on visual amenity or character taking into account the extent of screening required;

    e) impacts arising from infrastructure required by the development.

4. Where developments are considered not inappropriate in line with national planning policy, they will be supported where they contribute to the Core Strategy (CS13) policy objective of conserving the Green Belt as a recreational, ecological and agricultural resource. Such developments will also be assessed against the following clauses where applicable.

Re-use of Buildings

5. Applications for re-use should relate to lawful permanent buildings of substantial construction. They should take into account the character and scale of the existing building(s). In circumstances where character and scale are important to the local setting, excessive external alterations and additions will not be permitted.

Replacement Buildings

6. The replacement of a building will be permitted where:

    a) The replacement building remains in the same use; and

    b) The replacement building will not be materially larger than the existing

building it replaces, taking into account bulk, height, massing and scale. As a replacement, the building should be limited to an expansion of no more than 30% volume of the original[31] building.

Extensions to Buildings

7. Extensions to buildings will be permitted where:

    a) They are proportionate and subservient in appearance, bulk, massing and scale of the original building; and

    b) The proposal would not result in a disproportionate addition to the original building. The extension must constitute no more than a 30% volumetric increase over and above the original building, and maximising the footprint of the building will not be appropriate in every circumstance.

Infilling or Redevelopment of Previously Developed Sites

8. Proposals should not have a greater impact on the openness of the Green Belt and the purpose of including land within it than the existing development. Developments that lead to over-intensification of the site will not be permitted.

Agricultural Development

9. Development should not result in the loss of the best and most versatile agricultural land and should not impede the continuation of a lawfully existing agricultural development and/ or land use.

10. The change of use of an agricultural building should, where planning permission is required, demonstrate it is no longer needed for its current or intended agricultural use and should not result in a need to create any further building(s) to replace it.

11. New agricultural buildings will be permitted where it can be demonstrated that there is a need for the proposed development and where they are sited and designed to minimise their impacts as outlined in clause 3.

12. Proposals for farm diversification, including shops, processing, workshops or sports and recreation, should be ancillary to the existing main use. It should be demonstrated that the activity is related to the main farm use and that the proposal will not create the need for new buildings or supporting infrastructure and facilities that may harm rural character.

[31] Original building means a building as it existed on 1 July 1948 where it was built before that date, and as it was built when initially built after that date.

Equine Development

13. Proposals for the use of land for horses or for the erection of stables and associated facilities and/ or operational development will be carefully considered. Assessment will include the location/ layout of all structures; and quality of the provision and landscaping proposed.

Development for Outdoor Sport and Recreation

14. Proposals for outdoor sport and recreation should not materially impact on the character and amenity of the locality or result in the deterioration of the land, landscape or biodiversity. The scale, siting, design, use and level of activity of built recreation development will be taken into account when assessing the impact of a proposal.

15. Supporting infrastructure and facilities should not unacceptably harm local character. They should be directly associated with the main use and be of a scale, quality and design to minimise their impact.

Green Belt land looking from New Barn towards the Thames

Policy DP25: Nature Conservation and Enhancement

1. Development on the hierarchy of designated sites, featuring nationally recognised and locally protected sites, shown on the Policies Map will not be permitted. Development located within close proximity to designated sites, or with likely effects on them, should demonstrate that the proposal will not adversely impact on the features of the site that define its value or ecological pathways to the site.
2. Proposals should seek to avoid any significant adverse impact on existing biodiversity features. Any potential loss or adverse impact must be mitigated, including with reference to the following guidance points:
    a) Where mitigation measures require relocation of protected species this will only be acceptable when accompanied by clear evidence that the proposed method is appropriate and will provide for successful translocation.
    b) Proposals should include provision for protection during construction, and mechanisms for on-going management and monitoring.
3. Developments will be expected to preserve and, wherever possible, enhance existing habitats and ecological quality, including those of water bodies, particularly where located in Biodiversity Opportunity Areas. Particular regard should be had to points a) and b) below. Development proposals where the primary purpose is to enhance biodiversity will normally be permitted where:
    a) New biodiversity areas make use of native and local species as set out in the Kent Biodiversity Strategy and consider ecological links and adaptability to the effects of climate change
    b) Biodiversity features strengthen existing green and ecological corridors; and contribute to the creation and enhancement of the Green Grid.

Large residential development and North Kent European Protected Sites

4. Large residential developments located within 10km from the North Kent European Protected sites that are located outside the Borough will be required to undertake a Habitats Regulation Assessment to demonstrate that the mitigation measures proposed are satisfactory to avoid potential adverse recreational effects to protected features. Information on mitigation options is available on the Council's website.

Trees

5. In all development proposals existing trees should be retained wherever possible. If retention is demonstrated not to be feasible, replacement provision should be of an appropriate tree species and maturity and/ or canopy cover taking into account the tree that is being replaced and the location.

4.1.5 The vision, objectives and policies in this Core Strategy seek to meet the needs of the Borough in terms of providing homes, jobs and supporting facilities in a sustainable way. They also seek to protect and enhance the built, historic and natural environment. This is fully in accordance with the three roles of the planning system in achieving sustainable development and the results of the Sustainability Appraisal of this Core Strategy reflect this. The following policy reflects the importance of taking into account the principles of sustainable development when taking decisions on future development in the Borough.

Policy CS01: Sustainable Development

4.1.6 Planning applications that accord with the policies in the development plan for Gravesham will be approved without delay, unless material considerations indicate otherwise.

4.1.7 When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework and in this Core Strategy. It will work proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

4.1.8 Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then the Council will grant permission unless material considerations indicate otherwise, taking into account whether:

- **Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or**
- **Specific policies in that Framework indicate that development should be restricted.**

4.2 Scale and Distribution of Development

4.2.1 In order to meet both current and future economic, social and environmental needs to achieve sustainable development in Gravesham, further development is required within the Borough. Such development will meet the changing housing needs of the population, support and improve the local economy and develop services and facilities to support and benefit the existing local communities.

4.2.2 Regeneration, including new development, can address the needs of communities experiencing deprivation. New development can help provide a range of new homes for local people, improve the environment and provide additional or improved facilities, and introduce new and potentially more affluent households into a deprived area.

4.2.3 The distribution of development set out in this Core Strategy has been developed in line with sustainable development principles. It is consistent with national planning policy and the current and previous regional and sub-regional policy approach to the wider Thames Gateway and Gravesham[8]. It seeks to make the most efficient use of previously developed land, focus development in the most sustainable locations, and preserve the openness and maintain the national and local planning purposes of the Green Belt, protecting it from inappropriate development. It also reflects local priorities to secure regeneration through the creation of new residential neighbourhoods and employment areas along the riverfront and at Ebbsfleet, and revitalising Gravesend Town Centre.

4.2.4 The Council has carried out an assessment of the facilities and services available in the Borough's settlements to identify which are more sustainable. The results are reflected in the settlement hierarchy below.

Table 2: Settlement Hierarchy

First Tier Settlements:	Gravesend/Northfleet/Ebbsfleet, i.e. the urban area
Second Tier Settlements:	Istead Rise, Hook Green Meopham, Higham
Third Tier Settlements:	Culverstone Green, Meopham Green, Vigo
Fourth Tier Settlements:	Cobham, Shorne, Sole Street
Other Settlements:	Harvel, Lower Higham, Luddesdown, Lower Shorne, Shorne Ridgeway, Three Crutches

Source: Settlement Hierarchy Technical Paper December 2009

4.2.5 The hierarchy identifies Gravesend, Northfleet and Ebbsfleet as the most sustainable parts of the Borough. These parts comprise the urban area. The rest of the Borough is rural. The boundaries of the urban and the rural areas are defined on the Policies Map.

4.2.6 Within the rural area, the Council has identified 13 rural settlements inset from the Green Belt and defined on the Policies Map. These boundaries do not define the full extent of each settlement but relate to a coherent and established built up area where infilling would not adversely affect local character and identity, or impact on the openness of the Green Belt.

4.2.7 The national aim of the Green Belt is to prevent urban sprawl by keeping land permanently open. The extent of the Green Belt in Gravesham is defined on the Policies Map. Its local planning purposes are:

- to maintain the break in development between the eastern edge of Gravesend and the Medway Towns which is one of the few barriers preventing the further eastward

[8] As set out within the South East Plan and its supporting evidence base.

- sprawl of London and the merging of towns along the southern part of the Thames Estuary;
- to assist in safeguarding the countryside by minimising the expansion of the Borough's rural settlements; and
- to assist in concentrating development on underused, derelict and previously developed land in the urban area of Gravesend and Northfleet.

4.2.8 The Core Strategy acknowledges that as development opportunities within the existing urban area and settlements inset from the Green Belt become more limited, some development may be required on land in the rural area before the end of the plan period to meet the Borough's housing needs and sustain rural communities. The Green Belt has therefore been identified as a broad location for future growth and its boundaries will be subject to a review.

Housing

4.2.9 The Core Strategy identifies how the Borough will meet its own objectively assessed needs during the plan period 2011 – 2028 for at least 6,170 new dwellings which will be delivered at three different development rates over the plan period. The distribution of housing over the plan period is shown in Table 5. The greatest capacity for new housing is identified in the Opportunity Areas and Key Sites. There is also capacity on other sites within the existing urban area and rural settlements inset from the Green Belt.

4.2.10 Existing housing will make up around 85% of the housing stock in 2028. As a result, it is important to safeguard and make the best use of the existing stock. Investment is needed to ensure that existing public and private housing meets improving standards. The Council has been undertaking a rolling programme of refurbishment and repairs of its housing stock. Where feasible, the Council also seeks to develop some small, under-used parcels of land that it owns, particularly to meet older persons and specialist housing needs. However, there are areas where a more proactive solution is needed and, for example, the redevelopment of Christianfields has resulted in the replacement of social housing in poor condition with new social and private sector housing. The Council will consider further estate renewal but the scale, location and timing of this will depend on factors such as the funding available, the condition of the units and the needs of the community.

4.2.11 The Council has carried out a Strategic Land Availability Assessment (SLAA) which identifies the main categories of land supply to meet housing needs over the plan period. These are shown in Table 3.

Table 3: Housing Land Supply

A	All sites with extant planning permission at 31 March 2013 including ones subject to a legal agreement being signed*	3,020
B	Emerging Core Strategy Key Sites without planning permission or a resolution to grant planning permission - adjusted capacity (to avoid double counting with approvals set out in A above)	950
C	Unallocated sites which have the potential to make a contribution to housing delivery during the period. These sites are to be allocated in subsequent Site Allocations and Development Management Policies DPD**	850
D	Small site windfall assumption (less than five dwellings) for 2018 to 2028	330
E	Large site windfall assumption (five dwellings or more) for 2013 to 2028	450
F	Completions 1 April 2011 – 31 March 2013	580
G	Total supply	6,170
H	**Core Strategy Housing Requirement**	**6,170**

Note Figures rounded to the nearest 10 dwellings
* Adjusted to take into account Ebbsfleet and Heritage Quarter planning permissions as at 23/08/2013 and excludes completions included in row F
** Component of supply includes unallocated sites from Gravesham Authority Monitoring Report 2012-13 (interim) May 2013

Sources: Gravesham Authority Monitoring Report 2012-13 (interim) May 2013, Ebbsfleet and Heritage Quarter Planning Permissions as at 23/08/2013

4.2.12 The figures show that more than half of the future supply (58%) is either already built, with planning permission or with a resolution to grant planning permission subject to a legal agreement. The remaining supply is made up of Key Sites without planning permission, large and small windfall sites and sites that will be allocated through the Site Allocations and Development Management Policies DPD.

4.2.13 There are other sources of supply that the Council will take into account in monitoring and managing housing supply over the Core Strategy period. These include small windfall sites in the first five years post adoption. In accordance with national guidance, the supply does not include a figure for small sites in this period beyond outstanding planning permissions. However, past trends suggest that small windfall sites are a significant contributor to housing completions and the SLAA concludes that this will continue in the future. Actual completions from small site windfalls will count towards the housing target when they occur, as will rural affordable housing under Policy CS16 which cannot be counted as contributing to housing land supply until after completion.

4.2.14 The housing trajectory in Appendix 4 demonstrates that there are sufficient sites to meet the Borough's housing requirements in the first five years of the plan period post adoption (2014 – 2019). However, the Core Strategy acknowledges that there is insufficient land supply identified in the current SLAA to meet the level of housing need over the whole plan period. To address this, the Council will carry out a revised SLAA to identify additional land to meet the Borough's housing needs and maintain a five year rolling supply of deliverable sites over the plan period. This will be informed by a review of development opportunities in the existing urban area and rural settlements inset from the Green Belt and by a Green Belt boundary review. Sites that emerge from the revised SLAA will be subject to Sustainability Appraisal and will inform the Site Allocations and Development Management Policies DPD and the housing trajectory.

4.2.15 The Green Belt boundary review will identify land that is unnecessary to keep permanently open, to provide land for development. It will also identify land for safeguarding to meet development needs beyond the plan period. The national and local purposes of including land in the Green Belt, the potential for adding land to and removing land from the Green Belt and consideration of wider sustainability principles will all be taken into account in the review process. Any changes to the Green Belt boundary will be included in the Site Allocations and Development Management Policies DPD and shown on the Policies Map.

4.2.16 In parallel with the above, and in line with national policy, the Council will undertake a new Strategic Housing Market Assessment (SHMA). It is recognised that the outcome of such an assessment may result in a new objectively assessed housing need for the Borough, which will have implications for housing land supply. The results of this assessment will therefore inform the SLAA and any policy implications will be addressed in the Site Allocations and Development Management Policies DPD. If the evidence from the new SHMA and/or revised SLAA show that the Borough's housing needs cannot be met in the existing urban area and rural settlements inset from the Green Belt, a review of Policy CS02 (Scale and Distribution of Development) will be undertaken.

Economy and Employment

4.2.17 The limited size and weakness of Gravesham's economy is key to the rationale for maintaining the area's supply of employment land. Research by the Institute for Policy Research in January 2012 listed the worst areas for the number of job seekers chasing every job vacancy and Gravesham was ranked at number 10 with 12 jobseekers for every vacancy. Another measure of the economy is job density which is defined as the number of jobs in an area divided by the resident population aged 16-64 in that area. A job density of 1.0 would mean that there is one job for every resident aged 16-64 even though not everybody in this age group would be in employment or actively seeking work. The latest data from the Office of National Statistics shows that the Borough's job density is much lower than the South East average of 0.80. Gravesham's job density is 0.51 compared with 0.89 for Dartford, 0.61 for Swale and 0.57 for Medway.

4.2.18 The Economy and Employment Space Study Addendum 2011 considered a range of demographic, housing and economic scenarios to provide a demand-side perspective on future employment space requirements up to 2031. This has been supplemented by a re-run of the demographic and labour supply assessment forecasts for a dwelling requirement of 6,170, which indicates that this scale of dwelling provision would increase the economically active population by 2,250 by 2028.

4.2.19 On the basis that Gravesham is seeking to substantially diversify and strengthen its economy and reduce out-commuting, it is planned to provide employment floorspace which should enable the delivery of at least 4,600 new B class jobs over the plan period. Whilst the Council recognises that jobs can be delivered from a range of sectors, the Council's focus is to ensure that there is sufficient land for B class employment, which includes offices, industrial and storage and distribution uses, and the range of job opportunities that this can provide.

4.2.20 The amount of employment floorspace required to facilitate the provision of at least 4,600 new B class jobs over the plan period and its proposed distribution is shown in Table 6. The greatest capacity for new employment development is identified in the four Opportunity Areas within the urban area, then the rest of Gravesend and Northfleet, with no new employment development identified in the rural settlements. This is consistent with the presumption in favour of sustainable development and focusing development primarily on settlements with the widest range of facilities. It is also recognised that Ebbsfleet has the potential to create significantly more new jobs beyond the plan period. This reflects the long standing and continuing strategy for the area of creating a regional hub for the location of a major business district in a mixed settlement.

4.2.21 The figures in Table 6 exclude jobs generated from non-B Class employment use classes, such as retail development, and jobs in the rural area but this is estimated to equate to around 1,500 additional jobs.

4.2.22 The rural economy of the Borough has traditionally been dependent on agriculture, and to a lesser extent forestry, but has increasingly diversified as the agricultural industry has changed in response to modern requirements. This has resulted in the re-use of existing buildings and the development of new enterprises that do not necessarily relate to traditional farm uses. The Green Belt designation has assisted in protecting the best and most versatile agricultural land and conserving soil resources and this will continue to occur. At the same time, the support for rural diversification needs to recognise the nature of the business and its potential traffic generation and other impacts.

Retail Development

4.2.23 The Retail Study Update 2012 concludes that future retail needs, as set out in table 4, should be met primarily in Gravesend town centre, with a small allowance to meet localised needs elsewhere in the Borough. This 2012 update does not take into account the latest population information from the census 2011 or the commitments at Ebbsfleet, Northfleet

Embankment West and Canal Basin because of the uncertainty of the scale and timing of delivery. A new retail study will be undertaken to take account of any revised population figures and the latest retailing trends. Any implications for the Core Strategy from this work will be considered through the Site Allocations and Development Management Policies DPD to ensure that the needs for main town centre uses are met in full over the Plan period.

Table 4: Summary of Quantitative Retail Need

2028	Sq m
Comparison goods - net sq m	16,660
Comparison goods - gross sq m	22,210
Convenience goods - net sq m	1,620
Convenience goods - gross sq m	2,180
Total - net sq m	18,280
Total - gross sq m	24,390

Source: Retail and Commercial Leisure Background Paper December 2012

Development Distribution

Table 5: Distribution of Residential Development

	Key Sites and Other Sites	Sub-Total 2011-2028	Total 2011-2028
Northfleet Embankment & Swanscombe Peninsula East Opportunity Area	Land East of Grove Road and Robin's Creek Key Site	200	
	Old Northfleet Residential Extension Key Site	530	
	Northfleet Embankment East Regeneration Area Key Site	250	
	Other Sites	50	1,030
Gravesend Riverside East & North East Gravesend Opportunity Area	Canal Basin Regeneration Area Key Site	650	
	North East Gravesend Regeneration Area Key Site	130	780
Gravesend Town Centre Opportunity Area*	Heritage Quarter Key Site	330	
	Other Sites	560	890
Ebbsfleet (Gravesham) Opportunity Area*	Springhead Quarter Key Site	690	
	Northfleet Rise Key Site	0	690
Rest of Borough (Additional sites with known development potential)	Land at Coldharbour Road Key Site	500	
	Other Sites (5 or more dwellings) – Urban	850	
	Other Sites (5 or more dwellings) – Rural	60	
	Projected completions of currently permitted schemes of 4 or less dwellings	140	1,550
Borough-wide (Unidentified sites)	Small and large site windfalls	780	
	Unidentified sites to be allocated in Site Allocations and Development Management Policies DPD	460	1,240
Total		**6,170**	**6,170**
Housing Requirement		**6,170**	**6,170**

Note: Figures rounded to the nearest 10 dwellings
Total is based on un-rounded figures

* Adjusted to take into account the Ebbsfleet and Heritage Quarter Planning Permissions as at 23/08/2013

Sources: Strategic Land Availability Assessment, Gravesham Authority Monitoring Report 2012-13 (interim) May 2013

Table 6: Distribution of B Class Employment Development

	Key Sites and Other Sites	B Class Employment Floorspace sq m Gross	Anticipated Employment Generating Uses	Approximate Jobs Numbers	Total anticipated floorspace
Northfleet Embankment & Swanscombe Peninsula East Opportunity Area	Northfleet Cement Works Regeneration Area Key Site*	46,000	B1, B2, B8	1,330	133,550
	Northfleet Embankment East Regeneration Area Key Site	87,550	B1, B2, B8	940	
Gravesend Riverside East & North East Gravesend Opportunity Area	Canal Basin Regeneration Area Key Site	4,650	B1a, B1c	100	22,230
	North East Gravesend Regeneration Area Key Site	17,570	B1, B2, B8	410	
Gravesend Town Centre Opportunity Area	Heritage Quarter Key Site	300	B1a	20	5,670
	Other Sites	5,370	B1a	380	
Ebbsfleet (Gravesham) Opportunity Area	Springhead Quarter Key Site	5,000	B1a, B1b, B1c	350	20,000
	Northfleet Rise Quarter Key Site	15,000	B1a, B1b, B1c	1,060	
Rest of Urban Area (Parts of the Urban Area not covered by Opportunity Area Policies)	Land at Coldharbour Road Key Site	5,050	B1a, B1c	240	5,050
Total		**186,490**		**4,840**	**186,490**

Note: Figures rounded to the nearest 10 sq m and 10 jobs
*Includes approximate job numbers for Lafarge Tarmac Bulk Aggregates Import Terminal (BAIT) Northfleet but excludes BAIT floorspace figure

Sources: Economy and Employment Background Paper December 2012, Addendum to Gravesham Economy and Employment Space Study Final Report August 2013

Policy CS02: Scale and Distribution of Development

4.2.24 The development strategy for the Borough is to retain and improve the existing stock of housing and suitable employment land and to make provision for the Borough's objectively assessed need for at least 6,170 new dwellings delivered at a variable rate as follows; at least 325 dwellings per year for 2011/2012 – 2018/2019, at least 363 dwellings per year for 2019/2020 – 2023/2024, at least 438 dwellings per year 2024/2025 – 2027/2028, and at least 186,490 sq m gross employment floorspace (within use classes B1, B2 and B8) during the plan period.

4.2.25 Development will be distributed throughout the Borough as follows: around 3,890 new dwellings and around 186,490 sq m gross employment floorspace (within use classes B1, B2 and B8) will be provided in the Opportunity Areas at Northfleet Embankment and Swanscombe Peninsula East; Gravesend Riverside East and North East Gravesend; Ebbsfleet (Gravesham) and Gravesend Town Centre and on land at the Coldharbour Road Key Site; around 2,280 new dwellings will be provided on other sites in the urban area and rural settlements inset from the Green Belt.

4.2.26 The strategy prioritises development in the urban area as a sustainable location for development. This will be achieved by:

- **Promoting regeneration by prioritising the redevelopment and recycling of underused, derelict and previously developed land in the urban area. This will be principally through redevelopment of former industrial sites in the Opportunity Areas of Northfleet Embankment and Swanscombe Peninsula East, and Gravesend Riverside East and North East Gravesend to create new residential neighbourhoods and employment areas;**
- **The continued development of a new sustainable mixed use community in the Ebbsfleet (Gravesham) Opportunity Area, which will include the provision of high quality employment floorspace;**
- **Revitalising the Gravesend Town Centre Opportunity Area as a focal point for retail, leisure, cultural and tourism facilities and small scale office provision to serve the needs of the Borough whilst preserving and enhancing its character as a riverside heritage town; and**
- **Bringing forward a range of suitable sites in other parts of the urban area for residential and employment**
- **development, including Land at Coldharbour Road Key Site.**

4.2.27 In the rural area, development will be supported within those rural settlements inset from the Green Belt and defined on the Policies Map. Development outside those settlements, including affordable housing and proposals to maintain and diversify the rural economy, will be supported where it is compatible with national policies for protecting the Green Belt and policies in this plan. The extent of the Green Belt is defined on the Policies Map. A strategic Green Belt boundary review will be undertaken

to identify additional land to meet the housing needs up to 2028 and to safeguard areas of land to meet development needs beyond the plan period, while maintaining the national and local planning purposes of the Green Belt.

4.3 Opportunity Areas in Gravesham

Introduction

4.3.1 Four Opportunity Areas in the urban area are identified in this Core Strategy which give it resilience and flexibility whilst showing where most change within the Borough will occur over the plan period. Within the Opportunity Areas are a number of Key Sites which are strategic site allocations. The Key Sites have the capacity to deliver new housing, employment and retail development to meet most of the Borough's needs over the plan period. Both the Opportunity Areas and the Key Sites are shown on the Policies Map. The Opportunity Areas are also shown on the Key Diagram. The Key Sites are accompanied by schematic plans which provide an indication of the main principles to be applied to each site in accordance with the policy. These schematic plans are located after each of the Opportunity Area policies.

4.3.2 The concept of Opportunity Areas has been developed by the Council to establish a broad framework within which development can take place and an overall vision can be realised. The Opportunity Areas together form a significant regeneration area in the Thames Gateway, extending along the whole of the urban riverside and its hinterland and occupying almost a third of the built up area of Gravesham.

4.3.3 This Core Strategy aims to transform and revitalise previously developed land, strengthen the vitality and vibrancy of Gravesend as the Borough's principal town centre and create modern, integrated, accessible and sustainable communities which meet the full range of people's needs and aspirations.

4.3.4 Within this area opportunities have been recognised, not only for the development of nine Key Sites during the plan period, but also for the maintenance, improvement and development of adjoining sites as part of a comprehensive approach, which will benefit both existing and new communities. The concept of opportunity goes further, recognising the development potential of Swanscombe Peninsula and Ebbsfleet, which will carry the regeneration process beyond the plan period and beyond the boundaries of Gravesham as part of a longer term, sub-regional vision.

4.3.5 Whilst the Opportunity Areas have characteristics which are specific to them, they have a number of issues in common. The section below is included to avoid repetition in the Opportunity Area policies. It should be noted that other Core Strategy policies also apply. All policies in the Development Plan should be taken into account in the consideration of development proposals.

Common Issues

4.3.6 The proposed developments on the Key Sites within the Opportunity Areas are of a scale that they will have a significant impact on their localities. They will need to be carefully planned and phased to ensure that they are well integrated with and maximise benefits for the existing communities as well as providing for the needs of new communities. In some cases, development will result in the provision of new services such as schools and open space which will benefit existing and new communities. In other cases, transport infrastructure will be required to provide links between new and existing communities, e.g. bus services, footpaths. Policies CS10, CS11, CS12 and CS13 on Physical and Social Infrastructure, Transport, Green Infrastructure and Green Space, Sport and Recreation will apply.

4.3.7 The Opportunity Areas all lie within areas where there is a potential risk of flooding which is a major constraint on the type and form of development that can be accommodated. Policy CS18 on Climate Change sets out the relevant requirements for developments in areas at risk of flooding and the requirements in relation to surface water run-off and Sustainable Drainage Systems (SUDs).

4.3.8 On all the Key Sites, the scale of development will be such that developments should take the opportunity to deliver carbon reduction, renewable energy and water efficiency measures in accordance with Policy CS18 on Climate Change.

4.3.9 The Opportunity Areas all contain heritage interest including listed buildings, conservation areas, and scheduled monuments. These are referred to where relevant in the background text to the policies. It is important that the development of the Key Sites ensures that the heritage features are preserved, or enhanced and interpreted in accordance with Policy CS20 on Heritage and the Historic Environment.

4.3.10 Three of the Opportunity Areas are located alongside the River Thames and there are specific issues which apply to them. Within these areas, there will be a need to:

- Maintain, improve and replace tidal flood defences in line with the Thames Estuary 2100 plan (see Policy CS18 on Climate Change);
- Facilitate the creation of a high quality, dedicated pedestrian and cycle link alongside the River Thames, as part of the proposed Thames Estuary Path, or, where this is not possible due to the nature of riverside activity, as close as possible to it (see Policy CS12 on Green Infrastructure and Policy CS11 on Transport); and
- Safeguard the capacity of commercial wharves and other sites needed to support the River Thames as a working waterway (see Policy CS07 on Economy, Employment and Skills, and CS11 on Transport)

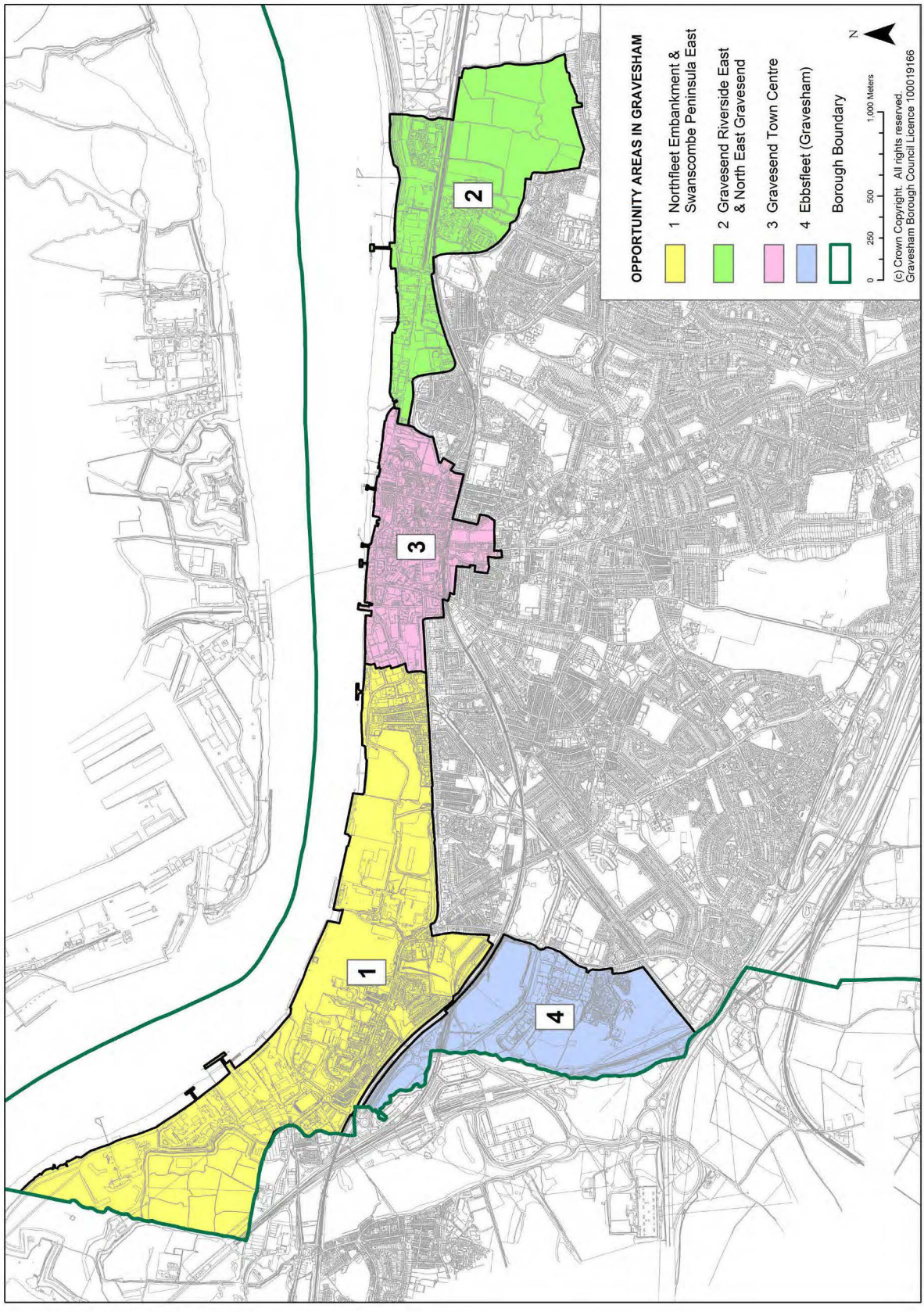


Figure 3: Opportunity Areas within Gravesham

4.4 Northfleet Embankment and Swanscombe Peninsula East Opportunity Area

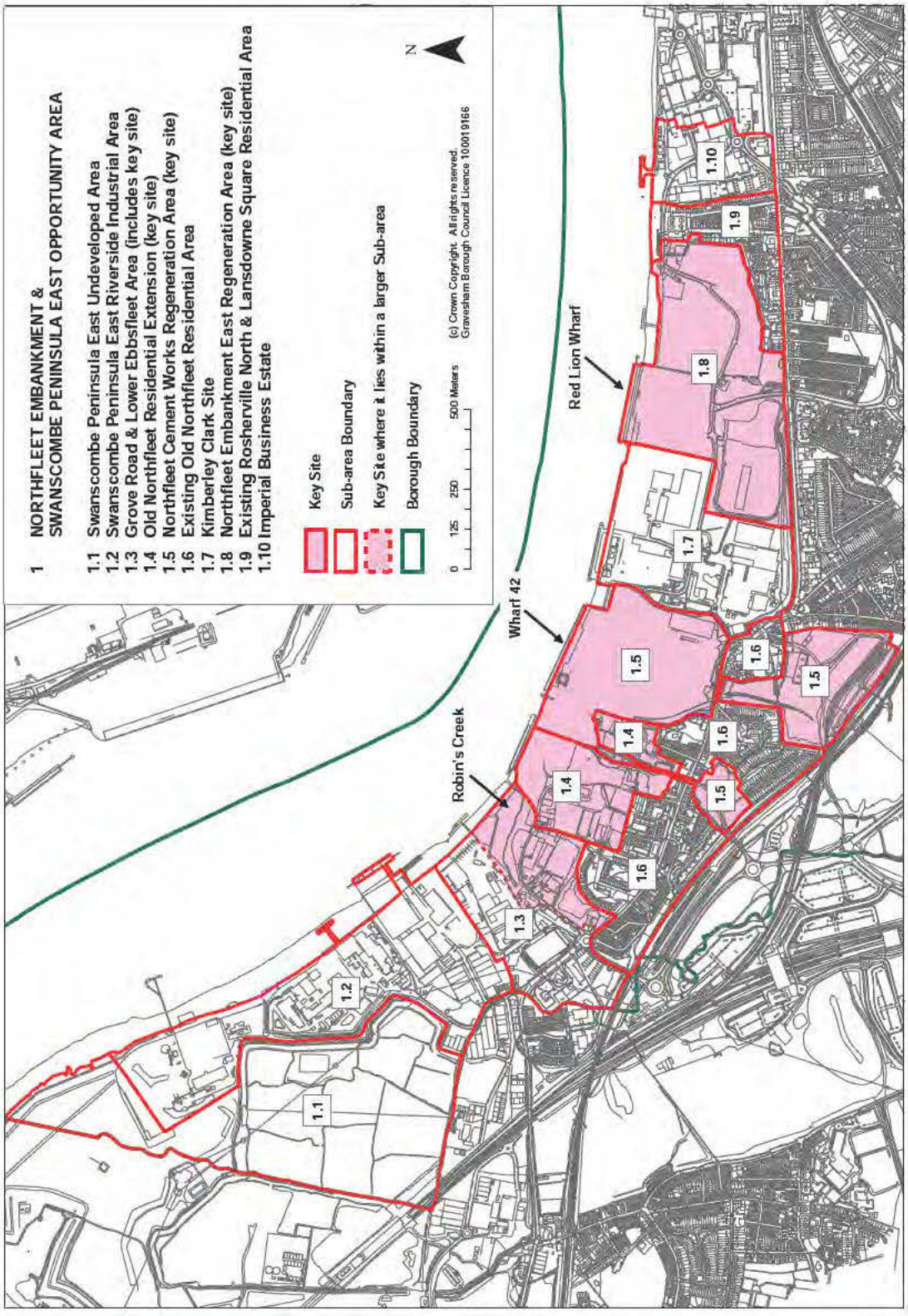


Figure 4: Northfleet Embankment and Swanscombe Peninsula East Opportunity Area

4.4.1 The **Northfleet Embankment and Swanscombe Peninsula East Opportunity Area** lies on the Thames waterfront and extends around four kilometres from the boundary with Dartford Borough in the west to the Gravesend Town Centre Opportunity Area in the east. Much of the area is characterised by its industrial past, with deep chalk workings that once supported the local cement industry creating abrupt changes in level and dividing the older settlements on higher ground from the river below. The riverside quarries once accommodated a variety of heavy industrial uses but these have largely disappeared, leaving an area that is environmentally degraded and with many vacant or under-used sites. There are clear opportunities in this location to make more efficient use of the land, facilitate river-related activity, accommodate new development and secure environmental improvement as part of the wider regeneration of the area. Figure 4 shows the main sub-areas comprising this Opportunity Area.

4.4.2 Most of this Opportunity Area (with the exception of sub-areas 1.6 and 1.9) is within the Northfleet Industrial Air Quality Management Area which was declared because of high levels of particulate matter, i.e. dust, arising from uncontrolled emissions from industrial processes. The closure of the Northfleet Cement works has removed a major source of dust, but current activities and the open nature of some of the area mean that it remains a potential issue. It will be important to take account of air quality in bringing forward any development of the area and a key objective will be to secure continued improvements to air quality through the redevelopment and environmental improvement of sites.

4.4.3 Swanscombe Peninsula East Undeveloped Area (sub-area 1.1) is a large area of land that projects northwards into a bend of the River Thames on the boundary between the Boroughs of Dartford and Gravesham. It is mainly low lying and comprises a mixture of residual marsh used for agriculture/grazing and raised ground. The development potential is likely to be constrained by:

- Transport and access - the Gravesham side of the peninsula is only served by a single junction onto the A226 at Galley Hill Road, a private access road on its eastern periphery, and the unmade Lower Road private lane to the south;
- Ground conditions - the northern part of the peninsula has been raised using Cement Kiln Dust and the southern part in Gravesham is former marsh;
- Proximity to existing industrial uses - the eastern side of the peninsula in Gravesham is occupied by heavy and port related industries that may impede development nearby;
- Biodiversity - although not subject to any designation, the marshes and mudflats provide important habitats and the biodiversity interest would need to be taken into consideration;
- Utilities - the Gravesham part of the peninsula is crossed by high voltage power lines forming part of the National Grid;
- Navigation - the northern part of the peninsula is affected by navigational sight line, radar and telecommunication constraints; and
- Railways - the High Speed 1 (HS1) railway line effectively severs the southern part of the marsh before going into tunnel and passing under the River Thames.

4.4.4 The Council considers that there is development potential at Swanscombe Peninsula. However, the constraints and the absence of any definitive proposals showing how they could be overcome suggest that any development in this area is only likely to be deliverable in the longer term. As a result, any development should come forward using a comprehensive masterplan approach that has regard to proposals for the Dartford part of the peninsula, development phasing and the possible need for a new highway link to relieve the existing A226 and improve accessibility to the peninsula. The presumption is that any development in this sub-area is most likely to comprise industrial/commercial uses together with greenspace to protect the biodiversity of the area. Residential development is not ruled out as part of a mixed use development of the site but would need to overcome the constraints and provide a sustainable form of development that integrates well with the adjoining urban areas.

4.4.5 Swanscombe Peninsula East Riverside Industrial Area (sub-area 1.2) comprises mainly industrial and port-related uses that sit behind the existing tidal flood defences. Access to this area is from the junction with the A226 at Galley Hill Road and a narrow privately maintained road. It is anticipated that this area will remain in active employment uses over the plan period. The retention and expansion of industrial and port related employment in this area will be supported.

4.4.6 Grove Road and Lower Ebbsfleet Area (sub-area 1.3) consists of a number of separate sites that have regeneration potential. These may be realised during or beyond the plan period depending on the aspirations of the landowners and the viability of development. Viability is likely to be influenced by the relative success of the Ebbsfleet development to the south. The development potential of this area is likely to be further constrained by:

- Ground conditions - the area has been actively used for industrial purposes for over 200 years and is likely to be subject to contamination;
- Heritage and archaeology - the area around Robin's Creek (outflow of the Ebbsfleet into the Thames) was the site of a medieval watermill later converted to grind cement in the 1790s, Portland cement was later invented here and Aspdin's Kiln (Scheduled Monument) and other features of heritage interest are likely to remain; and
- Existing uses - development of sites on a piecemeal basis is likely to be constrained by the proximity of existing poor neighbours (including the importation and processing of minerals at Robin's Wharf) or the need to retain/decant existing uses (including the local football ground).

4.4.7 Part of this sub-area has the potential for residentially-led regeneration to complement the proposal to extend the existing residential development in sub-area 1.4 (see paragraphs 4.4.9 and 4.4.10) and this is identified as a key site. Initial estimates suggest that this area could deliver around 200 new homes. Such development would be expected to: improve and enhance Robin's Creek and the Ebbsfleet stream; improve the greening of this area; and reduce the heavy commercial traffic and parking on Grove Road.

4.4.8 The Council supports the creation of a new navigable harbour for recreational purposes at Robin's Creek as this has the potential to create a high quality development, add value to other developments in the vicinity and contribute to the re-establishment of Northfleet as an historic riverside settlement. This would be subject to ensuring that the drainage functions of the Creek and its biodiversity interest are not adversely affected and that there is no potential conflict between recreational boats and commercial shipping on the river, and other proposals in the Opportunity Area.

4.4.9 Old Northfleet Residential Extension (sub-area 1.4) comprises an area of previously developed land extending northwards from The Hive local centre down College Road to the River Thames. A separate spur of land, divided from the main area by a cutting that carries the access road to the former cement works site from Thames Way (A226), extends northwards from the existing residential area down the former alignment of Lawn Road.

4.4.10 This area is identified as a Key Site. The Council's approach to this area is that residential development will be supported as it forms a logical extension to the existing established community of Northfleet and will re-connect it with the River Thames. This will include an extension to the Hive local centre and facilities to support the development. There is a resolution to grant planning permission for such use.

4.4.11 Northfleet Cement Works Regeneration Area (sub-area 1.5) consists of the remainder of the former Lafarge cement works site and lies at a lower level than the adjoining residential community on the banks of the River Thames. Access to the site is primarily via a road tunnel from the A226 Thames Way that passes through Vineyard Pit. A rail connection to the North Kent line has also been reinstated via Church Path Pit, a connected site to the south, which has the potential to be extended to sub-areas 1.7 (Kimberly Clark) and 1.8 (Northfleet Embankment East) in due course. There is also good deep water access via the existing Wharf 42.

4.4.12 This area is identified as a Key Site. There is a resolution to grant planning permission for around 46,000 sq m gross employment floorspace for business, industrial and storage and distribution uses under use classes B1, B2 and B8. In conjunction with this, listed building consent has also been given for the dismantling, relocation and reassembly of the Grade II listed Bevan's War Memorial. The other Grade II listed building in the vicinity of the site is the Northfleet Lower Lighthouse located at the eastern end of Wharf 42. The lighthouse is expected to remain in its present position and retain its industrial setting. The Port of London Authority also has an important navigational installation on-site, on the former cement works office block.

4.4.13 A planning permission also exists for the use of part of the site as a Bulk Aggregates Import Terminal, whilst a major cement importing facility has been created through the conversion of the former cement works coal store. In the short term, much of the site will be used for the importation and onward transhipment of Crossrail spoil. In the longer term, it is anticipated that the employment development will come forward.

4.4.14 Old Northfleet Residential Area (sub-area 1.6) comprises a series of residential neighbourhoods and the local centres at The Hill and The Hive. The area around The Hill forms part of a conservation area. The area around The Hive was rebuilt during the 1960s, along with Huggins College and Wallis Park. As a result, the area lost much of its distinctive character as an historic riverside industrial town associated with the early development of the cement industry. The loss of residential and other development to the northern end of College Road, along with the impounding of Robin's Creek in the 1980s by the creation of a new flood defence, effectively completed the severance of this community from the River Thames.

4.4.15 Although linked together by the line of the B2175 Northfleet High Street, the different parts of Old Northfleet are separated by deep chalk workings that make the area quite disjointed. Whilst there is a limited range of facilities in this location to serve the local community, it suffers from high levels of deprivation and would benefit from a co-ordinated approach to improvement. A recent award of Big Lottery Funding provides an opportunity to draw the community together and establish local priorities for investment.

4.4.16 The Council supports the improvement of the local centres to meet the needs of the local community. It will also require new development to be well integrated with the existing residential neighbourhoods. This includes improving connectivity with the Ebbsfleet development to the south and public access to the River Thames and Robin's Creek to the north.

4.4.17 Kimberly Clark site (sub-area 1.7) comprises a flat area of land set at a low level adjoining the River Thames. It is separated from the Northfleet Cement Works Regeneration Area to the west by the chalk spine of Granby Road. The site is currently occupied by the Kimberly Clark tissue mill and associated buildings. The deep water wharf is used for the import of raw materials used in tissue manufacture and the transhipment of other goods.

4.4.18 It is anticipated that this use will continue beyond the plan period and the Council will support its continued operation and expansion. The Council will also support the extension of a heavy rail connection with the Lafarge Tarmac site (in sub-area 1.5) to allow Kimberly Clark and the Northfleet Embankment East Regeneration Area access to the North Kent and High Speed railway lines.

4.4.19 Northfleet Embankment East Regeneration Area (sub-area 1.8) comprises a relatively flat area of land set at a low level adjoining the River Thames lying to the north of a tall chalk cliff face. Road access to this area is primarily via Rosherville Way and Thames Way under a chalk spine carrying the B2175 London Road. Whilst much of the site is currently cleared and empty, the area has a long industrial past and was last occupied by the former Northfleet Power Station and AEI Cable Works (TT Electronics). STEMA Aggregates continue to operate from Red Lion Wharf in the north western part of the area, taking advantage of the deep water jetty that once served the power station. The Council supports the principle of mixed use development in this sub-area and hence its identification as a Key Site.

4.4.20 A distribution warehouse facility of around 40,000 sq m gross floorspace on land west of Rosherville Way and south of Crete Hall Road has recently been built.

4.4.21 Land levels are currently being raised on the former AEI Cable Works site and part of the former Power Station site. This will take it out of the flood risk zone. The Homes and Communities Agency is developing a masterplan for this site to promote its development for a multimodal industrial and warehousing facility based on the heavy rail connection (see paragraph 4.4.18) and the availability of deep water wharfage. The site is expected to deliver a significant volume of jobs and is therefore important in achieving an improved balance between housing and jobs in Gravesham, irrespective of the rail connection. Whilst the multimodal terminal remains the Council's preferred option, it is necessary at this stage to retain a degree of flexibility given identified constraints and the need to agree a detailed masterplan. For example, the alignment of the railway may have implications for the operation of STEMA Aggregates at Red Lion Wharf. However, it is anticipated that this constraint could be overcome as the design, mix and layout of the site evolves. Should this not prove possible, the Council will seek to ensure, as a minimum, that sufficient minerals capacity is maintained through appropriate alternative provision, so that wider regeneration initiatives do not prejudice the parallel requirements of the Kent Minerals and Waste Local Plan. This approach is consistent with Policies CS07 (Economy, Employment and Skills) and CS11 (Transport).

4.4.22 The eastern part of the sub-area is expected to accommodate residential development reinforcing the existing Rosherville North and Lansdowne Square Residential Area (sub-area 1.9). A buffer zone comprising open space, landscaping and office/light industrial employment or other appropriate uses will be required between this and the multimodal industrial and warehousing facility to the west.

4.4.23 The north eastern part of the site is within the Lansdowne Square Conservation Area which includes the former Art Deco AEI office block. This is likely to form part of the residential component of the redevelopment of the site and any proposals will need to protect and enhance its setting. The Grade II listed Rosherville Quay Walls, steps, drawdock and World War II mine watching post lie within sub-area 1.9 to the east. The Council will seek the restoration of the listed remains of Rosherville Pier with links to new public open space as part of the development of this site.

4.4.24 The Council supports the principle of development likely to come forward as a result of the existing planning permissions and the emerging masterplan. Current estimates are that this could comprise around 250 new dwellings and around 87,550 sq m (gross) of B1, B2 and B8 employment floorspace.

4.4.25 Existing Rosherville North and Lansdowne Square Residential Area (sub-area 1.9) consists mainly of an existing residential area that sits on a chalk spine above the River Thames and the former quarries to the east and west. Lansdowne Square is a conservation area and the southern part of the sub-area lies within The Overcliffe Conservation Area. The listed Rosherville Pier is referred to under sub-area 1.8.

4.4.26 It is unlikely that this area will be subject to substantial change over the plan period. However, adjoining development should be designed to improve connectivity and access to the riverside so that existing residents benefit from improvements to community facilities to be provided.

4.4.27 Imperial Business Estate (sub-area 1.10) mainly comprises an existing 1980s industrial estate. It is a busy employment area that is anticipated to remain in-situ over the plan period. A small undeveloped area adjacent to the western end of the former Clifton Marine Parade, the White House offices and Imperial Wharf complete the site. Except for possible rounding-off of employment uses, it is not anticipated that this sub-area will be subject to substantial change over the plan period. Subject to the need for planning permission, the Council will support proposals for bringing Imperial Wharf back into a river based use that is appropriate to context.

Policy CS03: Northfleet Embankment and Swanscombe Peninsula East Opportunity Area

4.4.28 The Northfleet Embankment and Swanscombe Peninsula East Opportunity Area is a substantial opportunity for major riverside regeneration in Gravesham. Development will bring significant benefits to existing adjoining residential communities and the Borough as a whole through the delivery of new housing and jobs whilst achieving environmental improvement, especially in air quality, and a high standard of design.

4.4.29 Any future proposals for the Swanscombe Peninsula East Undeveloped Area will be subject to a comprehensive masterplan approach which deals with the issues of flood risk, transport and access, ground conditions, proximity to existing industrial uses, air quality, biodiversity, utilities, navigation and the presence of the HS1 railway line.

4.4.30 The Swanscombe Peninsula East Riverside Industrial Area, Kimberly Clark Site and Imperial Business Estate will be retained in employment use. The Council will support proposals which expand and support their operation.

4.4.31 The Council will support the regeneration for residential and employment uses of the Grove Road and Lower Ebbsfleet Area taking into account the ground conditions and existing uses.

4.4.32 Development of the Key Sites will lead to the provision of around 980 dwellings and around 133,500 sq m gross employment floorspace. Development on the Key Sites will be in accordance with the principles set out below.

Land East of Grove Road and Robin's Creek Key Site (within sub-area 1.3)

4.4.33 This will provide a residentially led mixed use development with the potential to create around 200 dwellings. Such development will be expected to: improve and enhance Robin's Creek and the Ebbsfleet stream; improve greenspace; and reduce heavy commercial traffic and parking on Grove Road.

Old Northfleet Residential Extension Key Site (sub-area 1.4)

4.4.34 This will provide a residential development of around 530 dwellings, open space, an extension and improvements to the Hive local centre and provision of community facilities.

Northfleet Cement Works Regeneration Area Key Site (sub-area 1.5)

4.4.35 This will provide an employment development of around 46,000 sq m gross new employment floorspace comprising business, industrial, and storage and distribution facilities (use classes B1, B2 and B8) and a Bulk Aggregates Import Terminal. Such development will be required to satisfactorily relocate Bevan's War Memorial.

Northfleet Embankment East Regeneration Area Key Site (sub-area 1.8)

4.4.36 This will provide an employment led development of around 87,550 sq m gross new employment floorspace including a major industrial and warehousing development (use classes B1, B2 and B8) with multimodal access, subject to masterplanning and overcoming identified constraints. It will also provide around 250 dwellings at the eastern end of the site which will reinforce the existing adjacent residential areas. A buffer zone comprising open space, landscaping and business development (use class B1) will be required between the residential development and the industrial and warehousing development. Such development should seek to restore the listed remains of Rosherville Pier and maintain an east-west route for public transport and general traffic accessing the Imperial Business and Retail Estate and Gravesend town centre. Proposals for the Key Site will be required to retain Red Lion Wharf for commercial river based use that is appropriate to context, subject to capacity for the transhipment of minerals being maintained through appropriate alternative provision off-site.

Figure 5: Key Site 1.3 Land East of Grove Road and Robin's Creek Schematic Plan

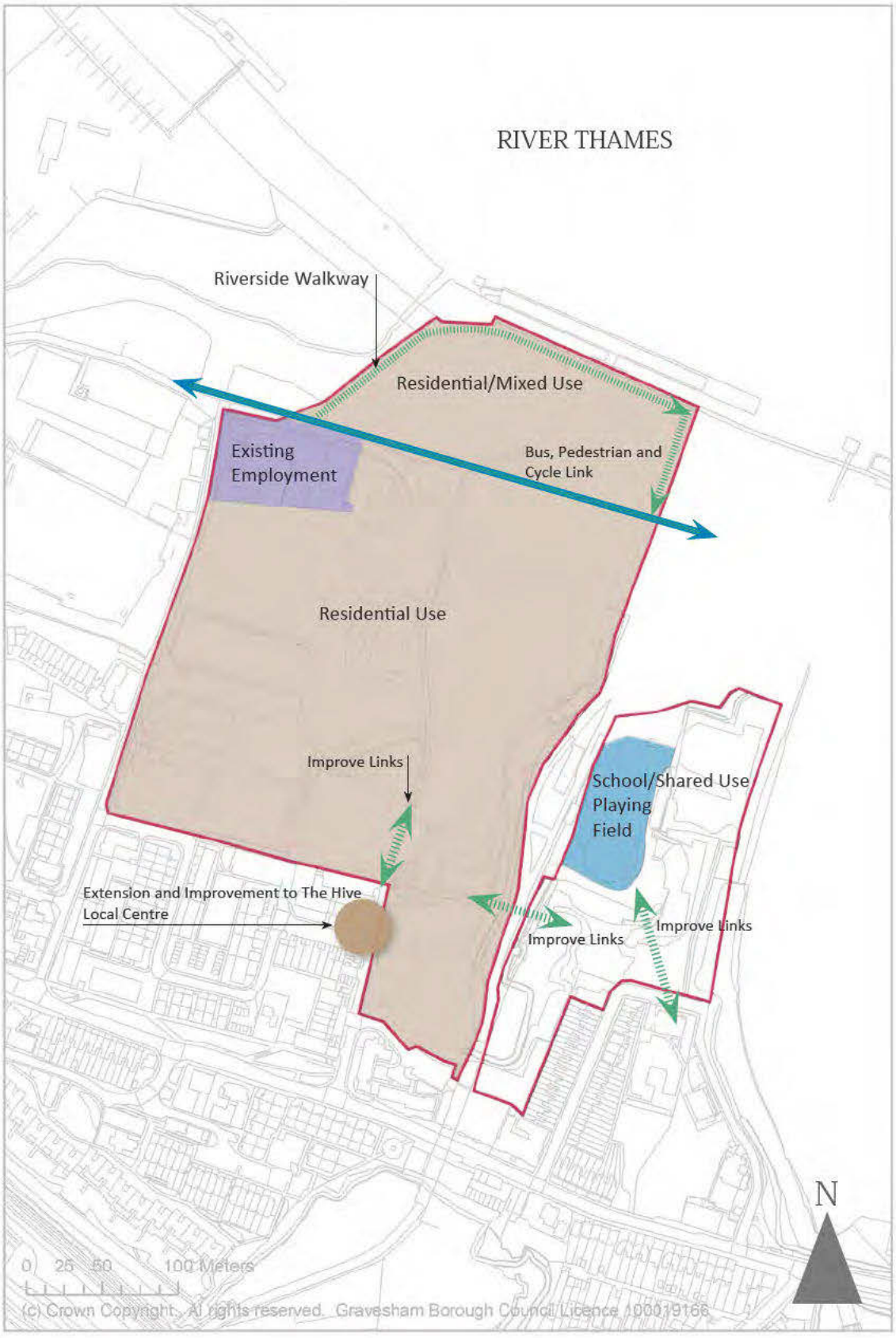


Figure 6: Key Site 1.4 Old Northfleet Residential Extension Schematic Plan

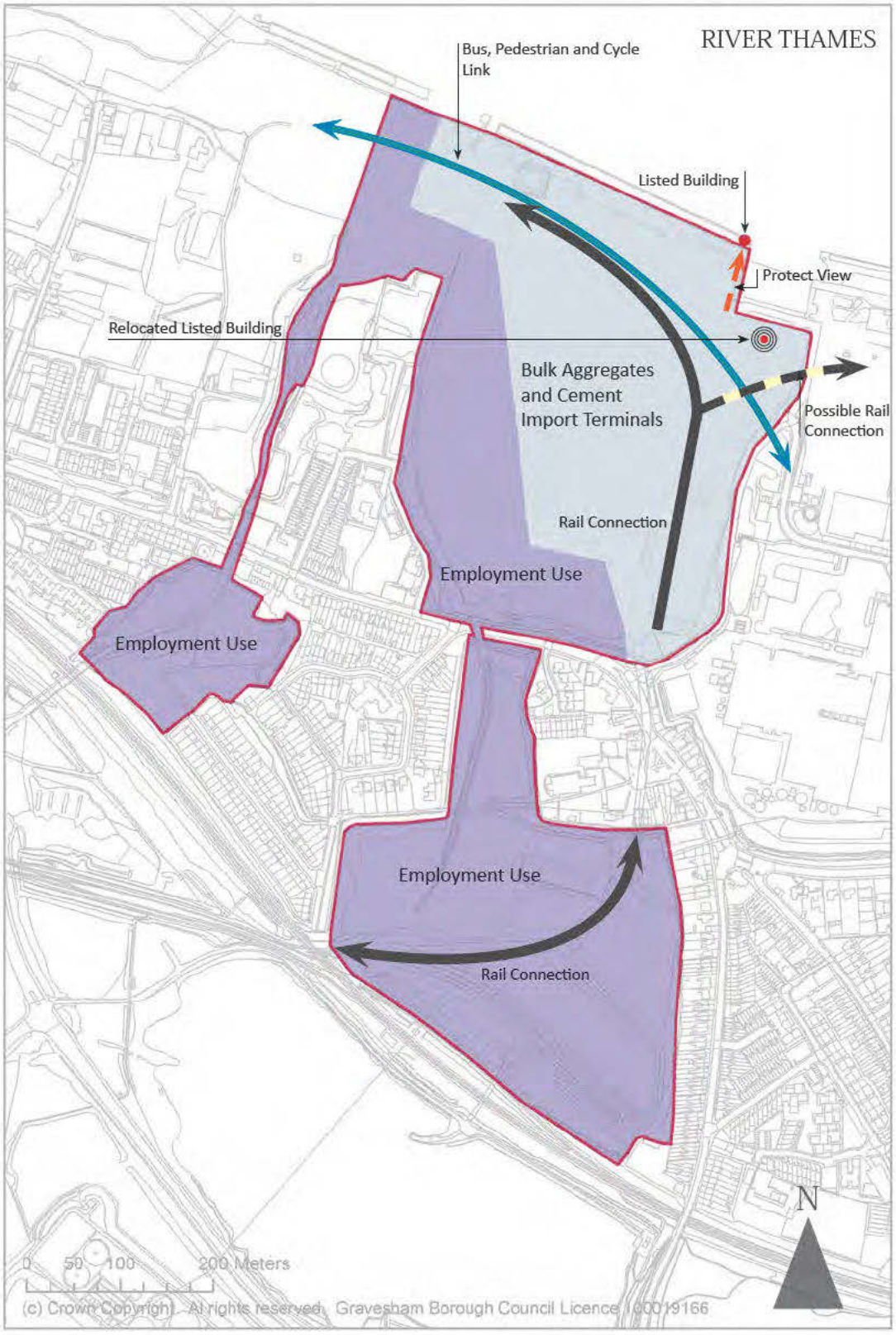


Figure 7: Key Site 1.5 Northfleet Cement Works Regeneration Area Schematic Plan

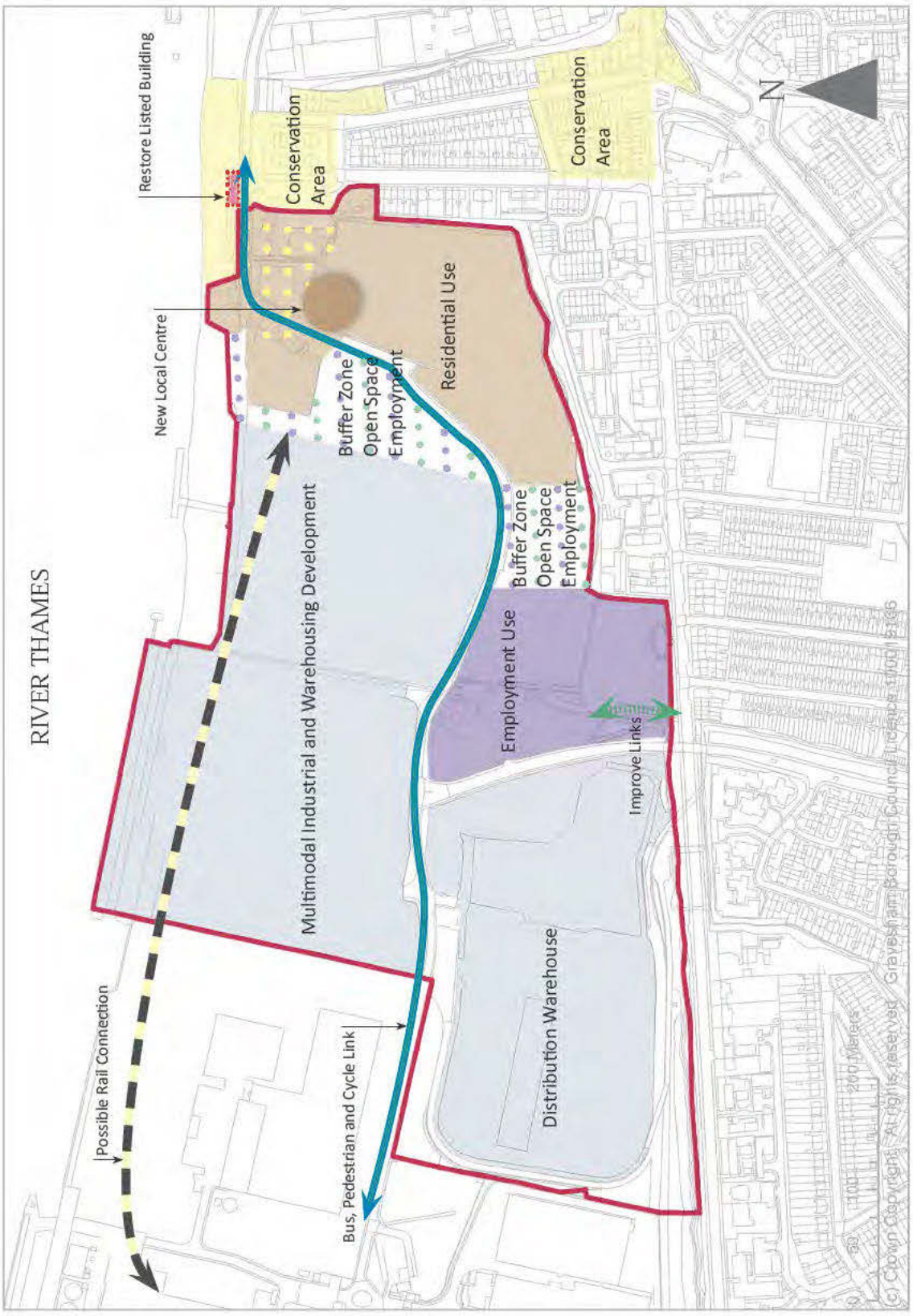


Figure 8: Key Site 1.8 Northfleet Embankment East Regeneration Area Schematic Plan

4.5 Gravesend Riverside East and North East Gravesend Opportunity Area

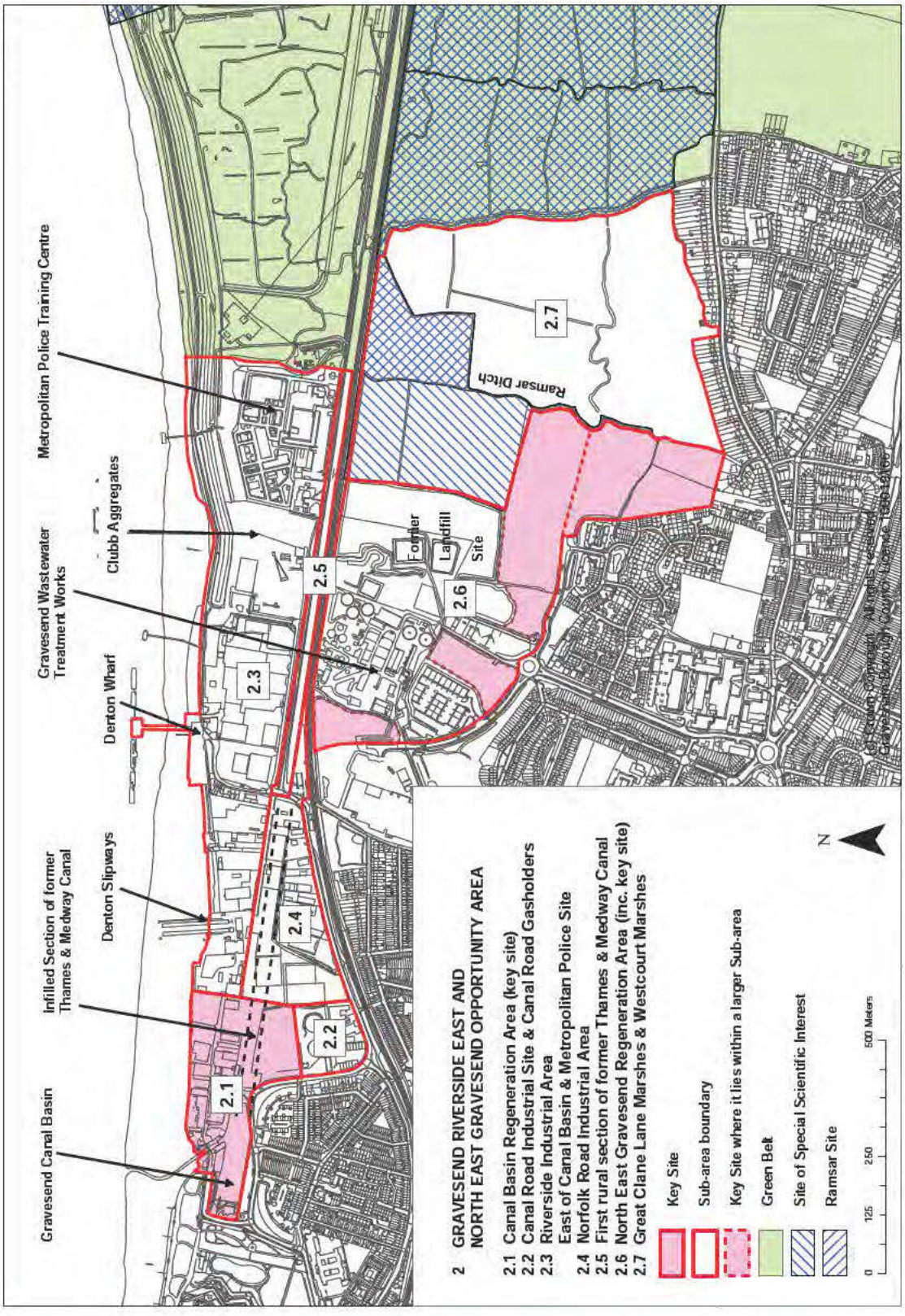


Figure 9: Gravesend Riverside East and North East Gravesend Opportunity Area

4.5.1 The **Gravesend Riverside East and North East Gravesend Opportunity Area** lies immediately to the east of Gravesend town centre, extending around 1.8 kilometres along the waterfront to the boundary of the urban area with the Metropolitan Green Belt. Included within this area is land to the south of the North Kent Railway line, surrounding the Gravesend Wastewater Treatment Works, and north of existing residential development at Northcourt Estate and Dalefield Way. To the east, still south of the railway, lies the remainder of the Westcourt Marshes and Great Clane Lane Marshes. Part of this area is included within the South Thames Estuary Site of Special Scientific Interest (SSSI) and the Thames Estuary and Marshes Ramsar Site which means that it is of significant biodiversity value.

4.5.2 A number of existing uses constrain the type and form of development likely to be acceptable in this Opportunity Area. These include the Gravesend Wastewater Treatment Works, the Metropolitan Police Training Centre and the Canal Road Gasholders. There are also a number of existing uses which demand a waterfront location because of the types of activity undertaken. These include the Denton Wharf (Port of London Authority), Denton Slipways (Ship Repairs) and Clubb's Wharf (Marine Dredged Aggregates). Notwithstanding these constraints, this area provides opportunities to continue the successful regeneration of the Canal Basin, make more efficient use of the land, facilitate river-related activity, accommodate new development and secure environmental improvement as part of the wider regeneration of the area. Figure 9 shows the main sub-areas comprising this Opportunity Area.

4.5.3 Due to the severance effect of the railway and the Thames and Medway Canal, the area to the east of the Canal Basin and north of the railway is served almost entirely from the Ordnance Road junction which links to the Gravesend town centre one-way system. This is a major constraint on what development and uses can be accommodated on the riverside because of the highway capacity, particularly at the junction, and any potential adverse environmental impacts of increased traffic on air quality. The Ordnance Road/Canal Road route is also a designated National Low Loader Route. This will also need to be taken into account in any development proposals. At North East Gravesend, capacity constraints at the junction of Dering Way and the Lion Roundabout will also need to be considered as well as impacts upon the wider highway network.

4.5.4 The Opportunity Area is in close proximity to the Thames Estuary and Marshes Special Protection Area (SPA) and Ramsar site to the east which are of international biodiversity importance, particularly for birds. Recent evidence suggests that there has been a decline in bird populations in the internationally significant Special Protection Areas (SPA) and Ramsar sites that make up the North Kent Marshes (Thames Estuary and Marshes SPA/Ramsar Site, Medway Estuary and Marshes SPA/Ramsar Site, and The Swale SPA/Ramsar Site). There is currently insufficient evidence to adequately assess the cause of this decline although interim findings indicate that recreational activity causes disturbance to birds and that more development will lead to an increase in disturbance. Further work is being carried out by the North Kent Environmental Planning Group (NKEPG) in relation to this matter. In the meantime, a precautionary approach to development will be applied. This means that developers may need to provide or contribute to mitigation measures for the recreation needs arising from their

developments, which may include provision of alternative greenspace, contributions to visitor control mechanisms and/or management of the SPAs, to ensure that detrimental impacts on the integrity of the SPAs/Ramsar sites are avoided.

4.5.5 There are important links for walkers and cyclists that connect Gravesend town centre with the North Kent Marshes beyond Mark Lane. These include the Saxon Shore Way long distance path and the National Cycle Route 1 (NCR 1). These routes are currently of poor quality in a number of places but still very well used and the Council supports their upgrading as part of the Green Infrastructure and transport network. Policies CS11 on Transport and CS12 on Green Infrastructure are also relevant.

4.5.6 Considerable progress has been made in restoring and upgrading the Thames and Medway Canal as a contribution to the Green Infrastructure network. The section between the Canal Basin and Mark Lane has been infilled and the Council is seeking the reinstatement of this part of the canal where this is shown to be feasible. Where cost precludes reinstatement at the time development takes place, the design will be required to facilitate future reinstatement.

4.5.7 Canal Basin Regeneration Area (sub-area 2.1) comprises the Canal Basin itself and the area lying north of the gasholders as far east as the Denton Slipways site. The Canal Basin has been restored as part of the first phase of redevelopment of the area and is in active use as a boating marina. This complements the recreational function of the Riverside Leisure Area to the west and is the type of marine related use that the Council would wish to see expand.

4.5.8 To the north and east of the Canal Basin lies an area that is currently in general employment use. The buildings are mainly old and in poor condition, with much of the land used for open storage. It has long been recognised that this area has potential for regeneration and it is shown as a Key Site. The Council's approach to this area is that mixed use regeneration that complements the development which has already taken place to the south of the Canal Basin will continue to be supported. This will comprise a mix of residential and business uses that have regard to the constraints imposed by its location in a flood risk area and the proximity of gasholders at Canal Road. A range of shops and services to serve the development and the existing residential area to the south should be included. Planning permission has been granted for these uses.

4.5.9 The Canal Basin along with the locks, swing bridge and other associated features are Grade II listed. There are thought to be significant buried archaeological remains associated with the canal, early railway, previous industrial uses and Albion Baths. It is also thought that there is a war grave containing the remains of Flight Sergeant Eric Williams from a World War Two crash site around Albion Parade. These features will need to be investigated and the heritage interest preserved and interpreted. The Canal Basin was a maritime hub and, as such, is within the Gravesend Riverside Conservation Area. Any proposals will need to preserve and/or enhance the character or appearance of the conservation area.

4.5.10 Canal Road Industrial Site and Canal Road Gasholders (sub-area 2.2) comprises an area of land immediately south of the Canal Basin Regeneration Area. It is primarily in employment use. The presence of the gasholders is a major constraint on the potential redevelopment of the area as they have health and safety implications. It is understood that these are likely to remain in-situ over the plan period.

4.5.11 The Council considers that this area is likely to remain in active employment use over the plan period and the presence of the gasholders would largely preclude the introduction of residentially-led mixed use regeneration.

4.5.12 Riverside Industrial Area East of Canal Basin and Metropolitan Police Site (sub-area 2.3) comprises an extensive tract of riverside land extending 1,300 metres east of the Canal Basin Regeneration Area along Wharf Road and to the east of Mark Lane, north of the alignment of the former Thames and Medway Canal. It is currently well occupied by a range of business and other uses.

4.5.13 Denton Slipways is a significant river-related facility which should be retained as it provides a range of services supporting water-borne transport and business on the wider River Thames. The Metropolitan Police Training Centre at Mark Lane and the Port of London's Denton Wharf and Denton Slipways (ship repairs) also provide facilities that are strategically important. Clubb's Wharf is an important facility for the importation of marine dredged aggregates.

4.5.14 The council's approach is that the current role of the area should continue over the plan period and support will be given to proposals that improve the environment of the area. The above strategic uses will be given protection from the encroachment of sensitive uses that may impede their operation.

4.5.15 It is understood that the Port of London Authority is currently considering the possibility of creating a Centre of Marine Excellence based on Denton Wharf and adjoining land. This could help to deliver further river-related services and diversify the local economy in the marine sector. The Council supports the expansion of such marine related employment uses that make active use of the waterfront between Denton Slipways and Denton Wharf.

4.5.16 Norfolk Road Industrial Area (sub-area 2.4) comprises the area lying south of the alignment of the former Thames and Medway Canal extending from the Canal Road Industrial Site and the Canal Road Gasholders site 450 metres to the east to Mark Lane. It is currently well occupied by a range of business uses.

4.5.17 The current role of this area should continue over the plan period as it is an important component of existing employment land supply. Proposals to improve the environment of the area will be supported.

4.5.18 The first rural section of the former Thames and Medway Canal (sub-area 2.5) comprises a restored section of waterway lying immediately north of the North Kent Railway to the east of Mark Lane. The depth of channel has been increased as part of a publicly funded project and a pumping system installed to maintain water levels.

4.5.19 Whilst this part of the canal is not navigable, it is important for the contribution it makes towards the Green Infrastructure network. The northern tow-path carries the vehicular access to the Metropolitan Police Training Centre and the route is well used as part of the public rights of way network and National Cycle Route 1. This part of the canal has been designated as a Local Wildlife Site.

4.5.20 The canal should be maintained in its current form and progressively restored as resources permit. Proposals that result in its loss will be resisted given its biodiversity, amenity and local heritage value.

4.5.21 North East Gravesend Regeneration Area (sub-area 2.6) comprises all the land lying south of the North Kent Railway and north of Dalefield Way and Dering Way. A proposed extension to the residential area south of Dalefield Way is also included within this sub-area.

4.5.22 This sub-area includes the Gravesend Wastewater Treatment Works which causes some odour issues. Parts of the sub-area are also subject to noise pollution from the shooting range to the east of the Metropolitan Police Training Centre. This means that the location and type of development in this area will need to have regard to odour nuisance and noise pollution. This sub-area also includes a former landfill site. This is likely to be subject to contamination which would make it unsuitable for built development without significant remediation.

4.5.23 This sub-area abuts the Site of Special Scientific Interest (SSSI) and the Ramsar site which are important for their nature conservation interest. As outlined in paragraph 4.5.4, it will be imperative that developers address and mitigate any detrimental impacts on biodiversity.

4.5.24 Whilst some commercial development has occurred at the Lion Business Park immediately south of the Wastewater Treatment Works, this has yet to be completed. Other sites to the east and west have been allocated for employment use in the past and a number benefit from extant planning permissions. These sites are allocated for employment use as they are important to the future delivery of jobs in accordance with the strategy. Therefore, they are shown as part of the Key Site.

4.5.25 There is a planning permission for residential use on land to the east of the existing residential area at Dalefield Way. This will make an important contribution to housing land supply over the plan period and is also shown as part of the Key Site.

4.5.26 Both the employment and residential components will be expected to meet the open space needs of workers and residents on-site and incorporate suitable boundary treatments to

reduce the risk of recreational pressure on the adjacent protected sites of nature conservation value.

4.5.27 Great Clane Lane Marshes and Westcourt Marshes (sub-area 2.7) comprises an area of largely undeveloped marshland lying between the Green Belt boundary and the North East Gravesend Regeneration Area. Westcourt Marshes is part of the South Thames Estuary and Marshes SSSI and the biodiversity value of this area has been damaged by past operations. Some of the sub-area (including a ditch extending southwards along the boundary of sub-area 2.6) also forms part of the Thames Estuary and Marshes Ramsar site.

4.5.28 The proposals for residential and industrial development at the eastern end of Dalefield Way in the North East Gravesend Regeneration Area, including the restoration of the damaged part of Westcourt Marshes SSSI to a more favourable condition, are supported.

4.5.29 The Thames Estuary 2100 Flood Risk Management Plan (see Policy CS18 on Climate Change) includes the proposal for a new north-south flood defence across the marshes to the north east of Gravesend. The alignment and form of this are not yet known. Given this and the significant biodiversity value of the area, the Council's approach is that this area should remain undeveloped over the plan period.

Policy CS04: Gravesend Riverside East and North East Gravesend Opportunity Area

4.5.30 The Gravesend Riverside East and North East Gravesend Opportunity Area will be the subject of riverside regeneration complemented by additional development to the south of the railway which improve the poor urban environment and make the most efficient use of vacant, derelict and underused land in the area. This will comprise a mix of uses including new housing, jobs and supporting development.

4.5.31 Development of the Key Sites will provide around 780 dwellings and 22,230 sq m gross employment floorspace. Development on the Key Sites will be in accordance with the following quantities:

4.5.32 The Canal Basin Regeneration Area Key Site (sub-area 2.1) will provide a mixed use development of around 650 dwellings and around 4,650 sq m gross new employment floorspace (use classes B1a and B1c). It will also provide a local centre to serve the resident and daytime population of the development. The employment uses will be located in the southern part of the site to minimise the health and safety impacts which arise from the proximity of the gas holders.

4.5.33 The North East Gravesend Regeneration Area Key Site (sub-area 2.6) is made up of a number of areas which will provide around 130 dwellings and around 17,570 sq m gross employment floorspace (use classes B1, B2 and B8).

settlement. The Council will require the preservation and interpretation of the site's heritage assets in accordance with Policy CS20 Heritage and the Historic Environment.

4.7.13 Northfleet Wastewater Treatment Works (sub-area 4.3) lies to the west of the Springhead Enterprise Park and south of Blue Lake. The plant has been upgraded to increase capacity and to meet European legal requirements. It is anticipated that this use will remain over the plan period. The Council recognises that it is a potential source of odour pollution and development proposals will need to reflect this.

4.7.14 Springhead Enterprise Park (sub-area 4.4) lies to the west of Springhead Road and south of Thames Way, immediately adjacent to the new residential development at Springhead Park (Springhead Quarter) and the Northfleet Wastewater Treatment Works. It is a well-established employment location consisting of a range of light and general industrial and warehouse units of different sizes. It has good levels of occupation although some of the larger units are more difficult to let. The Council considers that this area is likely to remain in employment use over the plan period. Proposals that result in improvements to the site and its employment carrying potential within the same range of uses will be supported.

4.7.15 Blue Lake (sub-area 4.5) is a deep water filled quarry lying to the north of Thames Way. The site is currently fenced to prevent unauthorised access due to the dangers associated with such workings but is used by a local fishing club. Water is abstracted from the lake to serve the Kimberly Clark tissue mill in the Swanscombe and Northfleet Riverside Opportunity Area. Lafarge Tarmac maintains rights to abstract water from the lake, although it is understood that no other abstraction takes place other than to maintain levels and to prevent flooding. The site is part of the Ebbsfleet Marshes Local Wildlife Site which means that it has some nature conservation value. However, it is understood that there is a degree of saline intrusion due to the proximity of the area to the River Thames.

4.7.16 The Council considers that Blue Lake will remain in its current use over the plan period. It would support proposals that better integrate the lake with the Northfleet Rise Quarter Key Site, secure environmental improvements and improve its biodiversity value whilst not prejudicing public safety and the abstraction of water for industrial purposes. It may be possible to increase use of the area for leisure purposes, for example. This would bring the area into active use and provide an income stream for its future maintenance and improvement.

Policy CS06: Ebbsfleet (Gravesham) Opportunity Area

4.7.17 The Ebbsfleet (Gravesham) Opportunity Area is a substantial opportunity for a high quality, sustainable, mixed use development in line with the long-standing strategy to create a major business district at Ebbsfleet within Dartford as well as Gravesham. Development will bring significant benefits to the Borough and surrounding communities through the delivery of new housing, business employment (within use classes B1a, B1b and B1c) and supporting facilities centred around and well linked to the Ebbsfleet Station transport hub.

4.7.18 Development of the Key Sites will lead to the provision of around 690 new dwellings and around 20,000 sq m gross business employment floorspace (use classes B1a, B1b and B1c), together with supporting retail (use class A1) and other facilities, leisure/entertainment floorspace (use class D2), hotels and restaurants. There is potential for the provision of additional dwellings and business floorspace in the longer term.

4.7.19 Development of the Key Sites will be in accordance with the principles set out below.

4.7.20 The Springhead Quarter Key Site will provide a residentially led mixed use development of around 690 additional dwellings with the potential to provide some business employment floorspace (use classes B1a, B1b and B1c) and some retail floorspace to support the residential development.

4.7.21 The Northfleet Rise Quarter Key Site will provide an employment led development comprising business employment floorspace (use classes B1a, B1b and B1c), leisure/ entertainment floorspace (use class D2), and hotels and restaurants. It will provide a local centre to support the development.

4.7.22 Retailing will be provided to meet the needs of the resident and daytime population and should safeguard the role of Gravesend town centre as the primary retail centre.

4.7.23 Facilities will be provided to support development of the Springhead Quarter and Northfleet Rise Quarter Key Sites and will be accessible to both existing and future communities. These will include the provision of educational, health, social care, sports and community facilities, open space to meet a variety of needs and recycling and waste transfer facilities. These will be provided in accordance with the phasing schedule set out in the Infrastructure Delivery Schedule.

4.7.24 Development will be designed to be public transport oriented to encourage a high proportion of trips by sustainable means and discourage the need to travel by private car. This will be achieved by the provision of frequent bus services and a high quality network of publicly accessible footpath and cycle links between the Springhead Quarter Key Site, Northfleet Rise Quarter Key Site and the Dartford Quarters of the development, Ebbsfleet Station and Northfleet. This will include the provision of a bridge over the Ebbsfleet stream to provide a pedestrian, cycle and road link between the Springhead Quarter Key Site and Ebbsfleet Station access road.

4.7.25 The Council will support the creation of an enhanced transport hub at Ebbsfleet Station (in the Dartford Borough Council area) providing high quality interchange facilities between bus, rail, walking and cycling and the provision of pedestrian and cycle links between Ebbsfleet and Northfleet stations.

4.7.26 Provision will be made for replacement car parking to serve Ebbsfleet Station if any is displaced by development.

4.7.27 The layout of development and mix of uses will have regard to railway noise from HS1 and odour from Northfleet Wastewater Treatment Works. Suitable buffer uses will be required between new residential development and this infrastructure to mitigate the impact of noise and odour.

4.7.28 A network of multi-functional, accessible greenspace will be provided, forming part of the wider Green Infrastructure network, to meet the needs of the resident and daytime population and to enhance biodiversity. This will include the improvement and management of the Ebbsfleet stream corridor.

4.7.29 The Springhead Enterprise Park will be retained in employment use. The Council will support proposals which increase its employment potential and make it more responsive to the market.

4.7.30 The Council will support proposals for Blue Lake that better integrate it with the Northfleet Rise Quarter Key Site, secure environmental improvements, increase its nature conservation value and introduce more beneficial uses where these are compatible with the need to maintain its water abstraction functions and public safety.

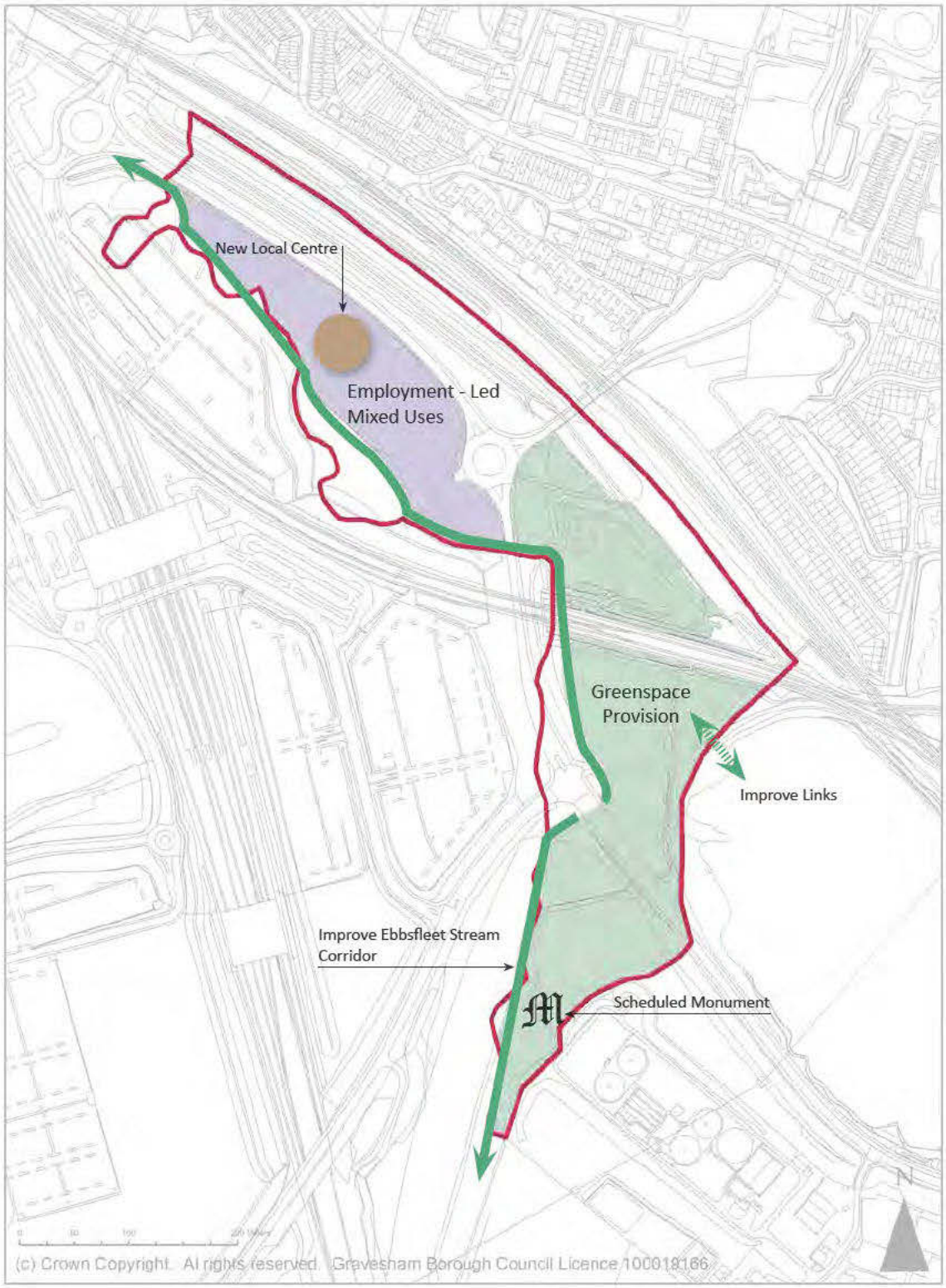


Figure 15: Key Site 4.1 Northfleet Rise Quarter Schematic Plan

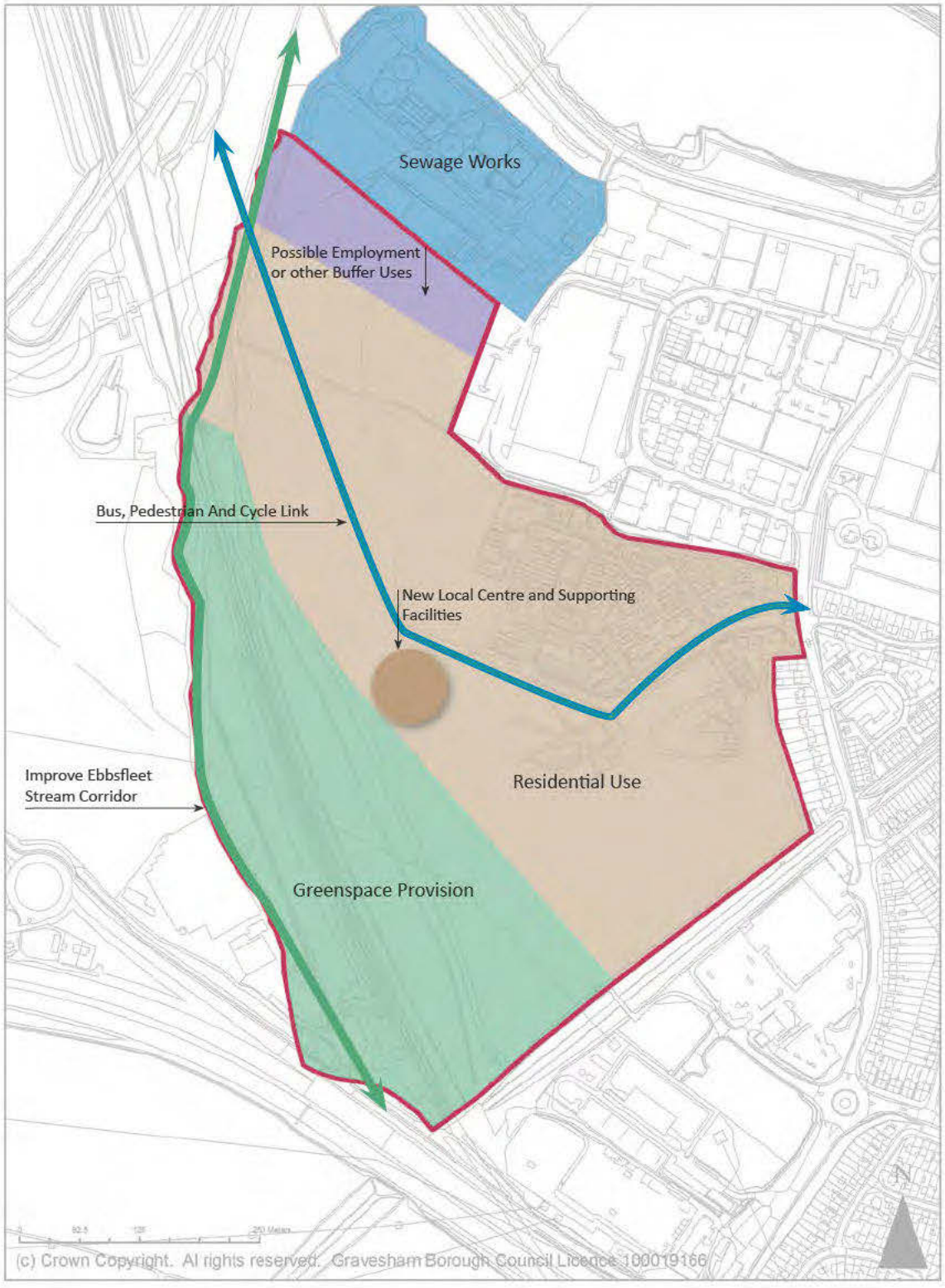


Figure 16: Key Site 4.2 Springhead Quarter Schematic Plan

Policy CS12: Green Infrastructure

5.7.22 A multifunctional linked network of green spaces, footpaths, cycle routes and wildlife stepping stones and corridors will be created, protected, enhanced and maintained. The network will improve access within the urban area, from the urban area to the rural area and along the River Thames. The key parts of the network are identified on Figure 19: Strategic Green Infrastructure Network.

5.7.23 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.

5.7.24 There will be no net loss of biodiversity in the Borough, and opportunities to enhance, restore, re-create and maintain habitats will be sought, in particular within the Biodiversity Opportunity Areas shown on the Strategic Green Infrastructure Network map and within new development.

5.7.25 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.

5.7.26 The overall landscape character and valued landscapes will be conserved, restored and enhanced. The greatest weight will be given to the conservation and enhancement of the landscape and natural beauty of the Kent Downs Area of Outstanding Natural Beauty and its setting. Proposals will take account of the Kent Downs Area of Outstanding Natural Beauty Management Plan, the Gravesham Landscape Character Assessment, and the Cluster Studies where relevant.

5.8 Green Space, Sport and Recreation

5.8.1 This section addresses provision and standards for green space, indoor and outdoor sport and recreation provision in the Borough.

5.8.2 In Gravesham, green spaces include parks, green corridors, natural greenspace and children's play areas. Facilities such Woodlands Park and Camer Country Park provide opportunities for informal recreation. Gravesham also has a range of formal indoor and outdoor sports facilities. Cascades Leisure Centre in Gravesend and Cygnet Leisure Centre in Northfleet provide a range of facilities including swimming pools, sports halls and health and fitness facilities. Meopham has a fitness and tennis centre. There are also sports pitches, golf courses, bowling greens and a number of other public and private sports facilities which provide the Borough's residents and workers with the opportunity to take part in sport. These are also available to visitors and residents from neighbouring areas. Some playing pitches have a dual function and also provide green space, e.g. Culverstone Recreation Ground.

5.8.3 A study of Gravesham's Open Space, Sport and Recreation facilities has been completed[23]. The Council recognises that further work on this is required and will work with Sport England to update it. This work will enable further guidance to be provided in later Local Plan documents and updates to the Infrastructure Delivery Schedule relating to open space, sport and recreation provision, to meet the needs of existing and future residents. The study found that the overall amount of all types of green space in the Borough is sufficient for the needs of the existing population. However, the provision of green space and access to it varies across the Borough. For example, there are issues with the provision of children's play areas, natural greenspace and allotments in much of the urban area and with access to parks in East Gravesend. It found that improvements to the quality of all types of green space are required.

5.8.4 The study found that the overall amount of land for playing pitches in the Borough is sufficient to meet the needs of the existing population. However, whilst there is an overall surplus of adult football pitches, there are shortfalls of junior football pitches and mini-soccer pitches (significant shortfall). Qualitative improvements are needed, particularly in terms of changing room facilities and disabled access at various sites. There are issues of access to and/or capacity of playing pitches. This is particularly an issue for mini-soccer pitches in Northfleet, East Gravesend and the rural area and for cricket, junior football and rugby pitches in much of the urban area.

[23] Gravesham PPG17 - Open Space, Sport and Recreation Study 2010

5.8.5 The study found that there are sufficient quantities of some sports facilities to meet the needs of the current population, e.g. swimming pools, sports halls. However, more health and fitness facilities are needed to meet the needs of the existing population. There is a need for some qualitative improvements to some facilities, e.g. multi-use games areas, indoor tennis courts. There are issues of access to and/or capacity of sports facilities in some locations, for example health and fitness facilities in Central and South Gravesend and outdoor tennis courts in much of Gravesend and Northfleet.

5.8.6 There is a clear need to address existing deficiencies identified in the Gravesham Open Space, Sport and Recreation Study as well as needs arising from new development. The natural growth in the Borough's population over the plan period, the Council's priority to encourage people to increase their level of physical activity and the ageing population will affect the amounts and types of playing pitches and sports facilities needed in the Borough in the future. The Council will work to address these needs by setting standards and considering site allocations in the Site Allocations and Development Management Policies Development Plan Document. The Council's strategy is to: protect existing green space, playing pitch and other sports facilities; address existing deficiencies; and make provision to meet future demands.

Policy CS13: Green Space, Sport and Recreation

5.8.7 The Council will seek to make adequate provision for and to protect and enhance the quantity, quality and accessibility of green space, playing pitches and other sports facilities, in accordance with an adequate, up to date and relevant evidence base.

5.8.8 A set of consistent green space, playing pitch and sports provision standards will be established which will apply to all new development. Provision should be made on-site. However, where this is not possible because of the site size, location or other specified circumstances, alternative provision or the enhancement of existing facilities will be required off-site. In all cases, provision will include arrangements for the ongoing maintenance of the space.

5.15.11 A proportionate amount of stakeholder and community engagement should also be undertaken to ensure that the design approach responds to expert advice and the needs and wishes of those who will use the places or buildings created or be impacted by them. Where proposals are likely to have a significant impact on the appearance and functioning of an area, developers will be encouraged to seek independent advice from the South East Design Review Panel (currently delivered through Design South East), to inform their design approach.

5.15.12 The space within and around individual dwellings is an important factor in the quality and adaptability of accommodation, the well-being of occupants and the impact of a proposed development on the character and amenity of the surrounding area. Currently the Council uses its Residential Layout Guidelines, which were adopted in 1996 as Supplementary Planning Guidance, to ensure that housing layouts, room sizes, internal arrangements and amenity space meet a minimum standard. All new residential accommodation, including conversions, will normally be required to conform to the space standards set out in the current Supplementary Planning Guidance. It is expected that the minimum internal floorspace standards will be exceeded to create good quality accommodation and to ensure future adaptability of the dwelling.

5.15.13 The Council will provide further guidance on these design principles in the Site Allocations and Development Management Policies DPD and through Supplementary Planning Documents.

Policy CS19: Development and Design Principles

5.15.14 New development will be visually attractive, fit for purpose and locally distinctive. It will conserve and enhance the character of the local built, historic and natural environment, integrate well with the surrounding local area and meet anti-crime standards. The design and construction of new development will incorporate sustainable construction standards and techniques, be adaptable to reflect changing lifestyles, and be resilient to the effects of climate change. This will be achieved through the criteria set out below:

- **Using the collaborative approach advocated in Building for Life 12 and in line withthe guidance set out in Kent Design, the design, layout and form of new development will be derived from a robust analysis of local context and character and will make a positive contribution to the street scene, the quality of the public realm and the character of the area. Account will be taken of the scale, height, building lines, layout, materials and other architectural features of adjoining buildings. Account will also be taken of the wider site context, including strategic views, site topography, the significance of heritage assets and features of townscape and landscape value which contribute to local character and sense of place;**
- **New development will encourage sustainable living and choice through a mix of compatible uses which are well connected to places that people want to use,**

including the public transport network, local services and community facilities; encourage sustainable travel; enhance Green Grid links and encourage healthier lifestyles;

- **New development will be located, designed and constructed to:**
  - **safeguard the amenity, including privacy, daylight and sunlight, of its occupants and those of neighbouring properties and land;**
  - **avoid adverse environmental impacts from pollution, including noise, air, odour and light pollution, and land contamination; and**
  - **not pose an unacceptable risk or harm to the water environment, including the quality and/or quantity of ground waters, surface waters, wetlands and coastal water systems;**
- **The design and layout of new residential development, including conversions, will accord with the adopted Residential Layout Guidelines;**
- **New development will be designed in an inclusive way to be accessible to all members of the community;**
- **New development will provide appropriate levels of private and public amenity space;**
- **New development will include details of appropriate hard and soft landscaping, public art, street furniture, lighting and signage and will ensure that public realm and open spaces are well planned, appropriately detailed and maintained so they endure;**
- **Car parking will be well related to the development it serves;**
- **New development will protect and, where opportunities arise, enhance biodiversity and the Borough's Green Infrastructure network. Support will be given to environmental enhancements where opportunities arise;**
- **New development will be fit for purpose and adaptable to allow changes to be made to meet the needs of users;**
- **The design and layout of new development will take advantage of opportunities to build in resilience to the effects of climate change. This will include protection against flood risk, where relevant, delivering carbon reduction, provision for low carbon and renewable energy, and minimising energy consumption and water use;**
- **New development will incorporate appropriate facilities for the storage and recycling of waste; and**
- **The layout of new development will create a safe and secure environment and provide surveillance to minimise opportunities for crime and vandalism.**

2.35 Bluewater has had a significant impact in raising the profile of the area and acting as a catalyst for a higher quality of development. It is also a major visitor attraction and employs 8,000 people. The continuing ability of Bluewater to evolve to meet market expectations is critical in maintaining these economic benefits.

2.36 The changes in the urban structure surrounding Bluewater, the extent of growth in the area with a consequent demand for new facilities as well as its relationship with neighbouring town centres, raises issues about the appropriate future role for this centre. The Council recognises that any changes may have impacts outside the Borough and, therefore, proposals which are of more than a local nature will take strategic considerations into account.

Stone

2.37 West of Bluewater, a cluster of sites in and around the existing community of Stone, provide a further opportunity to connect the locality together and provide new community facilities and improve existing ones for wider use.

2.38 Junction 1a of the M25 suffers from high levels of congestion[56]. Traffic generated by these sites is likely to exacerbate the situation (see paragraph 3.52). Development of these sites will require effective traffic management, particularly at peak hours.

Policy CS 4 : Ebbsfleet to Stone Priority Area

1. In the Ebbsfleet to Stone area, the Council will promote a chain of distinctive and individual but linked communities, existing and new. These will sit alongside a range of facilities of a regional and sub-regional scale and quality, generating vibrancy in the area and providing local access to a wide choice of jobs, retail, leisure and community facilities. Development of the area will continue beyond 2026. The Council will work with its partners to achieve the following outcomes:

   a) New residential communities focused on Ebbsfleet Valley and Stone, providing up to 7,850 homes within the Plan period, with further development beyond 2026[57].

   b) Local community facilities, with a new primary school[58], GP premises[59], an enhanced community meeting place and improved facilities at Stone. A range of facilities in the Ebbsfleet Valley (see Policy CS5) to support the new residents and enhance provision for existing residents, in particular, a new secondary school and its sporting facilities and a lifelong learning centre at Eastern Quarry. All new development will be required to contribute proportionally to the land and build costs of facilities, in relation to the demand generated by that development. (see also Policy CS26/1b).

[56] Kent Thameside Development of the Transport Strategy-Technical Summary Report, Jacobs, 2008
[57] These outcomes refer to Dartford Borough Council area only. Planning consents for Eastern Quarry and Ebbsfleet do not place a restriction on the rate at which delivery comes forward, subject to providing the necessary infrastructure, and this Plan does not seek to impose such a restriction. See also Paragraph 2.45.
[58] Infrastructure Background Paper, Dartford Borough Council, 2010
[59] Infrastructure Background Paper, Dartford Borough Council, 2010

c) 9,700 jobs in offices and other B1 uses, provided within the Plan period, with a concentration of these in the Ebbsfleet Valley[60].

d) A distinctive network of multifunctional green spaces defining each community and serving recreational and biodiversity functions. This will include natural habitat enhancement and making existing spaces publicly accessible at Craylands Gorge, St Clements Valley, the eastern end of Stone Lodge and the former Stone House Hospital; creating new spaces in the Ebbsfleet Valley and at St James Lane Pit; and improvements to Stone Recreation Ground.

e) A centre of excellence for sport and recreation at Stone Lodge, expanding on the existing Olympic-level provision on the site.[61]

f) Physical integration of Bluewater with the existing and proposed residential communities surrounding it, with footpaths, cycle paths and buses, including Fastrack. Options for the evolution of Bluewater which provide for a wider range of uses will be explored with the owners and relevant stakeholders, where this can provide synergies with Ebbsfleet and does not adversely impact on neighbouring town centres (see also Policy CS 12).

g) Linking of communities, facilities and key activity hubs through the Fastrack bus network, with a new link from Ebbsfleet through Eastern Quarry to Bluewater.

h) Built development reflecting the varied heritage of the area in order to create a sense of place. Provision of interpretation facilities, focusing on recent quarry-related industrial heritage as well as activity from earlier archaeological periods. The archaeological potential of parts of the Ebbsfleet Valley should be assessed prior to development through a desk-top study, and investigated via fieldwork, where the desk-top study indicates this will be necessary, or through an archaeological watching brief. The approach to any finds of significance will be determined through an Archaeological Strategy or Framework, agreed in partnership with KCC. Where there is an approved archaeological strategy as part of an extant planning consent, this will take precedence over this part of the policy.

2. Proposals at Stone will be required to demonstrate, through a Travel Plan, adequate traffic management measures to address capacity issues on London Road, taking into account all proposed developments in Stone. Measures may include provision for local highway and public transport improvements.

Ebbsfleet Valley Strategic Site

2.39 The Ebbsfleet, Eastern Quarry and Northfleet West Substation sites jointly comprise the Ebbsfleet Valley strategic site[62].

[60] These outcomes refer to Dartford Borough Council area only. Planning consents for Eastern Quarry and Ebbsfleet do not place a restriction on the rate at which delivery comes forward, subject to providing the necessary infrastructure, and this Plan does not seek to impose such a restriction. See also Paragraph 2.45.

[61] Sports Facilities Technical Paper, Dartford Borough Council, 2010

[62] See Ebbsfleet Valley Background Paper, Dartford Borough Council, 2010

2.40 Ebbsfleet is identified as one of four economic transformational hubs in the Thames Gateway[63] with the potential to deliver the change of the Kent Thames Gateway economy to a high value, knowledge-based economy.

2.41 Outline planning permission for a mixed use development covering the area around Ebbsfleet International Station, part of which lies in Gravesham, was granted in 2002. Ebbsfleet is to incorporate a business district centred on the international/domestic station with homes, retail, leisure and supporting community facilities.

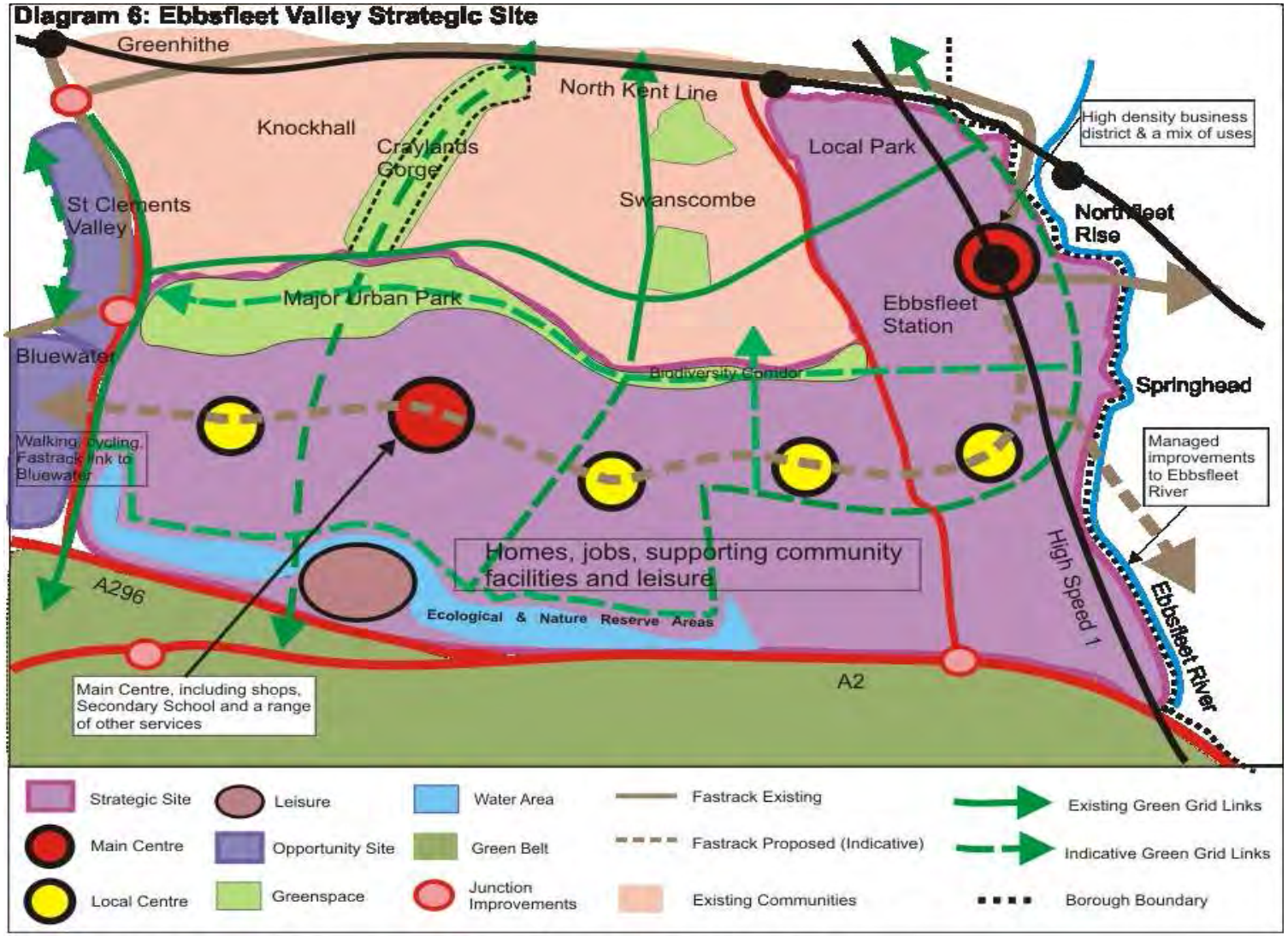
2.42 At Eastern Quarry, an outline permission, granted in 2007, provides for three mixed use 'villages' providing a range of residential, retail, community, employment and leisure floorspace.

2.43 An application for mainly residential development at Northfleet West Sub Station has been approved, subject to a S106 Agreement.

2.44 The precise nature of development of the Ebbsfleet Valley sites is to be agreed through a series of further approvals, which are to be guided by a site-wide masterplan and/or development parameters. In the case of Eastern Quarry, this is the Land-Use Disposition Plan.[64]

2.45 Assessment of potential delivery carried out through the SHLAA and SELAA, suggests that build-out of the Ebbsfleet Valley will continue well beyond the Plan period. For the purposes of formulating this Plan, a rate of delivery for the Ebbsfleet Valley based on the SHLAA and SELAA assessments has been used. This has informed the total housing, employment and retail delivery figure within the Plan period, as well as the infrastructure required to support the planned level of development. Nonetheless, the planning consents do not place any restriction on the rate at which delivery comes forward and this Plan does not seek to impose such a restriction. In the event that delivery is faster than projected, the necessary infrastructure to support development has been allowed for through the planning consents. This is achieved by a set of trigger points which require infrastructure to be provided before further development can be delivered.

[63] Thames Gateway. The Delivery Plan, DCLG, November 2007
[64] Ebbsfleet Valley Background Paper, Dartford Borough Council, 2010



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2.46 The Council wishes to see the current consents implemented and supports the principles embedded in them. In the event that fresh planning applications or variations to the current consents are submitted, it will be expected that the basic principles which seek to maximise regenerative potential and ensure sustainable development, are maintained. These are set out in Policy CS 5 below.

Policy CS 5 : Ebbsfleet Valley Strategic Site

1. At Ebbsfleet Valley, the Council will work in partnership with developers, service providers, Gravesham Council and government organisations to secure early delivery of the mixed use development, which will eventually comprise[65]:

   a) a community of up to 10,000 homes, (up to 5,250 assumed to be provided in the Plan period)

   b) a business district providing approx 16,900 jobs, (up to 9,500 assumed to be provided in the Plan period)

   c) leisure and retail uses to support local residents, workers and visitors

   d)community facilities required to support the residential community

2. An anchor use, such as relocated government offices, will be sought to act as an impetus for early development.

3. Work in partnership to achieve improved interchange facilities between Ebbsfleet Station, Fastrack and local buses and a pedestrian foot link with the North Kent line.

4. Applications for changes to existing consents or new applications (excluding reserved matters applications determined in accordance with existing consents) will be determined on the basis of the following principles:

   a) Creation of a high density business district adjacent to Ebbsfleet Station, with a mix of uses, including residential, generating activity in the daytime, evenings and weekends and ensuring a lively area.

   b) Quality of built design at Station Quarter North to signal arrival at an international station through the inclusion of landmark buildings and high quality public realm.

   c) Linked residential communities or 'villages', with a sufficient critical mass to support services, community infrastructure and the Fastrack service, (see point 4e) At Eastern Quarry and Northfleet West Sub-station, these will consist predominantly of family housing.

   d) A walking and cycling network and a Fastrack route across the area encouraging a high proportion of trips by sustainable means.

   e) Provision of community infrastructure, including schools, health facilities, sports and leisure facilities, community meeting places and shops provided at an appropriate stage of development to meet the needs of residents located to

[65] These outcomes refer to the Dartford Borough area only

meet the needs of residents and complementary to existing provision in adjoining communities (see also Policy CS4/1b and CS 26/1b).

f) A mixed use centre at the heart of each residential village, including community facilities and local shop(s), located to be easily accessible by sustainable forms of transport to residents and employees, with phased provision as the development progresses. One of these to provide a more comprehensive range of services and shops (see Diagram 6), with smaller, local facilities in the adjacent centres.

g) Physical and functional integration of the three individual sites in the Ebbsfleet Valley with each other, as far as possible[66], as well as with the adjoining communities at Swanscombe and Knockhall.

h) Provision of at least 30% of the site as open space[67], forming a network of multifunctional greenspace linking in to the Green Grid[68] and providing for leisure and recreation purposes, maintenance and improvement and creation of biodiversity corridors and for the management of water.

i) The retention and enhancement of the River Ebbsfleet and other water courses with natural habitat retention or creation along appropriate stretches of the bank side, and provision of flood risk mitigation measures within the development site.

j) Achievement of at least Code Level 4[69] in the energy category in advance of mandatory requirements. Where development commences in advance of a mandatory requirement for Code Level 6, buildings to be designed in a way that enables retro-fitting of sustainable energy technologies, for example through solar thermal, photovoltaic systems and ground source heat pumps. It may also be facilitated by supply of energy from a low/zero carbon Combined Heat and Power Plant.

k) Achievement of water efficiency to at least Code Level 4/5[70] in the water use category, or its equivalent in terms of water use reduction, in advance of mandatory standards.

5. Applications for, or changes to, area masterplans or reserved matters will need to demonstrate that proposals will not undermine the principles to be achieved across the site as a whole, as set out in the outline consent to which they relate.

6. Proposals Map 3 (p143) shows the site boundaries. Diagram 6 will be used to inform detailed proposals for the site.

[66] A vehicular link may not be possible between Eastern Quarry and Northfleet West Substation
[67] Open Spaces Technical Paper, Dartford Borough Council, 2010
[68] See definition of Green Grid at Policy CS 14
[69] Code for Sustainable Homes, DCLG, 2010
[70] Code for Sustainable Homes, DCLG, 2010

Thames Waterfront Priority Area

2.47 The Kent Thameside Strategy for the waterfront[71] seeks to open up access to the river for existing and future communities and to produce a high quality riverscape. However, recent piecemeal development of the Thames Waterfront has not achieved the full potential that co-ordinated development of the riverside could bring. A number of potential sites on the Thames Waterfront present a unique opportunity to create mixed use development, bringing life and activity back to the river.

2.48 The recreational value of the riverfront will be improved by a Thames Estuary Path running along the river frontage, interspersed with waterside activities. These could include a marina, boating facilities and pubs and restaurants. Housing, employment and other leisure uses will add to the vibrancy of the area. Some parts of the riverfront, Dartford Marshes and Black Duck Marsh on Swanscombe Peninsula, need to be protected for their nature conservation value and, in the case of Dartford Marshes, potentially to act as a managed water storage area in extreme flood events[72]. These areas of green space, alongside open spaces created as part of the new developments, will form a green parkland area along the river frontage, with green corridors linked to communities south of the river.[73]

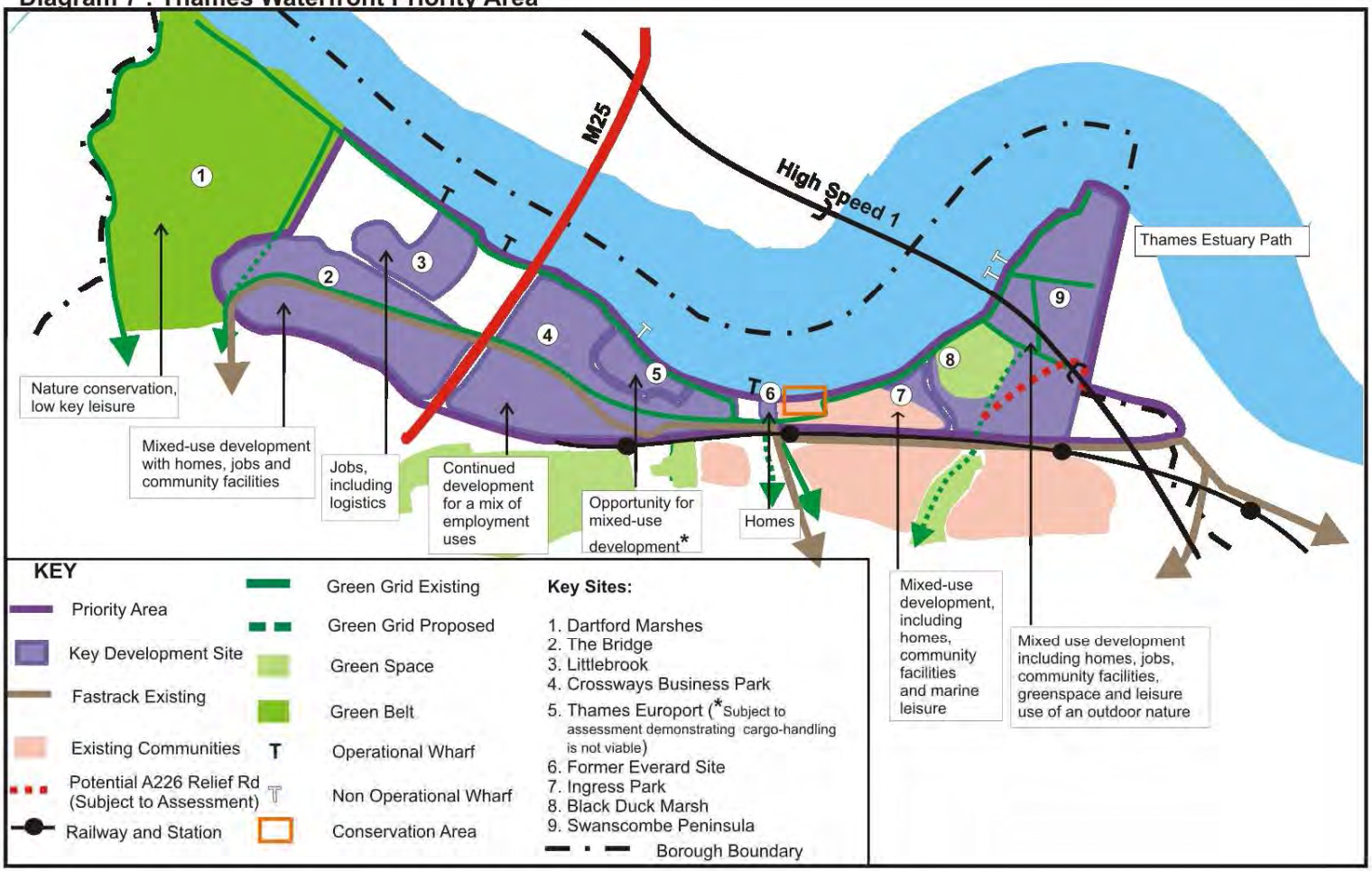
2.49 There are a number of wharves on the Thames waterside. Some of these provide a sustainable form of goods transport in support of the local economy and others have the potential to do so. As at 2011, Littlebrook Power Station and Johnson's Wharf are in active use. Thames Europort has been mothballed since 2009 and Bells Wharf and Whites Jetty at Swanscombe Peninsula have not been used since the closure of Swanscombe Cement Works in 1990. The challenge is to retain those wharves which are viable for the transport of freight whilst avoiding the retention of non viable wharves which result in vacant and derelict sites. Should a wharf become available applications for non-cargo handling uses will need to be accompanied by a study that assesses the viability of the wharf for cargo handling uses. The study should be carried out in conjunction with the Council and Port of London Authority. Where the study demonstrates that cargo handling uses are not viable, the potential for sustainable transport uses should be considered for the wharf, particularly where these support this Plan's regeneration objectives. Subject to the appropriateness of the location, such as adjoining uses or suitability of transport links, sustainable river transport uses may include marinas, boatyards, moorings or river bus stops. Johnson's Wharf is in use as an aggregates wharf. Government guidance on safeguarding of minerals and aggregates wharves requires that safeguarding is identified through Kent County Council's Minerals and Waste Core Strategy and is subsequently shown on the Council's development plan Proposals Map. At the time of preparation of this Core Strategy, the Minerals and Waste Core Strategy was at an early stage.

[71] A Strategy for Kent Thameside's Waterfront, Kent Thameside Delivery Partnership, 2008
[72] Thames Estuary 2100 Consultation Document, Environment Agency, April 2009.
[73] The Thames Gateway Delivery Plan, DCLG, Nov 2007 proposes the creation of 'Thames Gateway Parklands'.

2.50 Swanscombe Peninsula lies within both Dartford and Gravesham Boroughs. Joint working between the two boroughs will be required to maximise the potential of the area. Development will need to relate well to existing and proposed communities and other development, address the constraints of the site as well as the opportunities offered by the riverside location and natural environment[74]. Initial testing of options has been carried out but further work is needed.[75]

[74] Swanscombe Peninsula West Planning Brief, Dartford Borough Council, 2004
[75] Swanscombe and Northfleet Riverside Study, David Lock Associates, 2010.

Diagram 7 : Thames Waterfront Priority Area



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Policy CS 6: Thames Waterfront

1. The Council will promote the creation of a vibrant mixed-use riverfront, incorporating sustainable communities, new employment opportunities, leisure use of the river /riverside and use of the river for sustainable transport, by:

a) Supporting residential development of up to 3,750 homes, including on the Swanscombe Peninsula as part of mixed-use development, completion of permitted residential development at The Bridge and the former Everards site; and in the event that assessment demonstrates cargo-handling not to be viable, mixed-use development including riverside greenspace at Thames Europort.

b) Development at Swanscombe Peninsula to be fully integrated with Ingress Park, providing shared community facilities and local shops. The need for a primary school on the site will be kept under review. Master planning of the site will define the arrangement of land uses on the site and will be informed by detailed ecological studies to ensure that the biodiversity of the Peninsula is preserved.

c) Supporting employment at Swanscombe Peninsula, which, subject to further feasibility and impact assessments may include an Environmental Technology Park, incorporating a low/zero carbon Combined Heat and Power Plant, utilising Bells Wharf and Whites Jetty for the transport of goods and material. At Littlebrook, logistics activities will be supported. The continued development of Crossways for a mix of employment uses will be supported, as will The Bridge for a mix of B1, B2 and B8 uses and other employment generating uses.

d) Supporting new development incorporating sporting facilities and waterside activities, including boating facilities, pubs and restaurants, providing that river navigation, hydrology, traffic, parking and ecological impacts can be addressed and that development is appropriate to the character of the area.

e) Seeking the redevelopment of sites for alternative uses, where they become available through relocation or rationalisation of existing uses. In the case of wharves, this will be subject to a study demonstrating that cargo handling at the wharf and associated site is not viable. Proposals which incorporate sustainable river transport uses[76], utilising the wharf will be encouraged, particularly where these support regeneration objectives. Johnsons Wharf will be safeguarded where identified in the forthcoming Kent Minerals and Waste Core Strategy. Development adjacent to wharves should be designed to minimise the potential for conflicts of use and disturbance.

f) Protecting and enhancing Black Duck Marsh and Dartford Marshes as areas of biodiversity value and public recreational areas for quiet enjoyment, to the extent that the ecological protection of the area permits. New development will be expected to include connecting corridors of natural habitat along the river to

[76] Sustainable river transport may include marinas, boatyards, moorings or river bus stops, subject to other policies in the Core Strategy and later documents

enhance biodiversity linkages and to protect s41 species and other species of local ecological value[77 and 78].

g) Requiring all new development to incorporate a riverside foot and cycle path, linking with the long-distance Thames Estuary Path. Where, exceptionally, public access is not possible, for example as a result of wharfage facilities, a convenient and attractive route should be provided, linking back to the river at the nearest opportunity.

h) Supporting leisure uses at Swanscombe Peninsula where these are of an outdoor nature, or set in generous greenspace subject to compatibility with adjoining uses and impact on town centres. Proposals which maximise the tourism potential of Ebbsfleet and provide fast and convenient public transport links to Ebbsfleet station as part of the scheme will be particularly encouraged.

i) Encouragement of built development which reflects the heritage of the area in order to create a sense of place, with on-site interpretation facilities focusing on riparian activity and man-made influences on the landscape, particularly at the Swanscombe Peninsula. The archaeological value of the area should be assessed as part of planning applications through a desk top study and fieldwork investigations, where the desk-top study indicates this will be necessary, or through an archaeological watching brief. The approach to any finds of significance will be determined through an Archaeological Strategy or Framework, agreed in partnership with KCC.

j) Requiring development proposals to demonstrate, through a Travel Plan, adequate traffic management measures to address capacity issues not addressed by the Strategic Transport Infrastructure Programme (see Policy CS16), taking into account all proposed developments in the vicinity. Measures may include provision for local highway and public transport improvements. Subject to further assessment, a relief road for the A226 and provision of a dedicated or priority route for Fastrack may be required as part of proposals for development on Swanscombe Peninsula, linking to Ingress Park in the west and into Gravesham Borough in the east.

k) Require that Planning applications for development in Flood Zones 2 and 3 are accompanied by a site specific FRA[79] to demonstrate that development is safe and will pass Part C of the Exception Test[80], where applicable. These sites to also be sequentially tested to direct 'more vulnerable'[81] uses to the parts of the site at less risk of flooding, where possible.

2. Diagram 7 will be used to inform detailed proposals for the site.

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[77] Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 requires that the Secretary of State, in consultation with Natural England, publishes a list of habitats and species which are of principal importance for the conservation of biodiversity in England. There are currently 56 habitats and 943 species on the S41 list.

[78] An Environmental Impact Assessment of Swanscombe Peninsula has assessed the ecological value of the site. Table 8.3 provides a summary of results and identifies the protected species and those of local ecological importance

[79] Kent Thameside Strategic Flood Risk Assessment, Entec, 2005 & 2009 Update

[80] As per PPS 25: Development and Flood Risk, DCLG, 2010

[81] As per PPS 25: Development and Flood Risk, DCLG, 2010

Policy CS 14: Green Space

1. The Council will work with its partners to implement a multi-functional, high quality, varied and well-managed Green Grid[129]. It will deliver this by:

   a) Facilitating the creation of approximately 300 hectares of new or improved green spaces as part of new developments by 2026.

   b)Requiring new development to make a contribution to the Green Grid network as follows:
   - Sites of 20 ha and over: at least 30% of the site area
   - Sites of between 20ha and 2ha: at least 20% of the site area
   - Sites of less than 2ha will be considered on a site by site basis

   c) Where on-site open space is not appropriate or feasible, contributions may be sought for off-site improvements of open space in the vicinity of the site. Provision of specific types of green space and water bodies to cater for diverse community needs, including older children and teenagers; natural habitats and biodiversity corridors, and for mitigation of flood risk, will be provided within the overall allocation.

   d) Working with its partners to implement the projects below, in addition to those in Policy CS 13, through the Council resources and grant funding and as part of the Thames Gateway Parkland project:
   - Darenth Valley corridor – an enhanced path and landscape from the River Thames through Central Park in Dartford Town Centre to the open countryside
   - Central Park – expansion of the park, increased facilities and restoration of its traditional character
   - Thames Riverside Path – joining together the existing sections to create a continuous high quality path
   - Dartford Marshes – delivery of the 'Managing the Marshes' project which aims to conserve, manage and enhance the grazing marsh
   - New Countryside Gateway at South Darenth Lakes
   - Better connectivity between Dartford and Gravesham countryside through Ebbsfleet Valley and A2 corridor
   - Creation of a nature reserve east of Stone Lodge
   - Significant biodiversity improvements at development sites include Ebbsfleet Valley, Swanscombe Peninsula and the Northern Gateway

   e) Protecting and enhancing existing open spaces, including those shown in Diagram 8 and those identified and designated as locally important, the diverse landscape character, areas of nature conservation value, Sites of Special Scientific Interest, National Nature Reserves and local wildlife sites, community and ancient woodlands, as well as priority habitats and species, both in the urban and rural area. Biodiversity enhancements will be focussed on the Biodiversity Opportunity Areas. Protection and enhancement of biodiversity on brownfield development sites will be based on survey data.

2. Further guidance on the quality, quantity, management, maintenance and delivery of the component parts of the open space will be set out in the Development Management DPD and/or future SPDs.

[129] Green Grid – a strategic network of multi-purpose, attractive public open spaces consisting of green corridors, rivers, lakes and landscapes linked via a series of urban and countryside footpaths, Public Rights of Way, cyclepaths and roads, and designed to connect the main open areas within the urban area

Annex EDP 4
Relevant Extracts from Landscape Character Assessments

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SCENES FROM REACH 7

REACH 7 LONG REACH AND FIDDLERS REACH

3.7.1 CHARACTERISATION

This Reach stretches from the Mar Dyke to Grays Beach Riverside Park on the northern bank and from Longreach Sewage Works to Swanscombe Peninsula on the southern bank. This characterisation should be read in conjunction with Figure 4.99. At the western end of the Reach, the river narrows slightly to around 700m and flows in a south-easterly direction to Stoneness by West Thurrock Marshes. At Stoneness the river turns north-east and widens to 1,250 metres before turning sharply south-east around Swanscombe Peninsula. This Reach comprises a patchwork of land uses including large scale heavy industrial complexes, container depots, recent commercial and office development at the Crossways business park, remnants of marshland at West Thurrock and Swanscombe Peninsula and pockets of residential development at Grays, Greenhithe and Ingress Park. For detailed characterisation see Appendix 3.

The most prominent feature of this Reach, and indeed the eastern part of the Thames, is the Queen Elizabeth II Bridge (QEII Bridge) which is visible for many miles around. The bridge links Essex and Kent and spans high above the Thames to allow the passage of large ships. The spectacular elevated views from the bridge are only available to vehicular traffic. The M25 and the bridge/tunnel approaches take up a large area of land especially on the Kent side where the toll areas are located.

The marshland on West Thurrock and Swanscombe Peninsulas and the areas of open wasteland around the industrial complexes give the Reach a semi-rural character and creates a sense of openness along the river. This area is also very fragmented and disjointed with residential development immediately adjacent to heavy industry.

Land use on the northern bank is predominantly heavy industry from the Purfleet Thames Terminal to Grays. The main industries include oil refining and the manufacture of soap, margarine, cement and timber. The West Thurrock cement industry was one of the largest in Europe in the 19th Century. Notable features include the Purfleet Thames Terminal, a roll-on/roll-off ferry facility where large ferries moor up. East of West Thurrock Marshes there is a large oil refinery and cement works associated with the Vopak Terminal. Two super-size pylons, one on either side of the river at West Thurrock Marshes and Swanscombe Peninsula, are dominant vertical features. Their extra size enables the power cables to span the river at sufficient height to allow the passage of large ships. This area is generally very fragmented with large scale buildings and industrial complexes interspersed with areas of wasteland, depot areas and remnant marshland.

Extensive riverside residential development has occurred along the Grays riverfront, which lacks permeability. Here a former industrial area has been redeveloped and four-storey residential blocks now line the riverfront. Behind the taller riverside apartment blocks there are suburban estates of predominantly two storey buildings. Notable features of the Grays riverfront are a marina, where Thurrock Yacht Club is based and Grays Beach riverside park. White high-rise blocks on either side of the marina are recognisable features of the Grays riverfront. Both the marina and riverside park give life and activity to the riverfront.

Land uses on the southern bank include the large scale utilities of Long Reach Sewage Works and Littlebrook Power station which is a very large structure with a tall chimney forming a significant landmark. The Crossways Business Park is located east of the QEII bridge includes a range of large, low-rise warehouses and offices built close to the riverfront. The site has recently received a Kent Environment Award under the Sustained Site Management category for recognition of the management of land in a manner which improves habitat and protects the environment. From Stone to the east, the landscape bears the enormous scars of chalk extraction.

Greenhithe is an historic settlement dating back to Roman times. The recently built Ingress Park residential development to the east of Greenhithe is centred around the restored Ingress Abbey (built in 1833). Swanscombe Peninsula is an area of predominantly flat marshland that includes Swanscombe Marshes and Botany Marshes, which are drained freshwater grazing marsh and Broadness salt marsh. Tipping of pulverised fuel ash (PFA) has occurred in the northern part of the Peninsula which has been restored to grassland, in the southern part the PFA tip rises to a significant height. A proportion of the southern section of Swanscombe Peninsula West is, and has been for generations, given over to industrial uses. The site has historically been utilised as a cement works and a large number of industrial buildings remain on site.

RIVER BANKS

The northern bank of the river has predominantly hard vertical edges and there are numerous large piers and jetties on the western side of West Thurrock Peninsula. Soft river edges are found at West Thurrock Marshes and Grays Beach Riverside Park. There is access to the foreshore at Grays Beach. On the southern bank there are more extensive areas of soft river edge. Soft river edges are found by Littlebrook Power Station and its associated fuel store, the Crossways Business Park and Swanscombe Peninsula. Apart from the tip of Swanscombe Peninsula, all other areas are protected by earth flood embankments. There are extensive mudflats in this Reach, particularly around West Thurrock Marshes.

THAMES PATH

On the northern bank there is a public footpath/NCN13 that runs continuously from Purfleet Station to Grays although it has few landward links.

On the southern bank the footpath/NCN1 is also relatively good with a footpath running alongside most of the riverfront from Littlebrook Power Station to the Crossways Business Park but missing sections should be provided. There is some access to the riverfront at Greenhithe and a riverside path has been constructed at the Ingress Park development. The footpath continues along Swanscombe Marshes on the Swanscombe Peninsula, but does not extend out to its tip.

RIVER INFRASTRUCTURE

Vopak's Purfleet terminal which handles imports of CO2 and Esso's Purfleet site are amongst the eleven commercial terminals, with jetties, on the northern bank. On the southern bank there are three cargo terminals including Thames Europort which handles approximately 40% of the Port of London's ro-ro traffic. As this Reach is outside London there is currently no Safeguarded Wharves policy. Proposed piers within the Reach at West Thurrock Marshes and Grays Beach, Greenhithe, Ingress Park and Swanscombe Peninsula (east and west) will strengthen the case for north-south, and east-west ferries for tourism.

Thurrock Yacht Club is located on the northern bank at Grays and there is a launching site, Greenhithe Causeway on the southern bank. There are no public piers or riverside steps.

The most significant river crossing of the eastern part of the Thames is the Dartford Crossing comprising the Dartford Tunnel, opened in 1963 and the QEII Bridge, opened in 1991. A new strategic river tunnel for the Channel Tunnel Rail Link (CTRL) will be operational from November 2007, although its access points will be at Stratford and Ebbsfleet beyond the Strategy Area. On the southern bank in Kent Thameside, Fastrack is in the process of being implemented and will provide good local transport links.

BIODIVERSITY

The West Thurrock Lagoons and Marshes SSSI has in the past been recognised for its importance for wintering waders and wildfowl although the area has undergone recent decline due to closure of the power stations discharge that maintained suitable water levels. Similarly, the saltmarsh located at Stoneness is in unfavourable condition due to it being squeezed against hard sea wall from rising sea levels. The future management and use of the area has potential to restore and enhance the ecological functionality of the site. For

further information regarding biodiversity, refer to Appendix 3 - Characterisation and Appendix 6 - Biodiversity.

HERITAGE

Key sites of built heritage importance include Greenhithe, QEII Bridge, St Clements Church at West Thurrock and St Mary Church at Stone. Greenhithe is the only Conservation Area in this Reach. The Purfleet Military and Heritage Centre is housed in the Royal Gunpowder Magazine, which is itself of heritage interest as it is the last of its size and type in the country. It is the main visitor attraction within the Reach. For further information regarding built heritage refer to Appendix 3 - Characterisation and Appendix 5 - Built Heritage.

Swanscombe is well known for the discovery of fragments of an early human skull estimated to be about 400,000 years old, in Barnfield Pit in the 1930s (this is just outside the Strategy Area). It is amongst the earliest human remains known in Europe. Bones of animals such as the rhinoceros and straight-tusked elephant have also been retrieved from the terraced deposits of Barnfield Pit. This Reach is also particularly important for early pre-historic flint artefact manufacture and an important Levallois flint industry has been recorded at West Thurrock. Many other finds have been made in this Reach including pre-historic animal bones, human skeletons (including one believed to be of post-Palaeolithic date), Bronze Age spearheads and other implements, a large number of late Iron Age and Roman burial urns, and a system of tide walls on Littlebrook Marshes, known as Littlebrook Walls. West Thurrock, Grays Thurrock, Greenhithe, Stone and Swanscombe are mentioned as manors in the Domesday Book (1086).

The Purfleet area has also yielded rich evidence of former environments and fluvial conditions, including mammal, mollusc, pollen and ostrapod records. The discovery of two straight-tusked elephants and a woolly mammoth at Sandy Lane and the remains of the first jungle cat recorded in the British Isles are among the most important finds. Other finds include the remains of Neolithic stone hut circles on the mudflats near the low tide line at Purfleet, Palaeolithic and Neolithic finds, Neolithic forest and Roman discoveries.

For further information on archaeology refer to Appendix 3 - Characterisation and Appendix 4 - Archaeology.

RIVER ECONOMY

There are several major freight terminals, such as Littlebrook Powerstation, within this reach as well as important recreational uses.

KEY CHARACTERISTICS AND INFLUENCES

- The Reach contains the highly visible QEII Bridge
- This Reach comprises a fragmented and disjointed patchwork of land uses including large-scale heavy industrial complexes, remnants of marshland giving a semi rural character and pockets of residential development
- The Reach is particularly important for its archaeological value
- The landscape bears the large scars of chalk extraction.

3.7.2 REACH GUIDANCE

This Reach Guidance (RG) should be read in conjunction with Figure 4.100 and sits within the Strategic Guidance for the whole Strategy Area provided in Part 2.

PLANNING AND DESIGN

RG7.1 Ensure that development at Swanscombe Peninsula recognises the unique character of the peninsula, does not damage the remnant marshland character of the peninsula, enhances the soft river edges around the Swanscombe Peninsula as part of flood risk management proposals, provides the Thames Path extension City to Sea and generally supports the Strategy's recommendations.

RG7.2 Protect and enhance the strategic connections to the river including the Thurrock/Grays corridor, the City to Sea/Shoreline corridor,

the Bluewater/Stone Castle Link, Darenth Wood/Stone Link and Dartford/Stone Fiddlers corridors on the southern bank.

RG7.3 Seek opportunities to improve access within areas lacking permeability to the river and encourage links to the Thames Path extension City to Sea. Especially within growth areas of Grays and Purfleet.

RG7.4 Protect and enhance the positive aspects of the Reach's character including:
- the openness and marshland character of West Thurrock Marshes
- the 'seaside' character of Grays Beach
- the village character of Greenhithe
- views and setting of Beacon Green at Purfleet
- Purfleet Military and Heritage Centre
- the high quality character of Ingress Park
- open space between St Clements Church, the Proctor and Gamble factory.

RG7.5 Ensure that new development at Purfleet:
- relates well to the existing urban form
- strengthens the connection of the existing community with the riverside
- enhances the quality of the built riverside environment
- protects and improves riverside access
- expands the woodland character to give a cohesive structure to currently fragmented landscapes.

RG7.6 Seek opportunities to integrate Grays Beach Park with the river foreshore and explore opportunities to realign the flood defence wall which acts as a major barrier. Link Grays Beach with Grays Yacht Club and create an extended waterfront park and beach; in the long term consider the feasibility of extending Grays beach to cover a wider part of the bay. This could be developed as a significant leisure and recreation attraction and destination.

RG7.7 Seek opportunities to provide a high quality, safe and attractive foot and cycle path over the QEII Bridge to connect the northern and southern banks of the Thames Path City to Sea, the London Loop Path and the various routes of the East London, Thames Gateway South Essex, and Kent Thameside Green Grids.

BIODIVERSITY

RG7.8 Restore and enhance West Thurrock Lagoons and Marshes SSSI through appropriate site and water level management and by exploring opportunities for realignment of flood defence wall to restore the connection between the marshes and the river to help meet SSSI favourable status of saltmarsh at Stoneness.

RG7.9 Protect and enhance the habitat for aculeate hymenoptera at the pulverised fuel ash lagoons at West Thurrock and improve links to the Swanscombe Skull Site National Nature Reserve (NNR and SSSI).

ARCHAEOLOGY, HISTORICAL AND CULTURAL RESOURCES

RG7.10 Enhance understanding of the existing known and potential archaeological resource, particularly the Swanscombe Skull and including prehistoric flint manufacture, prehistoric and Roman settlement and burials, early medieval settlement, and sea defences, later medieval settlement, and marshland reclamation and early post-medieval mineral extraction.

RG7.11 Protect and enhance key sites of built heritage importance and explore the opportunities to create and promote a series of interlinked new and existing destinations and cultural heritage attractions, such as Greenhithe, High House Farm

Complex, Purfleet QEII Bridge, Dartford and St Clement's Church, West Thurrock, Portland Cement Works and the Swanscombe Skull site.

RG7.12 Protect, enhance and interpret the impressive views within the reach including:
- River prospects from and to QEII Bridge
- River prospects from Ingress Park and to Ingress Abbey
- River prospects from Grays Beach
- River prospects from St Clements Church, West Thurrock
- St Mary's Church, Stone
- The panoramic view from the picnic area off the B3228 near Stone
- The panoramic view from the proposed Stone Lodge Park
- River prospect from Swanscombe Peninsula
- River prospect from South Stifford to Swanscombe Peninsula
- Views of industrial landmarks of Littlebrook Power Station, Purfleet Thames Terminal and the Super Pylons.

RG7.13 Promote the creation of a major landmark as part of development proposals for the Swanscombe Peninsula.

RG7.14 Explore the opportunity to transform the QEII bridge at night through an innovative lighting scheme.

RG7.15 Seek to retain features of industrial infrastructure such as cranes to maintain a sense of place and industrial heritage.

FLOOD RISK MANAGEMENT/CLIMATE CHANGE

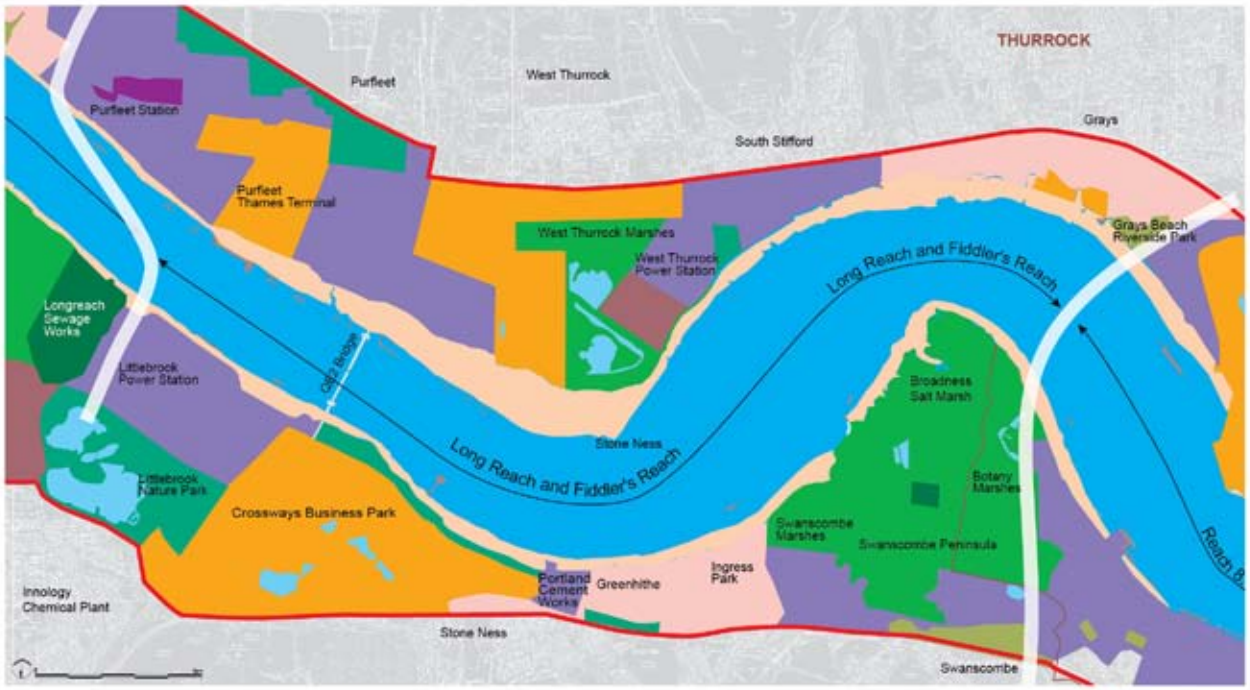
RG7.16 Seek opportunities for creative realignment of flood defences and making space for water in all riverside development proposals, where defences are being replaced and at riverside open spaces. in particular development proposals should be in line with Strategic Flood Risk Assessment completed for Dartford and Gravesham Boroughs.

ECONOMY

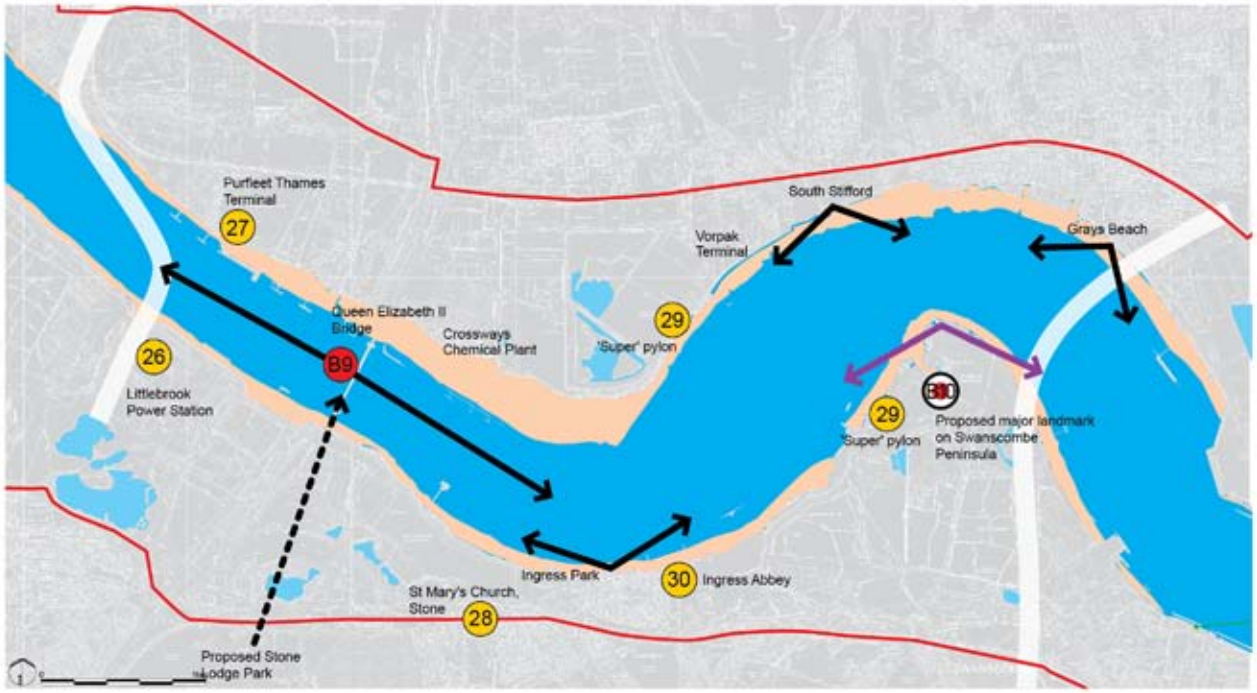
RG7.17 Protect and enhance the existing diverse economic uses of the river including piers, river-based transport, and the mix of riverside uses including industry, housing, business, and river-related tourism.

RG7.18 Explore opportunities and demand to develop new and existing piers at West Thurrock, Grays Beach, Greenhithe, Ingress Park and Swanscombe Peninsula (east and west) as part of an integrated ferry network linking concentrated leisure and recreation destinations and cross-river and commuter routes and also for leisure pursuits such as fishing.

FIGURE 3.7.1 **REACH 7: SUMMARY DATA**
LONG REACH AND FIDDLER'S REACH



CHARACTERISATION



VIEWS, LANDMARKS AND MAJOR LANDMARKS

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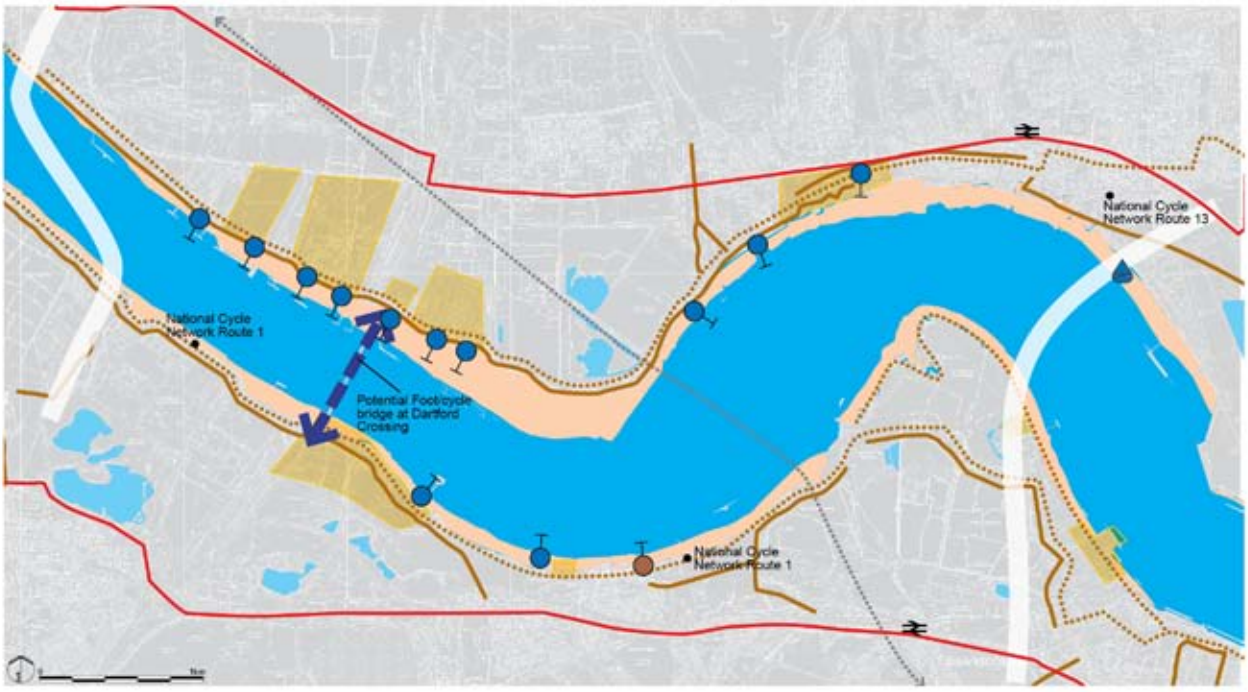
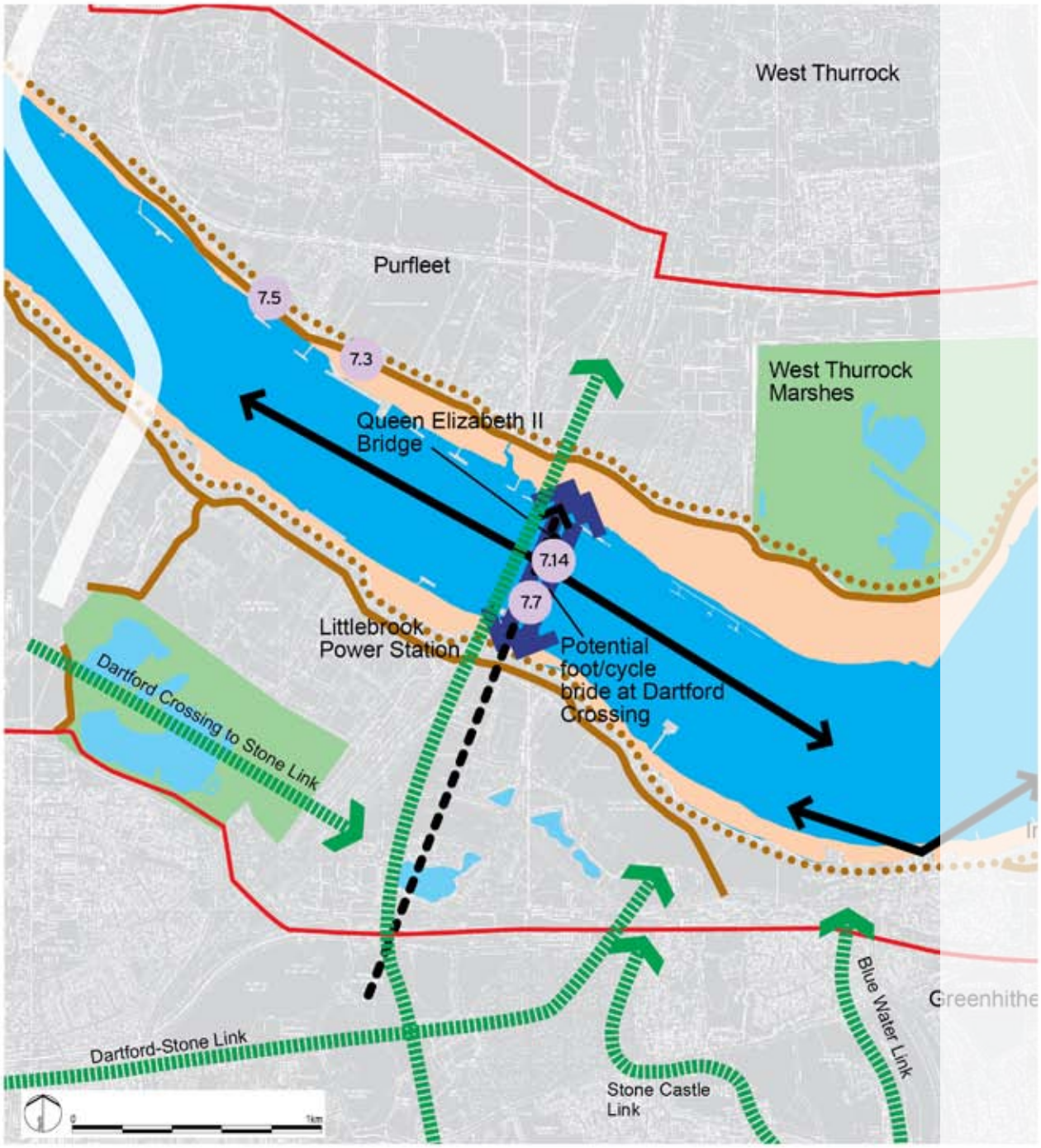
BIODIVERSITY, BUILT HERITAGE AND TOURISM



ACCESS, PUBLIC TRANSPORT AND
RIVER RELATED INFRASTRUCTURE

FIGURE 3.7.2 **REACH 7: GUIDANCE PLAN**



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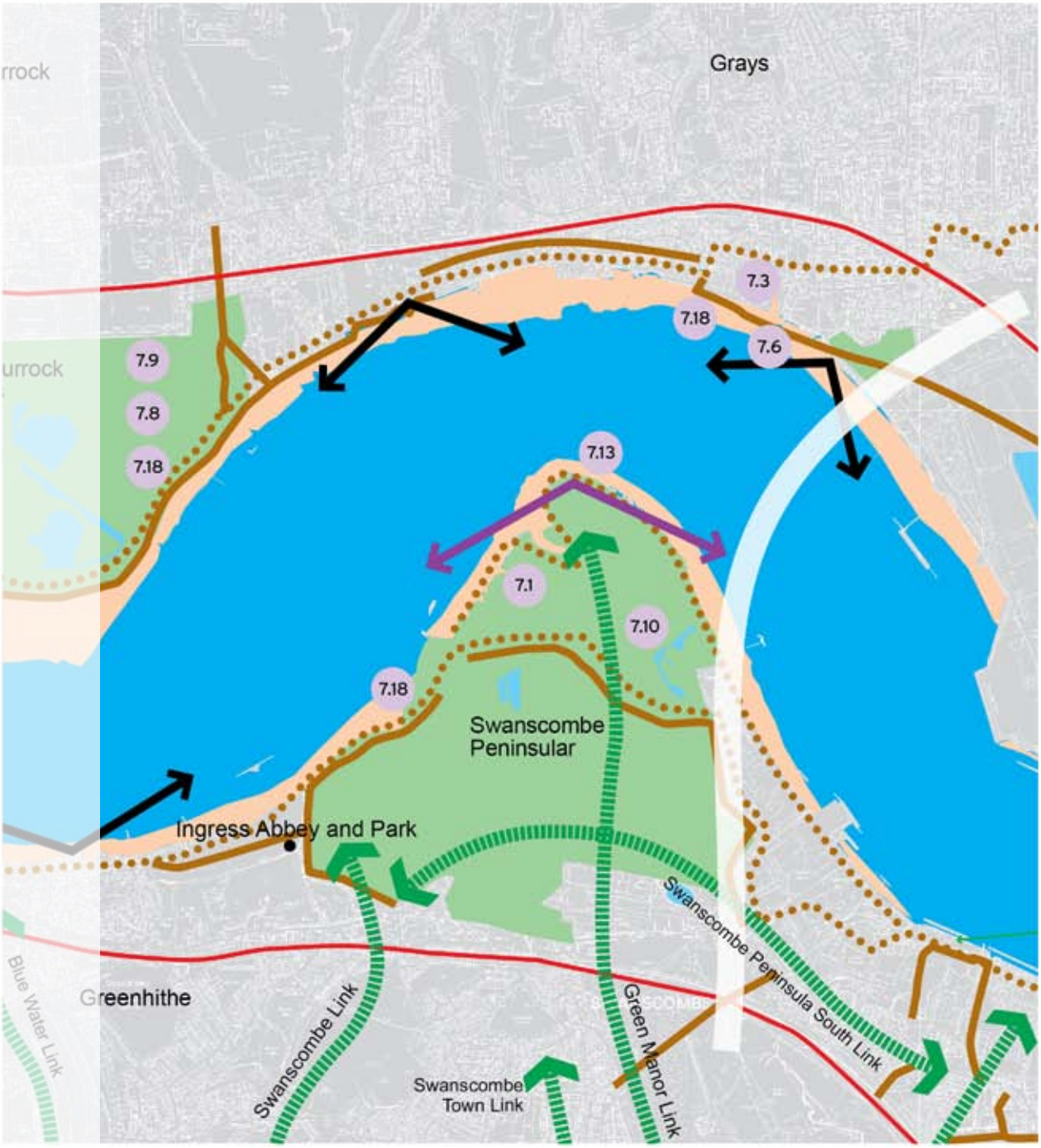


REACH 8 NORTHFLEET HOPE

3.8.1 CHARACTERISATION

This Reach stretches from Grays Beach Riverside Park to the eastern extent of Tilbury Docks on the northern bank and from Swanscombe Peninsula to Northfleet and Rosherville on the southern bank. This characterisation should be read in conjunction with Figure 4.109. The river turns sharply south-east around Swanscombe Peninsula and then turns due east around Tilbury Ness. The river narrows in width in this Reach from over 1000m opposite Swanscombe Marshes down to 500m at Tilbury Ness before gradually widening again towards Gravesend.

The Reach is characterised by shipping activity, dock cranes, large warehouses and depots around Tilbury Docks on the northern bank and heavy industry including a large cement works at Northfleet on the southern bank. For detailed characterisation see Appendix 3.

The riverfront is very active with freight and container ships loading and unloading, both at Tilbury Docks and at the industrial complexes at Northfleet. Wharves and jetties with travelling cranes line the river banks almost continuously and dock cranes dominate the skyline on the northern bank. The use of the riverfront is purely industrial and commercial. The riverfront has a unique 'raw' industrial character, particularly along Northfleet, due to the massive scale and intensity of the heavy industry.

Tilbury Docks dominates the northern bank in this Reach providing a key economic driver. Tilbury Docks were built on former marshland, consequently, the northern bank in this Reach is flat. The coming and going of large ships provides a characteristic river-related scene along with the water berths, cranes, the bulk grain terminal and containers. Tilbury is the main container port for London and comprises three large docks leading off the main dock, vast warehouses, stacks of multi-coloured containers, cranes and car and van depots surrounded by security fencing. The largest container ships moor up at the Riverside Wharf where the travelling cranes are the most dominant vertical features of the Docks.

There are impressive open views across the dock basins although these are not available to the public as there is strictly no public access to the Docks. Tilbury Bulk Grain Terminal is located adjacent to the docks by the riverfront. The London International Cruise Terminal, located to the east of Tilbury Docks, is a notable feature which is described in more detail in Reach 9. Little Thurrock Marshes is located to the north of the Docks.

Land use on the southern bank at Northfleet is predominantly industrial with 9 deep water cargo terminals. However, a development of large-Georgian villas and terraces lies between the industrial area and a retail park with superstores to the west of Gravesend town centre. The development was laid out by Jeremiah Rosher, a chalk merchant, who also laid out Rosherville Gardens, which were very popular with day trippers from London in the past. Residential areas of terraced housing are located to the south of the A226 which runs along the top of a chalk cliff which resulted from extensive chalk quarrying. The chalk cliff separates the residential area from the industry.

Historically, the main industries at Northfleet were shipbuilding and cement and paper production. A cement works still exists at 42 Wharf and Bevan's Wharf. Two football grounds are located within the industrial area, close to Robins Creek, although the ground to the north of Wallis Park is disused. Robins Creek connects the Ebbsfleet river with the Thames and is the only tributary found in this Reach.

In the longer term it is likely that Northfleet will be considered for mixed-use rather than the purely industrial development that exists presently - the Lafarge Cement works is an example of a site that may be released for redevelopment soon. The production of cement at Northfleet works is set to continue with a new import facility under construction and an aggregates

terminal planned. A steering group comprising SEEDA, Gravesham Borough Council, Kent County Council and Kent Thameside Delivery Board and Lafarge is currently looking at a master planning strategy to maximise regeneration potential of the wider Embankment from Rosherville Pier in the east, to Robin's Creek and Tower Wharf in the west.

A distinctive feature of Northfleet is the Church of Our Lady of the Assumption designed by Giles Gilbert Scott. The church is strategically located on high ground on the chalk ridge adjacent to a dramatic vertical chalk cliff of a quarry. The brick faced church tower can be seen clearly from the river. The historic hamlet of Northfleet, located close to the parish church of St Botolphs on the A226 is also notable. It is designated as a Conservation Area and includes some charming timber framed buildings and back of pavement development.

RIVER BANKS

Both the northern and southern banks in this Reach are hard and vertical, as they are almost continuously lined with wharfs and jetties.

THAMES PATH

There is strictly no public access to Tilbury Docks and no access along the riverfront. Access to the riverfront at Northfleet is very restricted, but there are two public footpaths that give access to a small section close to Tower Wharf and at the east end of Northfleet Embankment along the shore leading to a public footpath adjacent to Red Lion Wharf.

RIVER INFRASTRUCTURE

The Port of Tilbury has twenty one terminals comprising over seventy berths. On the southern bank there are nine commercial wharves. The Tilbury to Gravesend Ferry sits just to the east of the Reach and is covered in detail in Reach 9. There are no public piers, launching sites, riverside steps or watersports centres in this Reach. The landing stage for London International Ferry Terminal is covered in Reach 9.

BIODIVERSITY

Other than the River itself, there are no statutory or non-statutory sites of nature conservation interest in this Reach. There has been extensive loss of natural wildlife habitat through industrialisation and reclamation of marshland. Little Thurrock Marshes situated to the north of Tilbury contains a network of ditches which support water voles and reedbeds and is identified as an important site for invertebrates. Further information regarding biodiversity can be found in Appendix 3 - Characterisation, and Appendix 6 - Biodiversity.

HERITAGE

The main sites of built heritage importance are the church of St Botolph and Church of Our Lady of the Assumption at Northfleet, Henley's Telegraph Works Company factory and research laboratories, Tilbury Docks, the PLA London International Passenger Cruise Terminal including the Tilbury Riverside Station (now Tilbury Riverside Arts and Activity Centre) and Aspdin's Kiln, a Scheduled Ancient Monument that lies close to Robin's Creek at the westerly end of Northfleet Embankment. There are three Conservation Areas: The Hill, Northfleet; Landsdowne Square, Rosherville; and Overcliffe.

There is a wealth of intangible heritage in this Reach, for example the Tilbury brick works was owned by Daniel Defoe, author of Robinson Crusoe; Rosherville was named after Jeremiah Rosher, a chalk merchant who laid out Italianate villas and terraces and Rosherville Gardens. Further information on built heritage can be found in Appendix 3 - Characterisation, and Appendix 5 - Built Heritage.

Northfleet has long been famous for the thousands of Palaeolithic artefacts found here. The Ebbsfleet Valley to the south west is important for Mesolithic and Neolithic remains, including a type of early Neolithic pottery known as Ebbsfleet Ware. On the northern side of the Thames a number of Neolithic

and Bronze Age burials and Roman occupation debris and burials were uncovered, at depth, during the construction of Tilbury Docks in 1883. Further information on archaeology can be found in Appendix 3 - Characterisation, and Appendix 4 - Archaeology.

RIVER ECONOMY

This reach contains the main focus of port activity within the Port of London, Tilbury Docks, together with numerous other wharves this dominates this reach.

KEY CHARACTERISTICS AND INFLUENCES

- Both banks of this Reach are dominated by shipping activity and its associated infrastructure and land uses
- The chalk ridge that runs close to the river has been extensively quarried and the resulting chalk pits and cliffs are a characteristic feature of Northfleet
- The main landmarks in the area are Tilbury Bulk Grain Terminal; Tilbury Docks Riverside Wharf; the London International Cruise Terminal; chimneys at Northfleet; and Church of Our Lady of the Assumption, Northfleet.

3.8.2 REACH GUIDANCE

This Reach Guidance (RG) corresponds to figure 4.110 and sits within the Strategic Guidance for the whole Strategy Area provided in Part 2.

PLANNING AND DESIGN

RG8.1 Redevelopment proposals for this Reach should seek to restore the lost river related features of this Reach including biodiversity, river views, access to the river and foreshore, opportunities to enjoy the water, tree planting along the chalk ridges of Northfleet and provision for flood risk management and economic potential.

RG8.2 The strong dockland character and harbour activity of Tilbury Docks should be promoted as an asset characterising the Reach.

RG8.3 Promote, protect and enhance the strategic green space connections to the Thames including to Tilbury, Northfleet and Ebbsfleet train stations, the Tilbury connection and City to Sea/Shoreline connections as proposed in the South Essex Green Grid; and Swanscombe Peninsula, Swanscombe Peninsula South, Ebbsfleet Valley Corridor and Botany Marshes to Gravesend corridors as proposed in the Kent Thameside Green Grid.

RG8.4 Improve foot and cycle routes along the Thames by improving the route where it passes adjacent to the river and where the route deviates from the Thames ensuring that it is well signposted and of a good quality.

RG8.5 Protect and enhance the limited views to the Thames within the Reach including:
- views from the A226 on the chalk ridge, particularly from the picnic area to Tilbury Docks
- views of the Church of Our Lady of the Assumption, Northfeet
- London International Cruise Terminal
- views of chimneys at Northfleet
- create a river prospect at Tower Wharf, the Seacon Terminal.

RG8.6 Jetties that become redundant and no longer commercially viable or capable of being made viable for cargo handling, should be redeveloped first to incorporate water based passenger transport, leisure, and recreation facilities and water transport support facilities before non-river related uses that do not require a riverside location.

BIODIVERSITY

RG8.7 Opportunities should be sought to enhance the biodiversity along the river edge, marshlands and the urban fringe environment through planting, appropriate management and protection of the foreshore.

ARCHAEOLOGY, HISTORICAL AND CULTURAL RESOURCES

RG8.8 Enhance understanding of the existing known and potential archaeological resource including prehistoric, Roman and early medieval settlement and burials, later medieval settlement and marshland reclamation and post-medieval industry.

RG8.9 Protect and enhance key sites of built heritage importance including Henley's Telegraph Works Co. factory and research laboratories, Tilbury Docks, St Botolph's Church and Church of our Lady of the Assumption at Northfleet, Aspdin's Kiln, the London International Cruise Terminal, Tilbury Riverside Station (Tilbury Riverside Arts and Activity Centre) and the Conservation Areas of the Hill at Northfleet, Landsdowne Square, Rosherville and Overcliffe.

FLOOD RISK MANAGEMENT/CLIMATE CHANGE

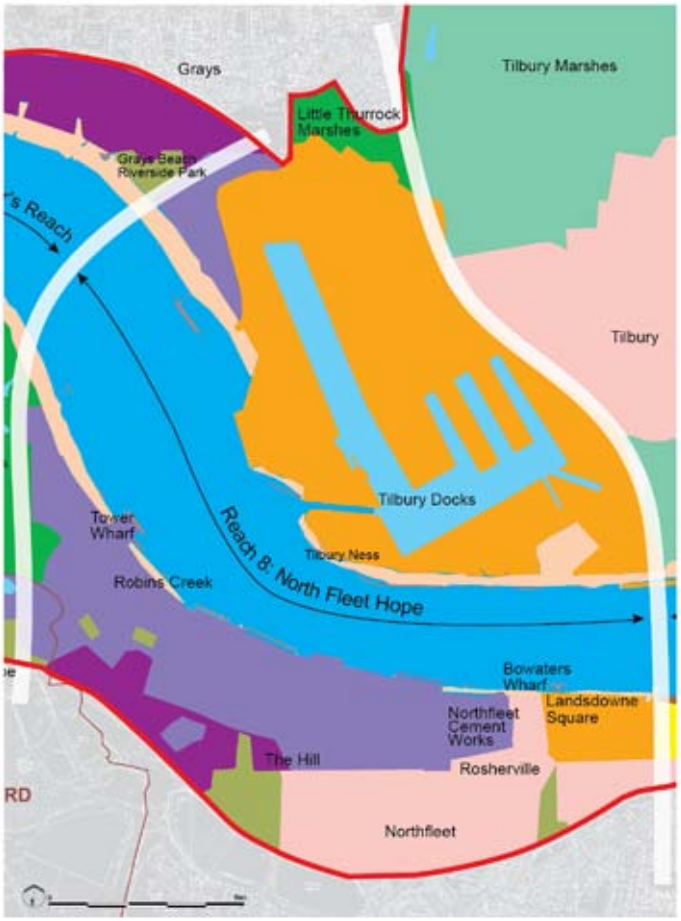
RG8.10 Seek opportunities for creative realignment of flood defences and making space for water in all riverside development proposals, where defences are being replaced and at riverside open spaces. This will be particularly relevant where heavy industry is being replaced with mixed-use development.

ECONOMY

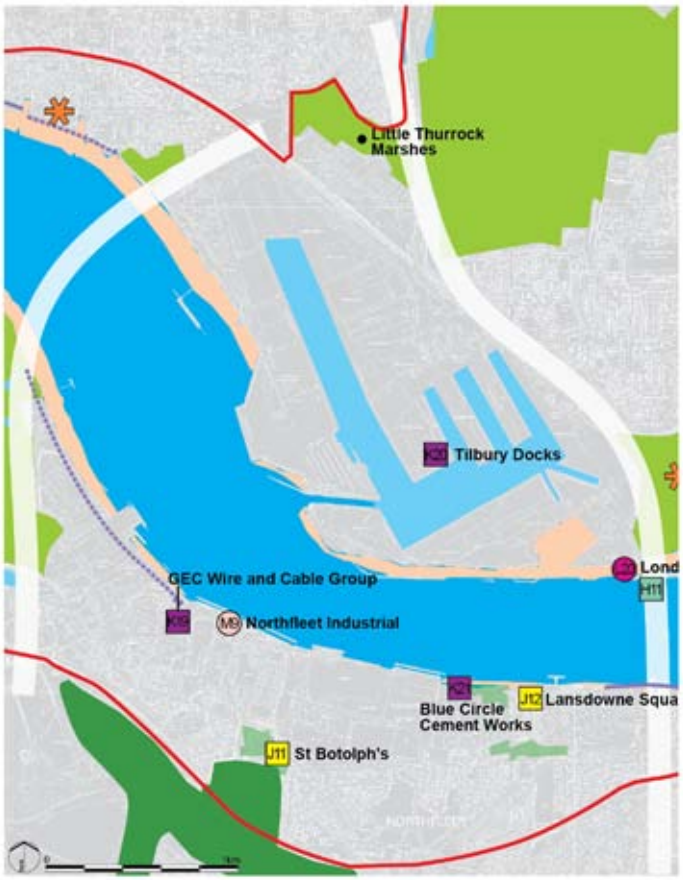
RG8.11 Protect and enhance the existing diverse economic uses of the river including river-based transport, and the mix of riverside uses including the Port of Tilbury, heavy industry, housing, business and river-related tourism linked to the London International Cruise Terminal.

FIGURE 3.8.1 **REACH 8: SUMMARY DATA**
NORTH FLEET HOPE

CHARACTERISATION



BIODIVERSITY, BUILT HERITAGE AND TOURISM



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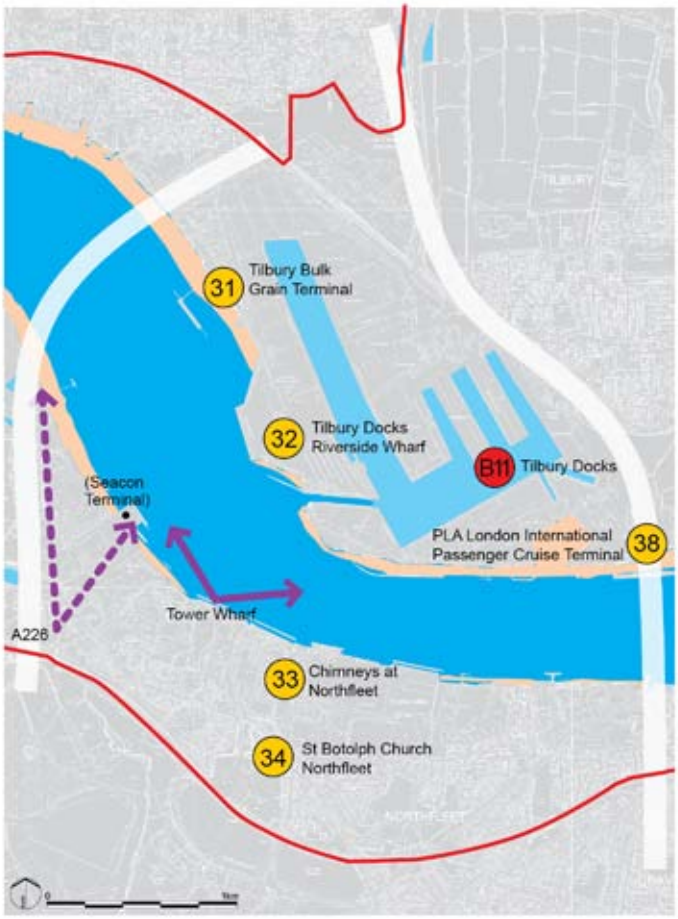


ACCESS, PUBLIC TRANSPORT AND RIVER RELATED INFRASTRUCTURE

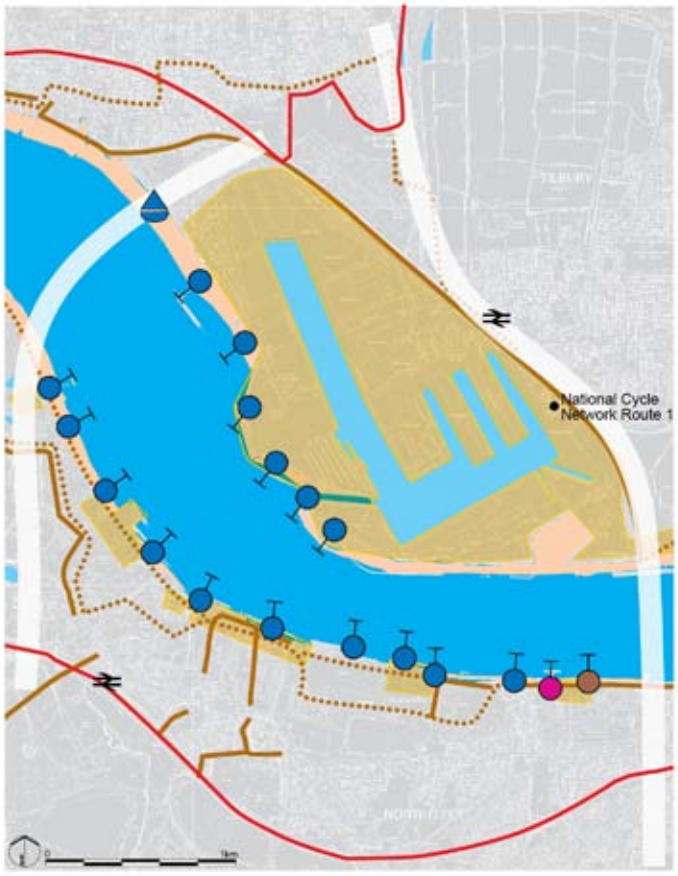
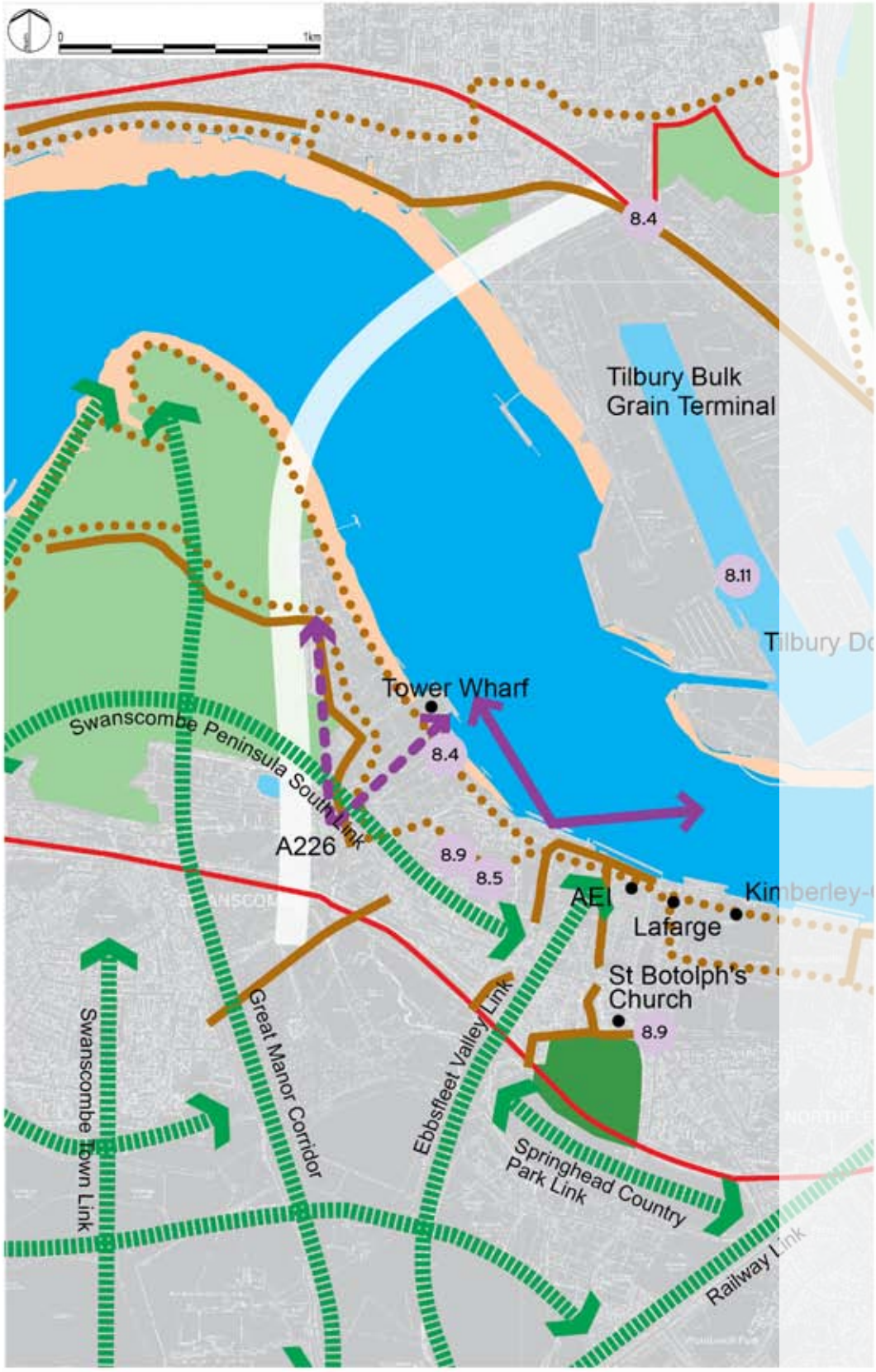


FIGURE 3.8.2 **REACH 8: GUIDANCE PLAN**



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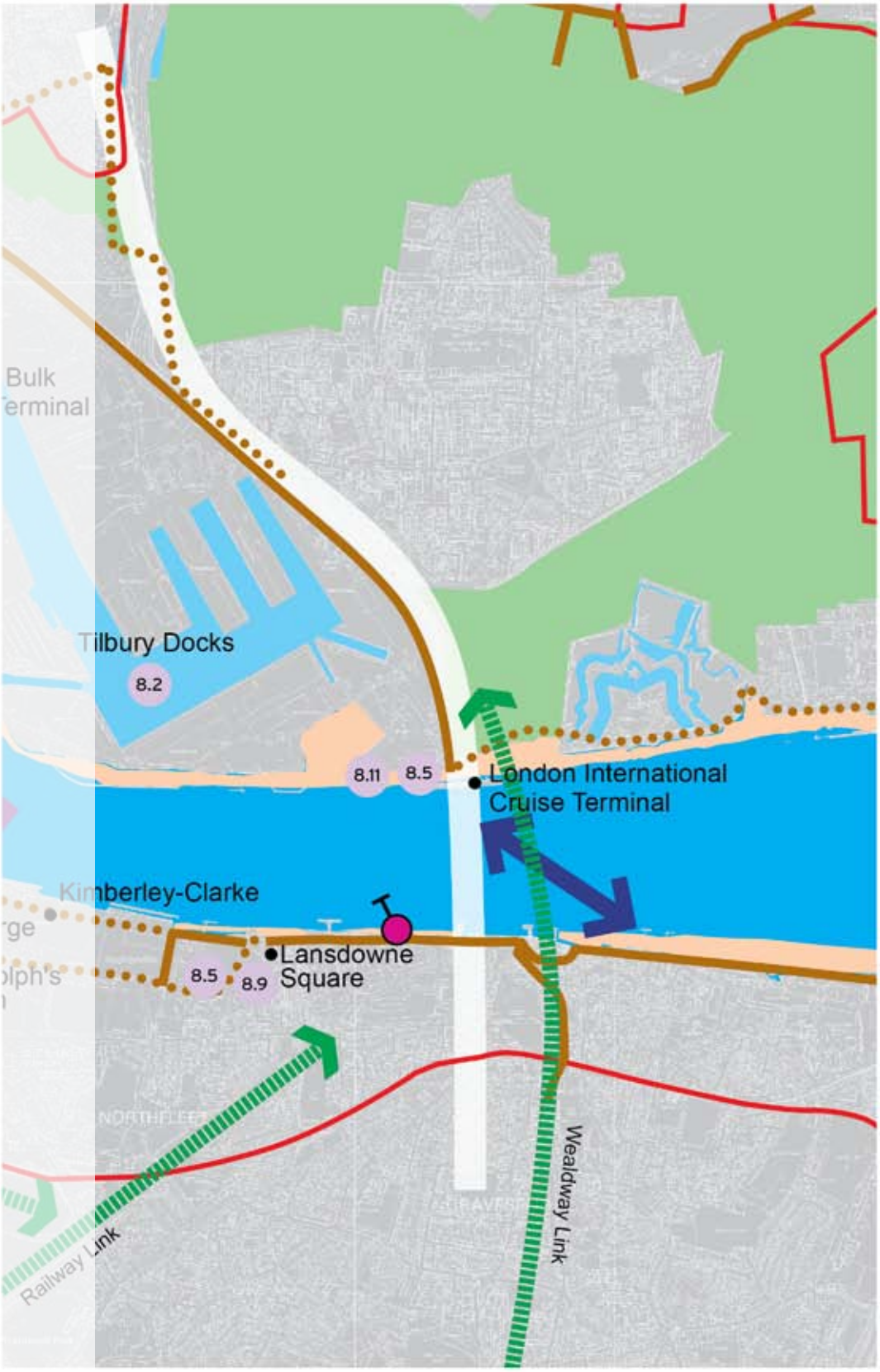


SCENES FROM REACH 9

REACH 9 GRAVESEND REACH

3.9.1 CHARACTERISATION

This Reach stretches from the eastern extent of Tilbury Dock to Tilbury Power Station on the northern bank and from Gravesend town centre to the National Sea Training College adjacent to Eastcourt Marshes on the southern bank. This characterisation should be read in conjunction with Figure 4.117. Here the River Thames runs due east, widening from approximately 700m by Gravesend town centre, to almost twice that width, 1300m including the mudflat areas, at the eastern extent of the Reach. The northern bank has a mixed character with grazing marsh extending down to the river around Tilbury Fort but with the imposing Tilbury Power Station to the west. In contrast, the southern bank has an urban character with Gravesend town centre overlooking the Thames from rising ground.

Gravesend Town Centre and Tilbury Power Station mark the gateway to the developed part of the Thames: westwards from here, almost continuous urban and industrial developments line the banks of the river. To the east the character changes dramatically to a more rural and truly estuarine character where flat, open salt marsh and grazing marsh provide the setting for the river which continues to widen, with mud flats becoming more extensive.

Land use on the northern bank of the river is predominantly reclaimed agricultural marsh land surrounding Tilbury town, a small settlement consisting mainly of low rise residential development with a few high rise blocks. Tilbury town was founded to serve Tilbury Docks and has grown in response to the expansion of the Docks since the 1930s. The southern edge of the town is sharply defined by the railway line that has been recognised as limiting accessibility within the East of England Plan that has identified the need to create a new rail crossing at Tilbury.

Along the riverfront, Tilbury Fort, is an excellent example of 17th century military engineering and one of Britain's best examples of a star-shaped bastion fortress. It is the main historic attraction of the Reach and affords fine views across the river to Gravesend.

A small sewage works separates the Fort from Tilbury Power Station. The Power Station is the largest feature within the Reach with its large jetty protruding into the river, large scale block buildings and two tall chimneys that are visible for miles around. Further inland beyond the reclaimed marshland, the land rises steeply and forms a notable ridge line from where there are impressive elevated panoramic views. The historic village of West Tilbury is located on the higher ground close to the ridge to the north east of Tilbury town. The spire of the village church provides an important landmark and is visible from most of West Tilbury Marshes. Chadwell St Mary is also located on the higher ground behind the ridgeline to the north of Tilbury Marshes.

Gravesend town occupies the southern bank. Land use includes Gravesend town centre, low rise residential development, a small area of commercial and light industrial development east of the town centre, a small sewage works and marshland. Gravesend town centre is located on higher ground close to the riverfront. It is an attractive and bustling town centre with a pedestrianised high street, recently restored traditional shop fronts and narrow lanes running north-south towards the river front. The town has good examples of Georgian architecture and there is a spectacular elevated panoramic view of the town, river and northern bank from Windmill Hill. The historic character of the town is reinforced by the church spires and the town hall that dominate the skyline. The town was a popular holiday resort for Londoners in the 17th and 18th century and the resort character is retained through the distinctive Town and Royal Terrace Piers, New Tavern Fort Gardens and Gordon Promenade by the riverfront.

Gravesend is an historic settlement that relates well to the River Thames and has real vitality. It has recently rediscovered

its sense of history and place through an ambitious and successful regeneration programme. This is a rich and diverse leisure, recreational and heritage attraction with excellent potential. Key National Cycle Network routes, the Wealdway and the Saxon Shore Way run through Gravesend. Gravesend also has a sailing club, a rowing club and a marina. Gordon Promenade is an excellent riverside park with an open, seaside character.

RIVER BANKS

The riverbanks are predominantly hard and vertical on both side of the river throughout this Reach. To the east of this Reach, outside the Strategy Area both river banks take on a rural estuarine character with mainly soft and sloping edges.

THAMES PATH

There are opportunities to provide a high quality continuous foot/cycle path along both banks of the Reach that support the Thames Cycle Route (NCN route 1 & 13). On the northern bank, there is public access to the riverfront except in front of Tilbury Power Station which has a commercial terminal to receive imported coal. On the southern bank, there is access to the riverfront by Town Pier and along Gordon Promenade adjacent to New Tavern Fort. East of New Tavern Fort and the Marina, there is a small area of industrial development with no access to the riverfront. East of Denton Wharf, the Saxon Shore Way long distance footpath follows the riverfront to Cliffe Fort (beyond the Strategy Area). NCR1 runs inland of the Thames along the Thames and Medway Canal. Steps lead down to the foreshore by Gordon Promenade.

RIVER INFRASTRUCTURE

River related infrastructure includes two launching sites at New Bridge Causeway and Gravesend Canal Drawdock. There are no watersports centres on the northern bank but there are several facilities on the southern bank; J and R Starbucks (Marine Centre), Gravesend Yacht Club, Denton Slipway (Marine Centre) and Denton Wharf (Marine Centre). In Gravesend there are three piers: Town Pier, Royal Terrace Pier and a commercial terminal with jetties owned by Clubb Ltd that handle imports of sea dredged aggregates. A ferry for pedestrians, cyclists and motorcycles runs between Tilbury Riverside Pier and Gravesend West Street Pier. This is a regular service that runs every half hour from 5.40am to 7.00pm. There is only one set of riverside steps in this Reach at Gordon Promenade.

BIODIVERSITY

This part of the Thames Estuary supports a large variety of marine and estuarine species reflecting the inter-tidal mud and sand flats. There is a more obvious connection here between the aquatic and terrestrial habitats including salt marsh, reed beds, mudflats and grazing marshes.

Sites of biodiversity importance include the South Thames Estuary and Marshes SSSI, the Canal and Grazing Marsh Site of Interest for Nature Conservation (SINC), Tilbury Marsh SINC, Hall Hill SINC and Gun Hill SINC. For further information regarding biodiversity refer to Appendix 3 - Characterisation, and Appendix 6 - Biodiversity.

HERITAGE

Tilbury Fort and Gravesend town centre and piers are the key sites of importance for built heritage, and are also the main tourist attractions. There are several Conservation Areas in Gravesend town centre. West Tilbury is also designated as a Conservation Area. Further information on built heritage can be found in Appendix 3 - Characterisation and Appendix 5 - Built Heritage.

A number of archaeological finds have been made in the area. Prehistoric remains include an area of Scheduled Earthworks to the north west of Tilbury town and Roman burials have been found in Tilbury Marshes. Gravesend was the site of an early Romano-British settlement and both West Tilbury and Gravesend are mentioned as manorial holdings in the Domesday Book (1086). This part of the Thames was clearly important for defence reasons, in particular for protecting access to London and the royal

dockyards of Woolwich and Deptford. Further information on archaeology can be found in Appendix 3 - Characterisation, and Appendix 4 - Archaeology.

RIVER ECONOMY

This reach has limited freight uses compared to reach 8 but does have a wealth of support industries as well as the Tilbury-Gravesend ferry. London River House contains the PLA's Port Control Centre, primarily responsible for ensuring navigational safety on the River Thames and its Estuary. Information from the PLA's extensive network of radars, tide gauges and CCTV are collated and provided for the benefit of those commercial and other vessels navigating within the Port of London. London River House also serves as the hub of the PLA's Pilotage Service.

KEY CHARACTERISTICS AND INFLUENCES

- This Reach marks the eastern extent of the more or less continuously urbanised estuary
- The Reach is particularly important for its strategic defence position. Tilbury Fort and New Tavern Fort historically were part of the defences of the river route into London
- Gravesend, a historic market town and former holiday resort, is positioned strategically on the first area of high ground in the Estuary, and characterised by church spires and piers
- The main landmarks in the Reach are Tilbury Fort, Tilbury Power Station, the Church at West Tilbury, Gravesend Town Pier, New Tavern Fort and the Church of St George, Gravesend.

3.9.2 REACH GUIDANCE

This Reach Guidance (RG) corresponds with Figure 4.118 and sits within the Strategic Guidance for the whole Strategy Area provided in Part 2.

PLANNING AND DESIGN

RG9.1 Promote the preparation development frameworks for major development sites that address flood-risk management as set out in the recently published Strategic Flood Risk Assessment for Kent Thameside and promote the principles of this Strategy. This would include the future development of north-east Gravesend, New Tavern Fort, Gordon Promenade and the Thames and Medway Canal basin.

RG9.2 Protect the rural marshland setting of Tilbury Fort and the openness of Tilbury Marshes and prevent coalescence of the urban areas of Tilbury and Grays.

RG9.3 Promote and enhance the historic character of Gravesend by:
- continuing the compact historic character and fine-grained structure of Gravesend town centre
- promoting tourism opportunities in the area through the 'seaside character' of Gordon Promenade and Fort Gardens, particularly the riverfront walk and open spaces
- protecting the historic skyline of Gravesend with its numerous church spires
- promoting stronger links between Gravesend town centre and the riverfront
- extensive street tree planting.

RG9.4 Strengthen the character of Tilbury by:
- creating a denser and stronger central core
- promote the town as a 'Garden City'
- extensive street tree planting
- improving pedestrian and cycle links between Tilbury station, town centre, riverfront, the Fort and the Thames Path
- promoting tourism opportunities in the area.

RG9.5 Promote, protect and enhance the strategic connections to the River including Tilbury Corridor, Thames Path, City to Sea/ Shoreline as proposed in the Thames Gateway South Essex Green Grid; and Botany Marsh to Gravesend, Gravesend to Shorne

Marshes, Thames and Medway Canal basin and the Wealdway as proposed in the Kent Thameside Green Grid.

RG9.6 Protect, enhance and interpret the impressive estuarine views within the reach including:
- the river prospect of the open estuary from Tilbury Fort
- the river prospect of the open estuary from Gordon Promenade
- townscape views from Windmill Hill in Gravesend
- views to the river from Gravesend High Street and Town Pier
- Tilbury Fort viewing area.

RG9.7 Promote the completion of the Thames Path on both banks of the river by creating links between the existing sections and Saxon Shore Way and filling in missing sections.

BIODIVERSITY

RG9.8 Protect and enhance the marine zone extending east beyond Gravesend, for its importance as a breeding and nursery area for several key fish species including Dover sole.

RG9.9 Protect and enhance the biodiversity of the Reach's valuable marshland habitats of:
- Tilbury Marshes SINC, which include a network of ditches with water voles and reed beds, grazing marsh and salt marsh, key nationally scarce plant grasses and sedges, invertebrates, such as the Hornet robber-fly and grassland invertebrate communities, particularly burrowing hymenoptera
- South Thames Estuary and Marshes SSSI, which contains extensive areas of grazing marsh, salt marsh, mudflats and shingle, supporting internationally and nationally important numbers of waterfowl, nationally rare and scarce invertebrates, plants and breeding birds including rare species like avocet and bearded tit
- the salt marsh and inter-tidal mudflats which provide a rich feeding ground for birds such as shelduck, oystercatcher, redshank, dunlin and wigeon.

ARCHAEOLOGY, HISTORICAL AND CULTURAL RESOURCES

RG9.10 Enhance understanding of the existing known and potential archaeological resource including a possible Iron Age hill fort or early medieval palace, to the north-east of where Tilbury Town stands today; Roman settlement and burials; early medieval settlement; later medieval settlement; ferry and marshland reclamation and post-medieval settlement and fortifications.

RG9.11 Protect, enhance and provide interpretation at key sites of built heritage importance including Gravesend Town Centre, Gravesend Town Pier, Tilbury and Tilbury Fort.

RG9.12 Protect and enhance the conservation areas at West Tilbury, High Street Gravesend, King Street, Queen Street, Harmer Street, Milton Place, Gravesend and Gravesend Riverside and the listed buildings within this Reach.

FLOOD RISK MANAGEMENT/CLIMATE CHANGE

RG9.13 Seek opportunities for creative flood defence realignment and making space for water in all development proposals, where defences are being replaced and at riverside open spaces. This is particularly important at Gravesend where the flood defences form a barrier between the town wand the riverfront.

ECONOMY

RG9.14 Protect and enhance the existing diverse economic uses of the river including the piers providing Tilbury to Gravesend river crossing, the London International Cruise Terminal, river-based transport and the mix of riverside uses including housing, business, and tourism.

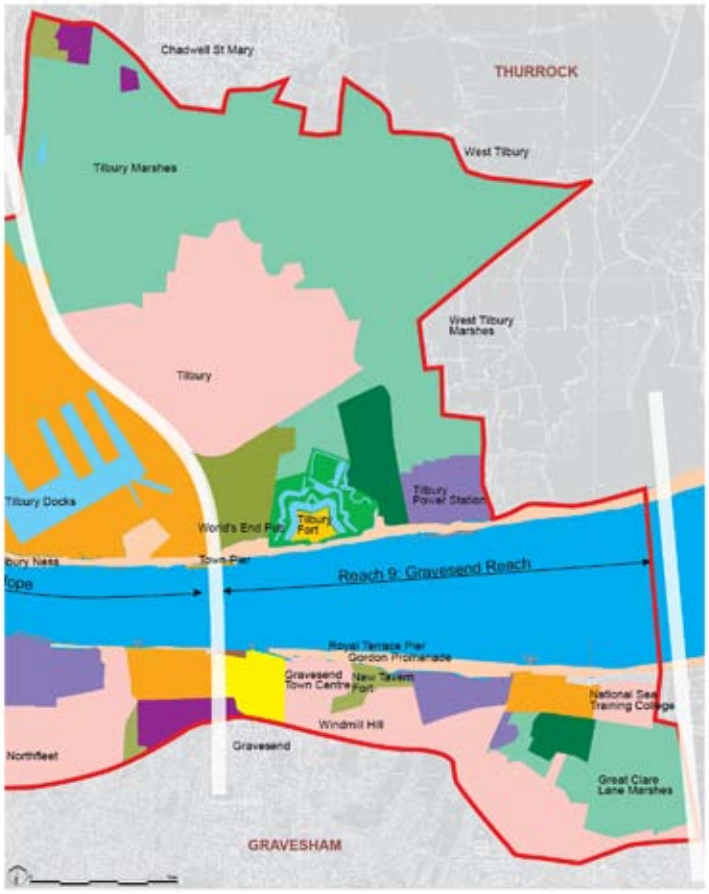
RG9.15 Promote Gravesend and Tilbury Piers as part of the wider strategic ferry service for leisure, recreation and commuting.

RG9.16 Promote tourism to the area by improving and publicising a series of tourist attractions connected with the cultural heritage, particularly the area's strategic importance in the defence of London through Tilbury Fort, New Tavern Fort, Coalhouse Fort and Shornemead Fort (outside Strategy Area) but also with Historic Gravesend and the Thames and Medway Canal.

RG9.17 Examine the opportunity to utilise surplus land at Tilbury Power Station for additional cargo handling.

FIGURE 3.9.1 **REACH 9: SUMMARY DATA**
GRAVESEND REACH

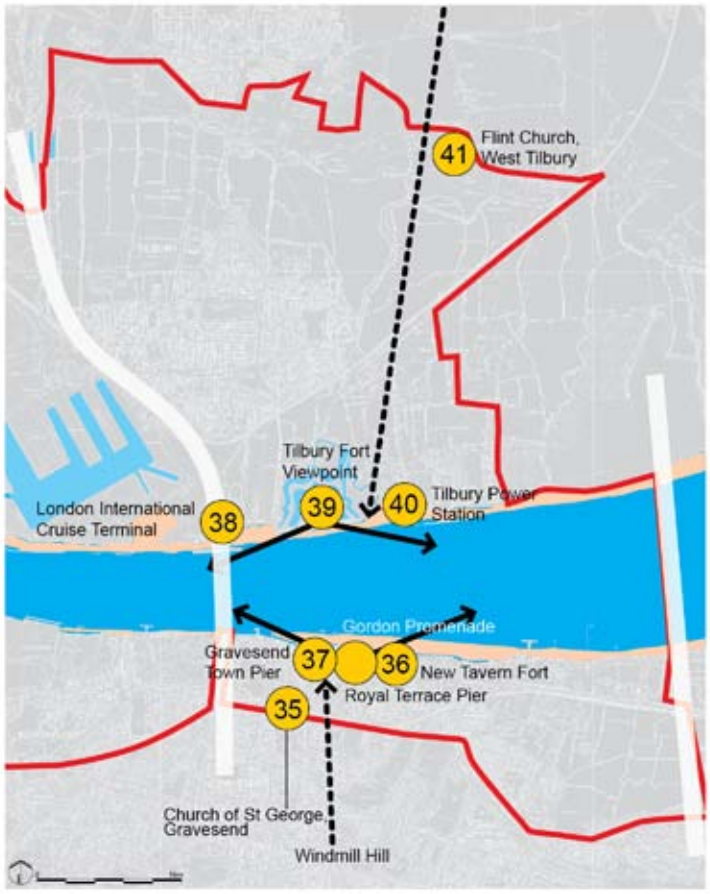
CHARACTERISATION



BIODIVERSITY, BUILT HERITAGE AND TOURISM

see back insert for key

VIEWS, LANDMARKS AND MAJOR LANDMARKS



ACCESS, PUBLIC TRANSPORT AND RIVER RELATED INFRASTRUCTURE

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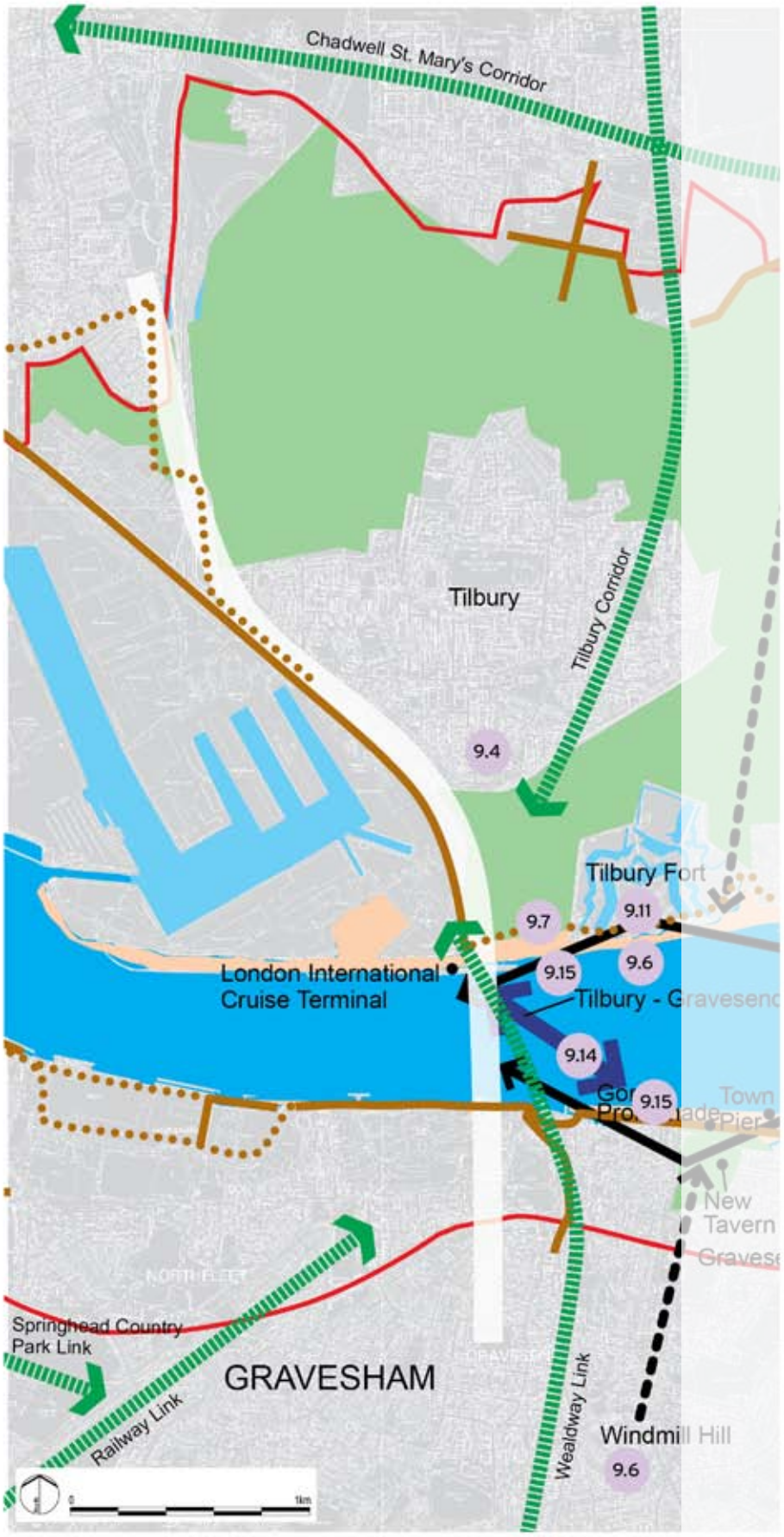
FIGURE 3.9.2 **REACH 9: GUIDANCE PLAN**



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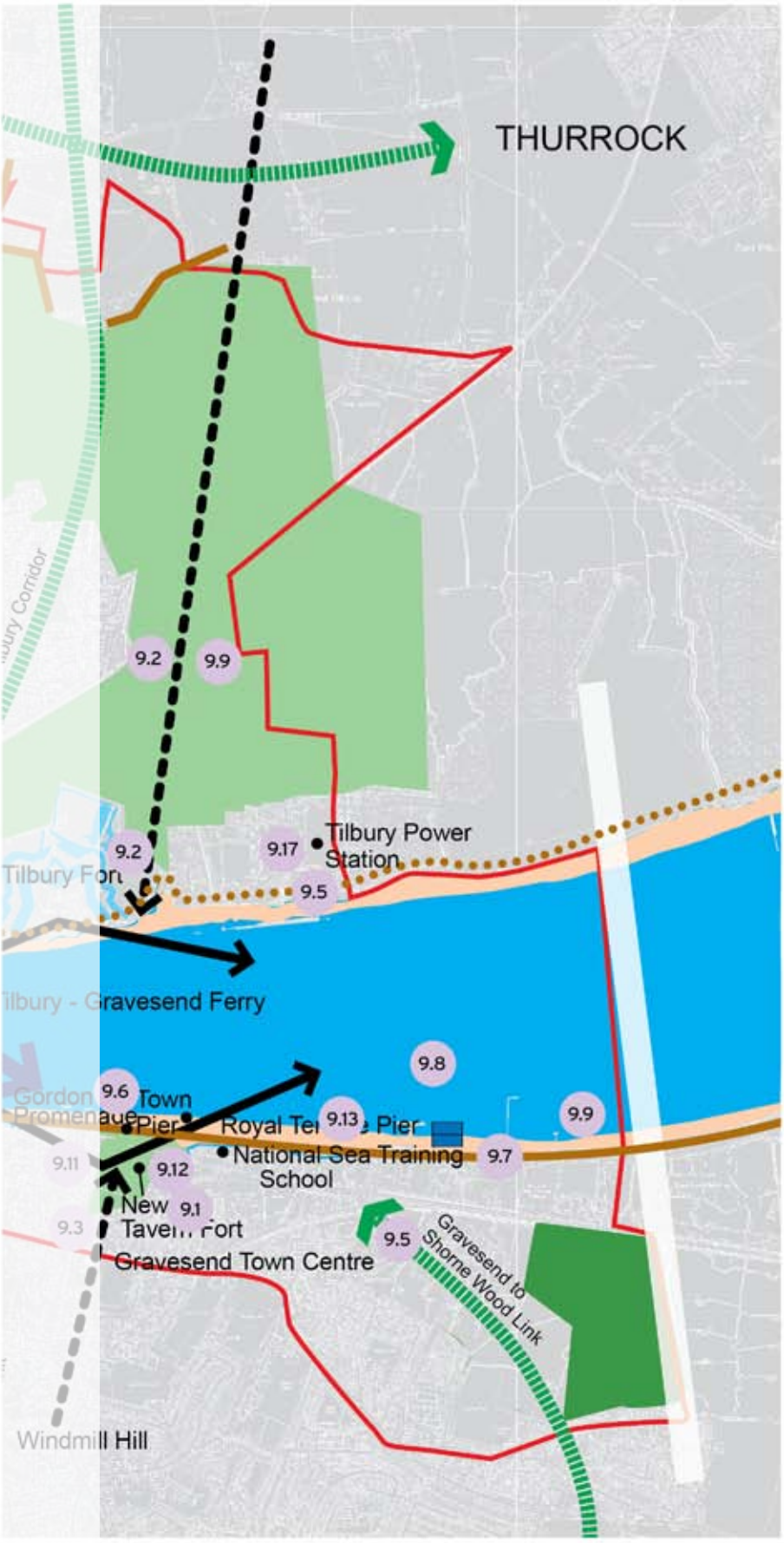


GENERAL KEY

- River Thames and its tributaries
- Water bodies
- Thames Strategy East boundary area
- Borough boundaries
- Reach boundaries
- Mud flats

CHARACTERISATION

- High rise office development
- High rise residential and institutions
- Town centre
- Industry
- Commercial/distribution/ warehouse
- Wharf
- Historic building/monument
- Low rise residential and institutions
- Sewage works
- Recreational greenspace
- Marsh
- Agricultural land
- Semi natural green space
- Leisure/Entertainment
- Previously developed land (Derelict/vacant/ construction site)
- Active landfill site

BIODIVERSITY, BUILT HERITAGE AND TOURISM

- Existing park or open space in public/private ownership (Green spaces have been taken from East London Green Grid and Kent Thameside Green Grid, where appropriate. Other open space has not been verified)
- Proposed park or open space in public/private ownership (Green spaces have been taken from East London Green Grid and Kent Thameside Green Grid, where appropriate. Other open space had not been verified)
- SSSI
- County Wildlife Site
- Site of importance of invertebrates
- Site of Local Biodiversity Importance
- Site of Borough Biodiversity Importance (Grade 1)
- Site of Borough Biodiversity Importance (Grade 2)
- Site of Metropolitian Biodiversity Importance
- World Heritage Site
- Major Historic Area
- Proposed Development
- K — Industry and trade site
- J — Traditional settlement site
- I — Military and defence site
- H — Power and infrastructure site
- L — Existing tourist destination site
- M — Potential tourist destination site

VIEWS, MAJOR LANDMARKS AND LANDMARKS

- 38 — Existing major landmark
- 32 — Existing landmark
- 37 — Proposed major landmark
- London Plan - London Panorama
- London Plan - River Prospect
- London Plan - Townscape View
- Existing Panorama
- Existing River Prospect
- Proposed Panorama
- Proposed River Prospect

ACCESS, PUBLIC TRANSPORT AND RIVER RELATED INFRASTRUCTURE

- Existing footpath/cycleway (including all existing footpath/ cycleways, existing Thames Path, National Cycle Network developed by Sustrans)
- Proposed footpath/cycleway (including opportunities to create new sections Thames Path, Thames Path City to Sea, National Cycle Network developed by Sustrans)
- Existing river crossing
- Proposed river crossing
- Potential river crossing
- Mainline railway station
- DLR station
- Proposed DLR station
- Tube station
- Channel Tunnel Rail Link (under construction)
- Safeguarded wharf
- Yacht club
- Steps
- Deep water terminal
- Commercial terminal
- Pier
- Mooring
- Launching Site
- Proposed pier
- Watersports Facilities and Marine Centres

The Thames estuary is our estuary. Working together for the sustainable future of our estuary.

1. Shorne and Higham Marshes

Landscape Description

Shorne and Higham Marshes lie east of Gravesend, directly south of the River Thames. The character area stretches to the eastern boundary of Gravesham Borough and to the fringe of the agricultural land to the south.

The geology of the area is Alluvium, with clay soils. The area is typical of the North Kent Marshes characterised by a sense of remoteness, flat topography, wide, open views towards the River Thames, and a lack of vegetation. The land is used predominantly for grazing sheep and cattle. There are views out towards Essex to the north of the River Thames, the Queen Elizabeth II Bridge to the west and Cliffe Fort on the headland to the east, and extensive views across the marshes from within the character area.

The river itself is concealed from views within the character area by the flood defence mound although massive ships are visible above the wall and the large industrial buildings on land to the north of the Thames. The wall provides an excellent vantage point for both views out across the Thames and inland to the wooded higher ground around Shorne and Cobham. A network of ditches and meandering waterways with traditional timber crossings divide the marshes in an irregular pattern, leaving parcels of land of medium scale. Vegetation comprises pasture, reeds within ditches and the occasional scrubby vegetation such as hawthorn. The limited vegetation types provide limited seasonal variation.

The marshland is traditionally unsettled. Inland is the Thames and Medway Canal that was completed in 1824 to link the Thames at Gravesend to the Medway near Rochester Bridge via the Higham - Strood Tunnel. It was designed to reduce navigation to the Medway for smaller vessels, but proved to be largely unsuccessful.

Shornemead Fort is located alongside the Thames in the centre of the area. It is one of the three Thames side forts that were designed to defend the Thames Estuary from Napoleonic attacks. These include Cliffe Fort and Coalhouse Fort in Essex that were built to prevent a hostile fleet reaching London via the Thames. The fort was last actively used during

Key Characteristics

- Flat grazing marsh with a lack of vegetation
- Sense of remoteness with extensive views across marshes
- Network of ditches and meandering waterways divide the marshes in an irregular pattern leaving parcels of land of a medium scale
- No roads and limited development
- Features of historic interest including Shornemead Fort
- Extensive views across the River Thames and to higher ground to the south

WWII and decommissioned at the end of the war. In the post war era, Shornemead Fort's only use came as target practice for the Royal Engineers demolition squad, and their effectiveness is very evident by the concrete, bricks and rubble at the site; they are all that remain of the barracks and administrative buildings. The area is still used as a firing range by the Metropolitan Police.

Other small scale developments include jetties into the Thames and some buildings associated with the Thames and Medway Canal to the south.

There are no roads through the area, with roads from the south stopping at the fringes of the marshes. Access continues from these as public rights of way and farm tracks. Limited public access is allowed within a central Danger Area, used for firing and test ranges. A footpath follows the line of the Thames and Medway Canal in an east west direction through the marshes and the Saxon Shore Way follows the line of the river edge. The Saxon Shore Way is a National Trail that runs from Gravesend, around the coast to Hastings in East Sussex. Many tracks are located on the flood defences and counterwalls to provide the driest access.

The entire marshland area is also nationally designated as a Site of Special Scientific Interest (SSSI), and is also designated as a Ramsar site. Higham Marshes to the east are designated as a Special Protection Area.

Future issues that may have significant effects on the marshland are the possibility of a Lower Thames Crossing. At present there is no adopted plan for this and no route identified but it is thought likely that it would link from the A2/M2 to Tilbury, which could have significant landscape character and visual impacts on the marshes.

Another major issue is the need to manage the effects of climate change and, in particular the Thames flood defence strategy. Options for this are being considered by the Thames Estuary 2100 (TE2100) Project.

Condition: Good

There is strong visual unity, with a unified pattern of landscape elements. The flat topography, limited vegetation and pattern of ditches and waterways provide consistency and strength of character. Apart from electricity pylons crossing the south of the character area there are relatively few visual detractors within the marshes, although there are views of visually detracting industrial buildings to the north of the Thames. There is strong ecological integrity with the comprehensive network of ditches forming wildlife corridors. Mud flats on the riverside of the river defence wall also provide strong habitat opportunities. Overall the condition of the character area is assessed as being very good.

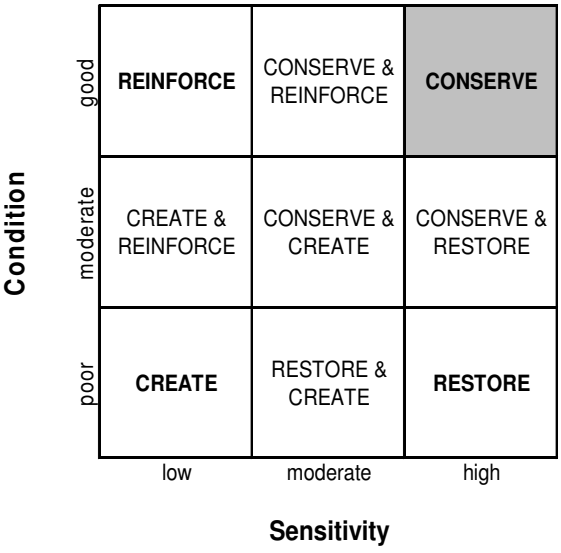
Sensitivity: High

This is a simple landscape comprised of few landscape elements. It is characteristically un-vegetated and unsettled and is likely to have remained largely unchanged for many centuries. The ditches that segregate fields are very distinct and historic. It is more fortunate than many areas of such marshland in North Kent in that it has managed to maintain the traditional grazing marsh pastures and, with the exception of a few fields in the west, has not been drained and converted to arable. However it is reliant on the Thames flood defence wall to maintain the existing regime and is consequently sensitive to changes in sea level rise and tidal defence management. Shornemead Fort and Barrow Hill add to the distinctive and historic features.

The absence of vegetation combined with the flat landscape mean that it is highly visually sensitive both to changes within the area and in the views beyond it, particularly the treatment of the urban edge to the east of Gravesend. Overall the marshes are considered to be very distinct and possess a strong sense of place. They are considered to be of high sensitivity in terms of their character, distinctiveness and visibility. They are also vulnerable to future sea level rise.

Guidelines: Conserve

Guidelines for the Shorne and Higham Marshes Character Area focus on the long-term conservation of the area to maintain its traditional land use, ecological and cultural interest, open character and the current very good condition of the marshes.



- Conserve marsh, grassland and wetland habitats, unimproved and grazing marsh.
- Conserve the historic ditch and river defence pattern to maintain landscape character and enhance ecological potential.
- Promote sensitive management of grasslands, encouraging grazing marsh and unimproved grasslands to re-establish.
- Conserve and manage flood defences and counterwalls.
- Restrict development proposals that encroach onto the marsh from the urban fringe surrounds, seeking opportunities to improve the appearance of the urban edge.
- Conserve and enhance the Thames and Medway Canal along its former line from Gravesend town centre to the Higham – Strood Tunnel.
- Promote opportunities for public access particularly alongside the Thames and former canal.

2. Botany Marshes

Landscape Description

The Botany Marshes are located in the far north-west corner of the Gravesham Borough on a piece of land known as the Swanscombe Peninsula. The immediate marshland area is locally referred to as the Botany Marshes. The area sits between the River Thames to the north, the Borough of Dartford to the west and Gravesend's main industrial belt to the east. It is a remnant of the North Kent marshes that bordered the River Thames from the eastern edge of London to Swale in the east. The Swanscombe Peninsula has a long history of industrial development and more recently has been raised in some locations by the disposal of CTRL spoil. Other parts are fragmented by business parks and housing and there are major redevelopment proposals planned for Swanscombe Peninsula West in Dartford Borough, and also on the western edge of Gravesend.

Its original character would have been similar to the Shorne and Higham Marshes to the east of Gravesend and it still shares these underlying physical characteristics. The geology across the area is Alluvium and the soil structure is clay. The topography of the area is flat with a man made sea wall on the bank of the River Thames to the north and bunding between the marshland and the surrounding industry.

There are open views across the marshland and towards the River Thames, adjacent industry and towards the Dartford River Crossing Bridge, with the peninsula location providing panoramic views of the Thames at its tip. Large ships are visible on the river itself and large industry on the Essex side of the river is visible from on top of the flood defence.

The area has a poorly defined land use and is a mix of rough marshland, open water, clumps of native scrub and trees, and an area of agricultural land on the northern edge of the peninsula. A network of ditches,

Key Characteristics

- Flat marshland with man made sea wall on bank of River Thames
- Divided by a network of ditches, meandering waterways and small lagoons into small parcels of land
- Remnant of agricultural land on peninsula
- Limited public access to marshland
- Unified clumps of native vegetation
- Strong network of wildlife corridors within ditches and waterways, mudflat on River Thames provide good habitat opportunities
- Visual detractors including electricity pylons running across marshland and large industrial building on character area boundary

meandering waterways and small lagoons divide the marshes into small parcels of land.

There is no settlement or built form on the marshes, and large electricity pylons cross the area from the east to the west. Large recent industrial buildings of low visual quality line the eastern edge of the character area.

There are no roads throughout the area, with road access from the south east stopping at the fringes of the marshes. Access from the road continues as a footpath that runs from the industry cutting across the marshes to link with the Broadness Salt Marsh within the Borough of Dartford. Public access to parts of the marshes and the river edge is limited in parts by the adjacent industry. There are some tracks on ridges and flood defences for authorised access.

Condition: Moderate

This is a very small and isolated character area; however there is a coherent pattern of elements within the area, including consistently flat topography, unified clumps of native vegetation and an evident pattern of ditches and waterways. Many visual detractors are apparent including electricity pylons that run across the site and industrial buildings that edge the character area.

The character area has a strong functional integrity heavily influenced by a strong network of wildlife corridors within the ditches and waterways. The mud flats on the edge of the River Thames also provide good habitat opportunities. There are signs of the recent immediate surrounding industry having a negative impact on the marsh and therefore the condition of the area is assessed as being moderate.

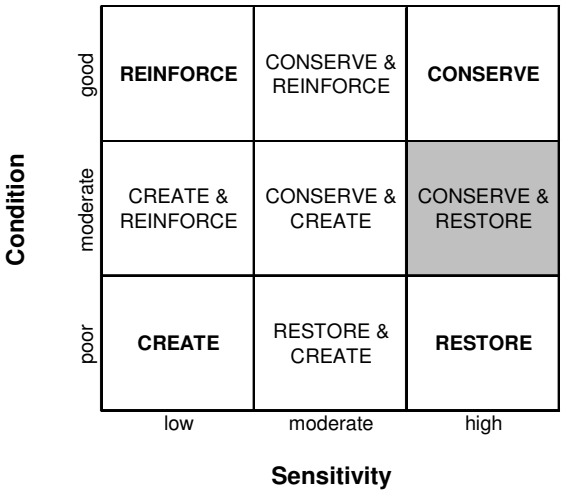
Sensitivity: High

There are few landscape elements within the marshes to assess, with little established vegetation, no settlements and no roads. It is likely the marshland has remained unchanged for many years. The area is reliant on the Thames flood defence to maintain its existing state and is sensitive to changes in sea level rise and tidal defence management. The ditches and waterways that divide the marsh are distinct and historic and provide a moderate sense of place. As a result of the flat open landscape and limited tree cover the visibility within the marshland is high and causes the area to be visually sensitive to change both within and surrounding the marshland. Heavily influenced by the high visual sensitivity the overall sensitivity of the character area can be assessed as being high.

Guidelines: Conserve and Restore

The Botany Marshes are an area to be conserved and restored.

- New development should be carefully sited and integrated so that it does not intrude upon areas of tranquil unspoilt marshland or significantly expand or exacerbate existing visual impacts.
- Existing network of ditches and waterways should be conserved.
- Resist encroachment from surrounding industrial development.
- Retain and promote opportunities for public access particularly alongside the Thames, and linking into wider access network.
- Control and restrict fly tipping.



3. Higham Arable Farmlands

Landscape Description

Higham Arable Farmlands are located east of Gravesend and south of Shorne and Higham Marshes.

The geology is made up of Upper Chalk to the west of the character area. To the north and south, there are some ribbons of Thanet Beds and Woolwich Beds, with a small amount of London Clay to the north around the Thames and Medway Canal. Soils are loam across the majority of the area, with some silty soil directly east of Gravesend.

The landform is very gently undulating, and generally rises from north to south. Adjacent to the marshes the land levels out, although inland it retains a Downs dipslope character for example the distinctive dry valley feature east of Higham. There are extensive views across open arable land from within the character area and views out of the character area, towards the marshes and the River Thames in the north, from some higher vantage points and areas near the boundary line. The gentle topography and goods soils, combined with the relative proximity to London and the River Thames means there has historically been a rich agricultural landscape. As a consequence there is little tree cover, allowing extensive views across an arable landscape. There are some remnant areas of orchards indicating a former agricultural use, often overgrown with trees in poor condition. There are some garden nurseries to the south, with smaller fields and distinctive crops such as rhubarb, and white poly tunnels. Shelterbelts, fence lines, gappy hedgerows and ditches provide an element of enclosure. Despite these features, there is an open character as a result of the extensive views and lack of tree cover. There is a regular pattern of medium to large fields throughout the area, with some smaller paddocks adjoining properties east of Higham.

Higham and Lower Higham are the main settlements in the area. Higham has developed as two parts, with the original Saxon village of Lower Higham to the north and a more recent development to the south around

Key Characteristics

- Very gently undulating topography
- Open arable farmland
- Views out to the marshes and the River Thames in the north
- Original Saxon village of Lower Higham and more recent development to the south
- Marsh side hamlets and settlements
- Isolated farmsteads and scattered properties with locally distinct styles and materials
- Pockets of orchards and garden nurseries
- Historic sites including a Priory and Gad's Hill, once home to Charles Dickens
- Thames and Medway Canal (disused) runs to Lower Higham

the main road linking Gravesend to Rochester. Isolated farmsteads and scattered properties throughout the remaining area contribute towards local distinctiveness, with oast houses, thatch roofs and converted timber barns. Alongside the boundary with the marshes, there are marsh side hamlets and settlement, including the Site of a Priory (Benedictine Nuns) at the northern end of Church Street. The Church has one of the oldest pulpits in Kent, dating from the 14th Century. The Larkin Memorial is located on Telegraph Hill and is visible from the valley to the east of Higham and along the Wainscott bypass. It was constructed in 1835, and repaired in 1869, in the memory of Charles Larkin, an auctioneer from Rochester. Gad's Hill, south of the A226, holds historical reference, once home to Charles Dickens and mentioned by Shakespeare.

In general, few roads cross the area. There is a contrast in scale of road size and use. Gravesend Road, the A226, severs the character area in part. This provides a busy route in contrast with some of the other roads in the area. The Wainscott bypass follows the valley floor and edge of the character area to the east of Higham. The Thames and Medway Canal (disused) and railway line run through the northern part of the character area to Lower Higham. Several footpaths and roads used as public paths cross the arable farmland.

Condition: Poor

The main physical elements of the landscape, such as the topography and general field pattern, are consistent. However land use provides an element of fragmentation, such as small areas of orchards and garden nurseries set within the dominating context of open arable farmland. Large pylons to the north, rail sidings, poly tunnels and polythene covering nursery stock provide some visually detracting features. Overall, visual unity is coherent.

Agriculture is generally intense with large arable fields and few hedgerow boundaries. Overgrown orchards, shelterbelts, gappy hedgerows and small areas of open water provide weak ecological integrity. Isolated properties and farmsteads provide local distinctiveness, in contrast with more recent development within Higham and Lower Higham. There is a modified cultural integrity and the overall, functional unity is weak. The condition of the landscape is therefore assessed as being poor.

Sensitivity: Moderate

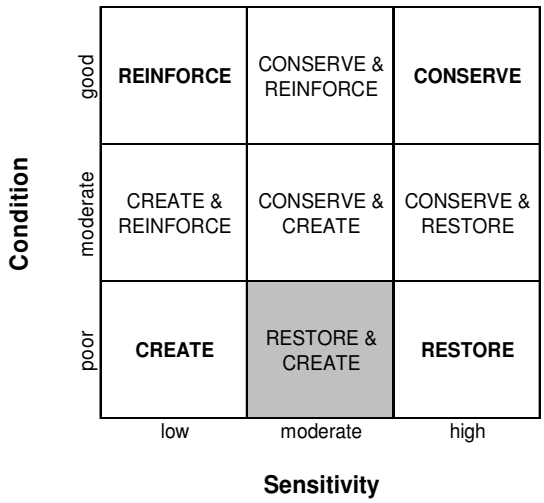
Distinct landscape elements comprise isolated buildings and farmsteads that contribute towards local distinctiveness through their traditional style and use of materials. Enclosure lines provided by ditch lines and remaining hedgerows provide historic features. Cultural associations, particularly with the life and writings of Dickens are strong in this area and locally there are pockets of distinctive landscape such as the dry valley south east of Higham. However much of the modern landscape comprises gappy hedgerows, limited woodland and indistinct recent buildings and, on average, features and elements within the landscape are indistinct and the sense of place is weak. The open character of the landscape and gently undulating landform provide high visibility across the character area.

On balance, the sensitivity of the landscape is moderate.

Guidelines: Restore and create

Guidelines for the Higham Arable Farmlands focus on restoring landscape elements in poor condition, whilst safeguarding it as a prominent landscape feature within the wider landscape.

- Restore and create field boundary hedgerows.
- Restore and create ecological networks by linking existing isolated woodland clumps and orchards.
- Create design standards for new developments in the area.
- Resist proposals that introduce extensive or obtrusive elements within visually sensitive areas of the open landscape.
- Create areas of regenerative woodland within farmland to create woodland links.



- Restore small pockets of heritage landscape around existing settlement.
- Improve footpaths and access throughout the area to link woodlands to marshlands.
- Raise awareness and promote awareness of the cultural associations of the landscape.

6. Istead Arable Farmlands

Landscape Description

Istead Arable Farmlands lies to the south of Gravesend and the Channel Tunnel Rail Link (CTRL). It stretches from the western boundary of Gravesham Borough, to the edge of Cobham and Ashenbank Wood in the east.

Upper Chalk dominates the geology of the area, with some small areas of Thanet Beds and Clay with Flints to the east. Soils are mostly silty, with a small amount of loam to the north west of Istead Rise and loam to clay around Sole Street to the east.

The topography is gently undulating, allowing wide, open views out towards the urban edge of Gravesend and the CTRL to the north. To the north west the landscape is dominated by open arable agricultural land, divided by tracks and roads. To the south east there are native hedgerows and occasional poplar shelterbelts. Fields are medium to large and form a regular pattern with boundaries running distinctly from north to south and east to west. Minor clumps of native woodland appear sporadically across the landscape, reducing the vastness of the open arable landscape. To the east fruit orchards, with pollarded hedgerow boundaries, are the dominant land use. There is a stronger sense of enclosure within the orchards.

The area surrounding Jeskyns Farm, west of Cobham, has recently been planted by the Forestry Commission. In the long term this will create a much more enclosed landscape in this area. Once mature the increased enclosure may change the character of this area to such an extent that it may be appropriate to redefine this part of the area - possibly as part of the Ashenbank and Cobham Parklands or, perhaps the Gravesend Southern Fringes if this develops as a recreational landscape character.

Roads are open yet infrequent and are all minor with the exception of the slightly busier A227 Wrotham Road that runs north south, linking Gravesend with Meopham. A section of the Wealdway, a 129km national

Key Characteristics

- Gently undulating topography with open arable fields
- Fields divided by tracks, roads and occasional hedgerows
- Orchards to the east
- Minor native woodland clumps
- Few roads, which are open in character
- Istead Rise modern housing development
- Clusters of properties and farmsteads
- Large pylons

trail, linking Gravesend with Eastbourne, runs through the character area to the east of Istead Rise. A network of public footpaths crosses the land, often running diagonally across arable fields.

Istead Rise, to the west, comprises a modern housing area. Other more traditional buildings include clusters of houses, isolated farmsteads, oasts and occasional small churches and chapels. Large pylons, running north west to south east, form a dominant feature and are widely visible in the open arable land.

Condition: Poor

The pattern of elements within the landscape is coherent, with regular shaped fields and a network of tracks along field boundaries. There is some fragmentation in terms of land use. Whilst the majority of the area is under intensive arable use, fruit orchards dominate the eastern corner of the area. However, other factors are consistent throughout the area, including the topography, infrequency of roads. Electricity pylons dominate the area and although there are few other detractors, the scale and frequency of the large pylons is a significant visual detractor within the landscape. Visual unity is interrupted.

The ecological integrity of the area is poor because of the dominance of arable land and limited amounts of hedgerow and woodland clumps. There are few heritage features visible within the landscape and the overall condition of the landscape is assessed as poor.

Sensitivity: Moderate

Distinct landscape elements comprise isolated buildings and farmsteads that contribute towards local distinctiveness through their traditional style and use of materials. Enclosure provided by ditch lines and remaining hedgerows provides historic features. However, many features and elements of the landscape are indistinct and recent, and overall there is a weak sense of place. The open character of the landscape and consequential high visibility across the character area provide a moderate level of sensitivity overall.

Guidelines: Restore and Create

Guidelines for the Istead Arable character area are to restore distinctive features and patterns of the landscape, whilst creating landscape elements that support the landscape character.

- Restore traditional field structure and enclosure with native hedgerows and boundary planting.
- Restore the landscape through the removal of detracting features, in particular seek opportunities to relocate electricity cables underground.

Condition \ Sensitivity	low	moderate	high
good	**REINFORCE**	CONSERVE & REINFORCE	**CONSERVE**
moderate	CREATE & REINFORCE	CONSERVE & CREATE	CONSERVE & RESTORE
poor	**CREATE**	RESTORE & CREATE	**RESTORE**

- Consider possible mitigation planting to limit visual impact of A2 and CTRL infrastructure.
- Create design standards in keeping with local character for new developments within the area.
- Create a positive edge to the urban area.
- Restore and create an access network linking urban areas with existing and proposed recreational opportunities including Jeskyns Farm and the wider landscape.

7. Gravesend Southern Fringe

Landscape Description

The Gravesend Southern Fringe is a linear character area that runs along the southern edge of Gravesend with an additional area that feeds into the urban edge and is encompassed by Gravesend suburbs. The majority of the character area is sandwiched between the urban edge and the realigned A2 trunk road and the Channel Tunnel Rail Link (CTRL).

Originally this area would have been part of the Istead Arable Farmlands, with the countryside abutting the southern edge of Gravesend and reaching in towards the town centre along the valley feature north of Tollgate. The location of the CTRL away from the urban edge and relocation of the A2 adjacent to it have cut off this area from its traditional context and, whilst sharing the physical characteristics of the countryside to the south, the influence of the urban edge and dominance of the infrastructure have been so great that it is appropriate to consider this as a separate character area.

The majority of the geology is made up of upper chalk and areas of Thanet beds at the edge. Soils are silty with areas of loam towards the north west of the character area. The landform is very gently undulating and generally rises from north to south. A distinct dry valley feature leads towards the town centre bringing the countryside into the urban area and creating an attractive approach to the town. From within the linear section of the character area there are extensive internal views running east and west. In addition there are extensive views looking out of the character area towards the countryside in the south and across Gravesend towards the River Thames to the north.

The A2 has recently been relocated adjacent to the north side of the CTRL and the old carriageways and some of the open space between the new A2 and the urban edge has been remodelled to create a new recreational landscape or linear park including a footway and cycleway running its entire length. Footpaths also cross the area linking the town to the countryside.

Key Characteristics

- Dominant settlement on urban edge of Gravesend
- Very gently undulating topography rising from north to south
- Small arable fields historically part of Istead Farmlands landscape
- Man made golf course landscape acts as visual detractor
- Limited tree cover mostly consisting of small clumps of non native tree material on golf course
- Wire Fence lines and gappy native hedgerows
- Landscape dominated by large roads, Channel Tunnel Rail Link and associated infrastructure

Where agricultural land remains it consists of arable and grazing farmland. The farmland is broken down into a series of small regular shaped fields, the shape of which has been dictated by the surrounding roads, railway lines and urban edge.

To the north of the former A2 corridor, the eastern side of the valley is dominated by a large golf course. There is limited tree cover within the area, mostly consisting of small clumps and individual species located on the golf course, most of which are non-native. Some roadside vegetation, mostly scrubby in nature, exists on the edge of the former A2 and around its junctions.

There is a limited element of enclosure provided by railings along Wrotham Road, along with less distinct wire fences, security fencing and native scrub, gappy native hedgerows and hedgerow trees.

Settlement is dominant, with the urban edge of Gravesend running the length of the northern boundary of the character area. Housing dates mostly from the 20th Century and includes terraces, semi detached and detached properties built at suburban density. Built form within the character area includes a golf club house and a traditional thatched roof cottage.

The approximate line of the former A2 marks the Roman Watling Street that linked London with the coast. The A2 is a major busy road that cuts across the length of the character area whilst the A227 acts as a busy connection between Gravesend and villages to the south. A network of smaller residential roads link into adjoining housing areas. The CTRL runs the length of the area's southern boundary and includes various large items of related infrastructure. Several footpaths and public rights of way, including the Weald Way, run across the area from the urban edge, crossing the A2 and Rail Link and dispersing into the adjacent character area.

The area north of the former A2 is within the Thames Gateway, which brings pressures for development and recreation. The whole area is also identified as part of the Kent Thameside Green Grid. To the south of the former A2 the land is designated as Metropolitan Green Belt.

Condition: Poor

The landform is the strongest and most robust landscape feature, particularly the dry valley into Gravesend, providing a constant in this changing landscape. The field pattern and planting types are disjointed and contribute towards an incoherent pattern of elements. The area has many visual detractors including pylons, the A2, major road junctions and the CTRL and various items of infrastructure. The reinstatement of the former A2 to the landscape locally improves this area however the fragmentation and dominance of the infrastructure in the wider character area remains.

In the valley to the north of the former A2, the weak hedgerow structure and introduced elements on the golf course, including sand bunkers and non-native tree planting, act as visual detractors. The dissected nature of the landscape, vast areas of mown grass and ornamental and evergreen planting within the golf

club, accompanied by gappy hedgerows and a lack of native tree cover contribute to a weak ecological integrity. Major infrastructure also limits the ecological integrity of the area reducing its connectivity to the wider landscape. A lack of vernacular architecture and traditional landscape elements means that the cultural integrity of the area is incoherent. A weak functional integrity and lack of visual unity means that the overall condition of the landscape is assessed as being poor.

Sensitivity: Moderate

The majority of landscape elements including field layout, boundaries and planting are indistinct and recent, the character area has a very weak sense of place. The landscape elements are mostly dictated by road, CTRL or urban development.

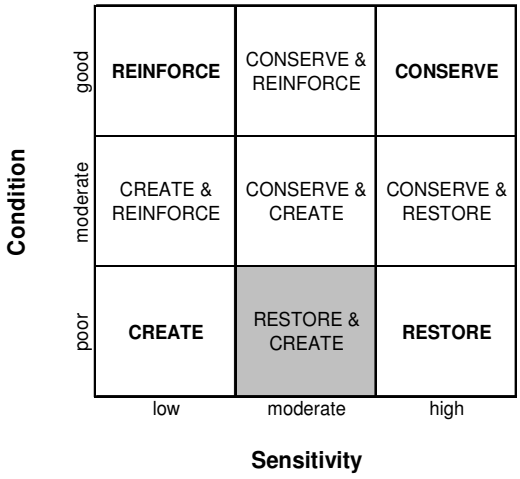
The undulating topography and limited tree cover means there is high visibility within the character area.

The combination of high visibility and a weak sense of place mean that the sensitivity of the character area is assessed as being moderate.

Guidelines: Restore and Create

The Gravesend Southern Fringe is an area whose traditional agricultural origins are being eroded and fragmented. To ensure a positive use for this area for the future, the area needs to find a new function to meet the demands of the adjacent urban area and a buffer to the rural landscape south of the CTRL.

- Create a new landscape identity and function appropriate to its urban edge location and status as gateway to Gravesend and Kent Thameside.
- Restore the fragmented landscape, restoring and creating landscape structure in parcels of land cut off by the major transport routes.
- Consider ways to integrate new and existing development into the landscape using traditional landscape elements.
- Restore field structure within retained agricultural land through the use of native hedgerows and field boundary planting, thus creating links between natural habitats into developed areas.



- Improve design standards for new development within the area and consider ways to reduce impact of visual detractors and infrastructure.
- Manage access arrangements to balance the need for recreation whilst controlling unauthorised access and anti-social uses, and linking to wider access network.

8. Meopham Downs

Landscape Description

Meopham Downs is a large character area, stretching from the centre to the south of Gravesham Borough along the eastern edge of Sevenoaks District.

The majority of the geology comprises Upper Chalk and a wide band of Clay with Flint, stretching from north to south. An area of Blackheath / Oldhaven Beds sits beneath the large village of Meopham and an area of Claygate Beds sits west of the neighbouring village Meopham Green. Soils across the character area are silty, with loam to clay across high areas.

The topography is gently undulating with clear views across the immediate landscape and occasional wider views from the main road towards the residential settlements of Istead Rise and New Barn. The dominant land use is agricultural, with a mixture of grazed pasture and arable use. Small clumps of woodland, neglected orchards and commercial horticulture exist in parts. There is a presence of horse related activity scattered throughout the landscape.

Field shape and size differs, with a neat pattern of small square fields in the south and broader irregular shaped fields to the north. Field boundaries are distinctly formed by native hedgerows, with hedgerow trees.

The large village of Meopham is located to the north of the area, with Meopham Green located at the centre of the area and Culverstone Green to the far south. Traditional architecture surrounds village greens in both Meopham and Meopham Green, providing a strong sense of place and local vernacular. All three settlements comprise dense clusters of buildings that have formed along the A227 that runs from north to south and links all three villages. In addition the small recent settlement of South Street is located to the north-east.

Small traditional clusters of isolated farmsteads can be found to the east and west. Small traditional Victorian red brick architecture and elements of flint are common, reflecting their locality within the Kent landscape. Meopham Windmill, located along Wrotham Road, provides a unique and

Key Characteristics

- Gently undulating topography with a mixture of arable and pasture farmland
- Neat pattern of small square fields in the south
- Broader irregular shaped fields to the north
- Narrow lanes and roads lined with hedgerows
- Three large settlements located along A227 running east and west
- Traditional architecture surrounding village greens provide local vernacular

traditional attraction within the area. Overhead wires run across the landscape near the small settlement of Henley Street.

The A227 is the areas largest highway and acts as a busy link between the north and south. Narrower, winding, hedge lined roads and lanes run east and west from the A227 into the adjacent landscape.

Condition: Good

The pattern of landscape elements is coherent, with few visual detractors. Established hedgerows and small woodland clumps limit the visual impact of detractors. Hedgerows are native and in good condition, providing ecological corridors along field boundaries. Woodland clumps are mostly native and mature and vary in condition, whilst the remains of orchards are in poor condition. In general the ecological integrity of the area varies.

Both Meopham and Meopham Green have Conservation Areas at their centres with traditional buildings and village greens. In general the uses of the landscape are traditional, however the quality of the landscape and land development to the south is of a lower quality than that to the north. Taking into consideration the traditional architecture, land use, coherent pattern of elements and the lack of visual detractors the condition of the landscape can be assessed as being good.

Sensitivity: Moderate

The key characteristic elements of the landscape are distinct, providing coherency and a strong sense of place within the landscape. Although woodland is restricted to small woodland clumps, hedgerows that run along field boundaries are historic and distinct. Both the settlements of Meopham and Meopham Green have distinct traditional village centres. In addition, traditional vernacular architecture can be found scattered across the landscape. The other two remaining settlements have more recent architecture that is less in keeping with the local vernacular. Strength of character and visibility are moderate, providing a moderate sensitivity overall.

Guidelines: Conserve and Reinforce

The key landscape elements characteristic of the Meopham Downs should be conserved and reinforced.

- Conserve and reinforce the traditional landscape structure and where necessary introduce new elements they should respect and enhance the pattern.

- Conserve characteristic narrow winding lanes and dense native hedgerows.

- Conserve traditional character of built environment by drawing on traditional building materials and techniques for new development.

- Reinforce village identity, keeping villages distinct and separate from one another.

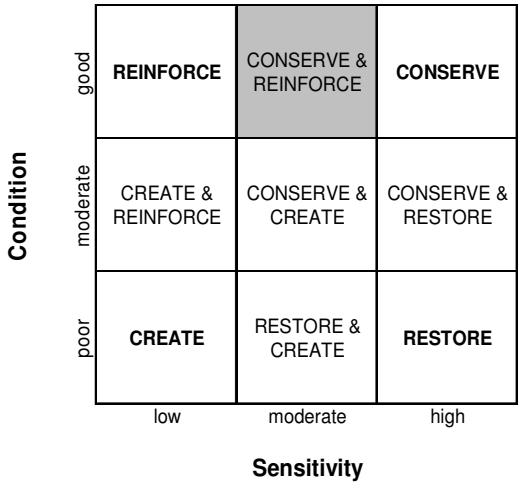
- Reinforce the enclosure of settlements within wooded areas.

- Conserve and reinforce broadleaf woodland cover and wooded edges to arable plateau.

- Encourage the use of local produce to support traditional land uses such as orchards.

- Explore new horticultural land uses.

- Conserve and reinforce agricultural land use.



Gravesham Townscape Appraisal

June 2008

This Townscape Appraisal was undertaken by Jacobs for Gravesham Borough Council during 2008 and finalised in June 2008. The appraisal covers both the urban area (Northfleet and Gravesend) and villages. A map showing the urban character areas is provided at Appendix 1.

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APPENDIX 1: URBAN CHARACTER AREAS MAP **140**

Town Centre

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Townscape Description

Location:

The historic town centre of Gravesend is situated on the southern bank of the River Thames, approximately 10km down river from the Dartford Crossing. The A226 runs east to west via the town centre. The A227 connects the town centre with the A2, which is approximately 3km to the south. The town centre is located between Imperial Retail Park and the Canal Basin. This along with the town centre's close proximity to the riverside, emphasises the Town Centre's strong industrial and maritime history, which has had a lasting impression on development within the town centre and its existing sense of place.

Views & Topography:

The area defined on Figure 1 as the Historic Town Centre Core is flat in parts but contains changes in levels. Most of the land aligning the River Thames is flat. This historically has allowed for the development of large-scale industrial units, cranes and storage facilities. This type of development has in turn had significant impacts on the views in and out of the town centre.

North of the town centre the riverside edge provides extensive views of the River Thames itself and across the river to Thurrock, with Tilbury Power Station forming a prominent feature. The variety of cranes, masts, mudflats and the activity of the tankers and other boats all add to the character and interest of the these views. There are also views along the banks of the River Thames of the various piers and jetties that break up the continuum of the rivers edge.

There are significant level changes primarily to the west of the town centre, with a number of redundant quarries creating changes in topography. Due to the built nature of the riverfront adjacent to the town centre core, direct views of the river can be restricted, but some views do exist such as those from the High Street and Harmer Street.

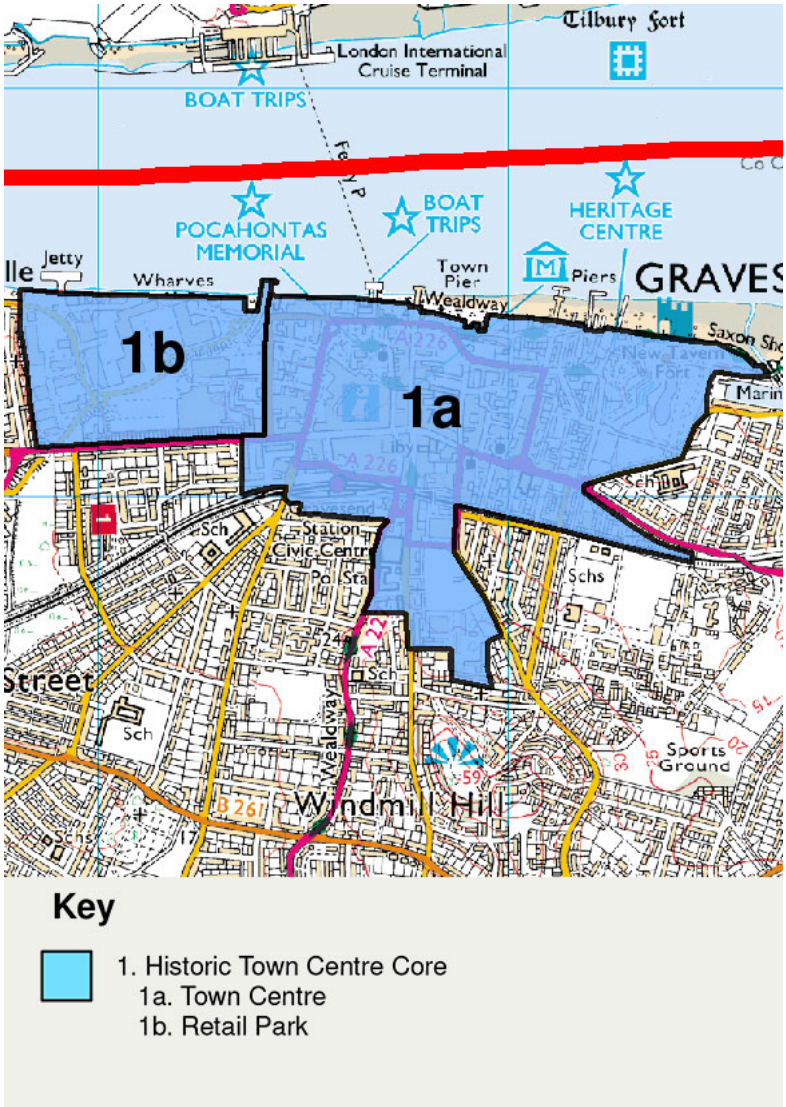


Figure 1: Gravesend Town Centre

Land Use:

Gravesend town centre as shown in Figure 1 has two quite distinct characters. The historic town centre (Figure 1, 1a) forms the traditional town centre with service provision that includes shops, banks, post office, and Gravesham Community Hospital. These services are provided from a range of different building styles from 3-storey Victorian and Edwardian properties to large glass fronted 1970's units. The other character area shown in Figure 1 is Imperial Retail Park (Figure 1, 1b). This retail park provides a more modern, large scale, out of town centre retail park experience. To a degree the proximity of this more modern retail park to the historic town centre creates a conflict of land uses.

However the historic town centre has developed a level of flexibility and robustness within its built environment, which now supports a range of services. The fabric of the historic town has been well maintained, and even though there are some more modern additions to the town, such as the recently built hospital, its land use functionality has not been compromised. To the south of the town centre is a collection of office blocks creating an administrative centre that complements the nearby commercial activity located in the heart of the town centre.

Green Spaces:

Due to the high density of development within the town centre core there is very little in the way of green space provision. Green spaces, within the town centre include the communal gardens that surround St George's Church on Church Street, St Andrews Gardens on Crooked Lane and the Riverside Leisure Area, which includes Gordon Promenade and Fort Gardens.

Directly east of the town centre, Fort Gardens provides approximately 6 hectares of attractive communal garden space, which separates the town centre from the riverside activities further to the east. The well kept gardens include distinctive features such as, a small bandstand, built in 1890, a pond, and a number of black, cast iron canons. Towards the southwest of Fort Gardens there is a small public car park but the condition of the space is less well maintained, with some overgrown garden space creating an unattractive, less inviting part of the public realm.

Fort Gardens, although separated from the town centre by the density and location of the built form, does provide a significant communal green space that helps break up the dominance of the town centre and the heavy industry that surrounds it. The space however is not well link to the town centre and can go unnoticed by visitors unfamiliar to the area.

There has been an effort to improve the soft landscape within the public realm around Baltic Wharf and the surrounding Retail Park. Some of this space, particularly on the rivers edge, has recently been developed into residential flats and apartments and the surrounding land has included an element of soft landscaping, helping to soften the dominating hard landscape from the existing dockyard industries.

Settlement Pattern:

There are four distinctive settlement patterns within the town centre, their formation being a result of their intended land use functions.

The first area consists of Gravesend Town Pier and West Street Pier which align the River Thames to the north of the town centre core. This area forms a linear strip along the river bank and to a limited extent creates a space separated from normal town centre functions. The area neighbouring these Piers has seen significant change with older industrial uses making way for new residential development adjacent to the river.

The second area is the commercial sector, which seeks to provide the local population with the usual town centre services. The local High Street together with the St George's and Thamesgate Shopping Centres are at heart of this core. The dominating built form of the shopping centres and their extensive site footprints cover much of the town centre. There are also a number of large office blocks to the south of the town centre core reinforcing the presence of the commercial sector. The scale of these office blocks creates a strong sense of place and, by being located on main roads such as Wrotham Road, helps create the sense of being within the town centre. The Gravesham Community Hospital is located on Bath Street, further extending the variety of town centre functions within the area and contributing to the structure of the street layout through the dominating size and stature of the hospital building.

The third area within the town centre is that of the Retail Park which seeks to complement the town centre with a range of services that are not contained within the existing town centre core. The pattern of development within this area is significantly different from that of the traditional town centre. The units are much larger and are sited along Thames Way. The units are surrounded by large areas of car parking, which encourages the use of private car access to a site that would usually be situated out of town. Although designed to contribute to Gravesend town centre, the pattern and scale of development in fact creates a character completely separate from the town, although still geographically linked.

Lastly, the fourth area within the town centre is the residential sector. Immediately surrounding the town centre but not separate from it, is a variety of Georgian and Victorian housing, built in tandem with the growth of the industrial riverside. The residential development that surrounds the town centre creates a phasing out of the 'High Street' functions into the residential hinterland. As a result creates a series of smaller block structures than experienced in the town centre core. Harmer Street provides a good example of Georgian town houses built in a regular block structure with active fronts facing the public realm.

Buildings:

The town centre has a large variety of buildings, both in age, size and quality. Gravesend was established as an Anglo-Saxon town in the 4th century, but due to a number of devastating fires over the centuries the majority of pre-Victorian buildings have been destroyed. Therefore, the buildings of most historic value are those that date back to the early Victorian era.

There is a strong Victorian core running throughout the town with some especially good examples within the designated 'Historic Quarter' and further north towards the riverside. The 19th century terraced housing along Harmer Street is a

strong continuous linear development of Georgian housing with the clock tower at the southern end of the street creating a significant focal point along the street. The Post Office building and former bank on Milton Road are other significant public buildings that create a positive sense of place along a main arterial route through Gravesend Town Centre.

The development of the High Street and the type of buildings that were constructed there in the 18th century shifted the focus of Gravesend from being a market town, to one of an administrative centre. St George's Church, Old Town Hall, Clarendon Royal Hotel and the market buildings with its traditional columned entrance. Together these buildings further enhance Gravesend's character and reinforce this area commercial and administrative core.

The building of the County Court in 1870 on King Street further reinforced Gravesend's reputation as administrative centre, shifting the focus from the ports to the towns centre.

However, along the High Street and New Road, some of the original buildings have been replaced by offices and shops, built around the 1960/70s. Despite Gravesend's rich history and large number of significant historic buildings, there are many examples of poor quality 20th century developments which now dominate the streetscape.

The St George Shopping Centre, a large red brick building and the associated high rise, concrete, multi-storey car park, dominate both the low level streetscape and high rise skyline. There are a variety of office blocks, all originating from the 1960/70s that dominate the streetscape, the Civic Centre being a prime example. One reoccurring theme throughout much of Gravesend, and seemingly wherever these 1960/70s developments are located, is the lack of active frontage that these buildings create. Many of these buildings were designed to have active fronts but the sides and rears of these buildings, which still face onto the public realm, are often blank concrete or rendered facades that create the feeling of dead space and offer little in the creation of active spaces.

The space around the train station is a typical example of how disjointed development has led to the disorganisation of space. The siting and location of the train station, local commercial buildings and the rear of the multi storey car park on Clive Road create a very negative space with little sense of structure or organisation and can be difficult to navigate, especially for pedestrians.

Local Materials:

There is a considerable contrast in materials between those used around the town centre core and those used in the Retail Park towards the docks and around the Asda superstore.

Much of the historic town centre consists of yellow brick buildings, often white rendered, with such examples being Gravesend train station and many of the buildings that align the High Street. Although many of the ground floor shop units have had their facades altered, relative to their current uses, the first floors and

above have remained in their original state.

Where original buildings have been removed altogether and replaced with more modern builds, there is often a lot of concrete used, with some buildings incorporating artificial stone and low quality cladding into their design.

The Retail Park area is all together different from the rest of the town centre. The material most used is large corrugated iron sheets, in the colours of the relevant shop, often with large glass fronted entrances, surrounded by expansive areas of asphalt car parking spaces.

The distinctly mixed use of materials used throughout the Historic town centre core only further enforces the lack of physical unity between buildings and public spaces.

Landmarks:

Gravesend's emergence as a regional civic centre in the 18th century, aided by the growth of industrial activity around the dockyards, influenced the type and scale of the built environment, developed at the time. There are now a number of landmark listed buildings across Gravesend, including the County Court, NatWest Bank, Gravesend Library as well as a number of smaller landmarks such as public houses and residential buildings, all of which help define nodal points in the overall context of the townscape. The Jubilee Clock Tower is a good example of how a historic monument can draw the eye and act as a landmark aiding navigation around the town.

There are a number of more modern landmark buildings located around Gravesend, and act as such, more because of their scale, mass and location than their architectural or aesthetic qualities. An example of this is St George Shopping Centre, which acts as a centrally located landmark in Gravesend, situated on a key node.

The Gravesham Community Hospital acts in the same way. Due to its scale and location on a main arterial route through Gravesend, it forms a reference point within the town centre, and aids navigation. The multi-storey car park, the council office and the retail park, although unimpressive buildings, do act as landmark buildings because of the impression they leave on the psyche of town centre users.

The recent redevelopment of the town pier has created another landmark. This acts as such because of its unique location and identity and also because of its re-introduction into the character of the town.

Road Network:

Gravesend town centre is surrounded by a complicated one-way system that navigates clockwise around the town centre, using Clive Road, Bath Street, West

Street and Harmer Street.

This is a result of many of the original routes being narrow Victorian roads, and road space being at a premium due to current pressures for on street car parking.

The A226 Milton Road acts as the main east–west axis through Gravesend, whilst the A227 Wrotham Road is the main north–south arterial route and connects Gravesend to the A2(M), linking to London and the coast.

Pedestrian navigation is difficult in the centre of Gravesend due to the large amount of redevelopment that has occurred over the years without much cohesion of old and new spaces. Moving further out of the centre and into the surrounding residential areas, Gravesend's strong Victorian history has left its mark with a strong block structure in place, with most roads remaining well connected to their surroundings, making these spaces easier to navigate and move around in.

Conclusion:

Gravesend town centre has all the usual town centre functions one would expect. It provides the local population with a wide variety of services, shelled in a wide variety of both impressive Victorian period buildings and more recent, less impressive 1960 & 1970s buildings.

This large variety of built form creates pockets of hidden gems, such as Harmer Street and the Jubilee Clocktower, or St George's church on Church Street and the numerous Grade II listed public houses found throughout the town centre.

The more modern buildings often dominate the streetscape but, due to their age and the poor quality of materials used, often evoke a sense of negativity and deprivation. These dominative buildings have in many instances become run down in appearance and only aid in creating a negative sense of place.

Gravesend's historic riverside past also in parts imprints a rather negative image on the townscape at present. The once vibrant River Thames riverside structures such as Clifton Slipways on West Street have run into disrepair. These structures are either visible from nearby roads or from certain vantage points around the town. The neighbouring retail park and Wickes whilst forming recent development are not in keeping with the town centre, as neither the materials used nor the scale of development are within keeping with its town centre location.

With the development of the Retail Park, Gravesend effectively has an 'out-of-town shopping centre', within close proximity to the town centre. This has brought about direct competition between two spaces that should be focused on complementing each other. This conflict of land uses has brought with it traffic issues which may restrict growth and the development of the town centre in the future.

Gravesend's attempts to attract people into the town centre using 'green travel' via public transport has in part been undone by having a Retail Park in close proximity that effectively encourages people to travel into town by private car. This conflict affects the capacity of the roads and the ability to move in and around the town, especially during peak hours. The lack of any significant communal green space within the town centre also has negative connotations.

Overall, Gravesend's Historic Town Centre Core has many unique and impressive buildings. However due to the contrast caused by more modern developments it suffers from a lack of unity.

Condition:

Due partly to Gravesend's Victorian past, much of the road network remains reasonably legible and navigable with a well defined block structure around the High Street, Milton Road and Harmer Street area. Legibility becomes more difficult around more recently developed spaces, such as the St George's Shopping Centre and towards the Retail Park. Much of the 1950-70s developments act as separate buildings and make little effort to integrate with their surroundings, this creates a feeling of isolation from the more historic parts of town.
Legibility rating: Coherent

Further towards the River Thames there are a number of buildings and spaces where the public and private realms become confused and as a result become disconnected from the rest of the town centre. Within the town centre there are structures such as the multi-storey car park and large scale shopping centres that detract from mainstream built form, with both positive and negative outcomes.
Visual Detractor rating: Many

Land use is well defined with a wide range of facilities throughout the town. Certain types of services are often contained separately from each other, for instance retail is mainly contained within designated shopping centres; large administrative and commercial services are located south of the town centre in a number of large office blocks around Windmill Street and the majority of residential properties border the town centre boundary. Despite a variety of land uses, each service area is well defined providing easy access for users.
Land Use rating: Defined

There are a number of significant buildings that enforce Gravesend's status as the administrative and commercial core of the borough. A number of churches, the county court, Community General Hospital and the buildings on the High Street all support its role as the centre of borough.
Cultural Integrity rating: Many

Sensitivity:

The town centre is distinctive for its range of services it provides; its commercial activity, its function as the boroughs civic centre and the focus for many forms of leisure activity. This mix of land uses and built form makes the area less distinctive for one particular use and instead provides many services to many people.
Distinctiveness rating: Distinct

The town centre has a strong, positive historic presence in many of the streets, whether in terms of the built form, the settlement pattern and road network.
Continuity rating: Historic

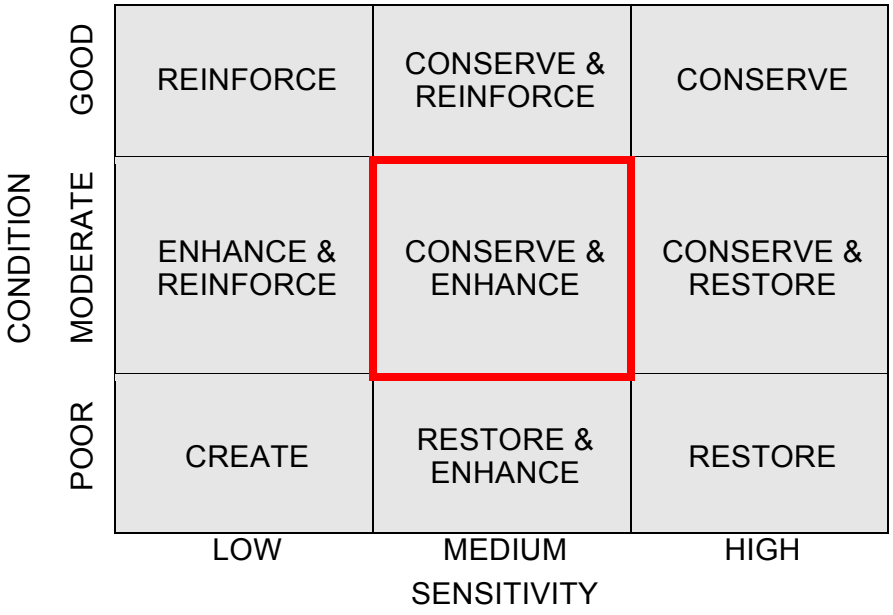
Topography throughout the town centre is relatively level, although there are some major topographical level changes at certain points around the edge of the town centre, particularly towards the River Thames and around the docks. The large scale buildings contribute in keeping many of the streets enclosed.
Landform rating: Insignificant

Despite the relatively uneventful landform through much of the town centre, views in and out of the town centre are extensive, especially those to the north that stretch across the River Thames.
Views rating: Open

Guidelines: Conserve & Enhance:

Specific guidelines for the Town Centre are to:

- Conserve features of historic interest, buildings and spaces.
- Conserve town centre functions in the centre of town.
- Conserve positive views along key streets and neighbourhoods. Enhance public realm with improvements to streets and green spaces.
- Enhance the connectivity of major streets and nodes by improved links and signage



Industrial Hinterland

Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

There are a number of industrial areas in Northfleet and Gravesend, dedicated to industrial and heavy commercial activity. The largest of these industrial sites is Rosherville, situated immediately west of Gravesend town centre on the banks of the River Thames. To the east of Gravesend town centre are the Milton and Canal Basin industrial areas. Located along the western boundary of the Gravesham borough are two large commercial sites, one containing the Sainsbury's superstore and the other containing Springhead Enterprise Park which consists of a mixture of industrial and distribution units, both of which attract considerable amounts of traffic to the sites.

Views & Topography:

Topography within these sites is mainly level throughout. This can be attributed to the large scale development that has occurred on these sites and the necessity for large units to be situated on level ground with good access in and out of the site by HGVs and/ or heavy sea-freight containers, this is particularly the case at Rosherville. Views through these areas can be restricted by the numerous large scale buildings that are situated there.

However due to the wider topography of the borough, vantage points towards the edges of these industrial areas allow for of the surrounding neighbourhoods, riverside or countryside. The quarrying that has occurred at Northfleet Embankment has resulted in a number of vantage points revealing wide-ranging views, particularly those looking north towards the River Thames.

Land Use:

Heavy industrial land use dominates these spaces, both in physical and visual. The heavy industrial factories and distribution units that align the River Thames not only dominate the skyline with their tall chimney stacks and sprawling corrugated iron units, but also in terms of their influence on the history and make-up on the surrounding town.

Although the cement works and numerous distribution depots are still fully functional, Gravesend's industrial hinterland is working at a lower capacity than in the past. This decline in primary and secondary industries (throughout the UK) from the 1970s onwards has had its impacts on Gravesend, none more so than within this industrial area. This in turn has had drastic impacts on the current land uses within these spaces and now affects the current sense of place.

Since the decline of the riverside industries, land has become derelict and unused, often with buildings laying in ruin. With the increased availability of land, especially around Canal Basin, there are a number of residential developments with high standard flats and apartments under construction. Further south and along the western border of the borough the land use changes to that of heavy commercial and large scale retail, with the presence of the Springhead Enterprise Park and the Sainsbury's superstore complex, albeit that this area will significant regeneration with the development of Ebbsfleet International Railway Station and both residential and office development in Ebbsfleet.

Green Spaces:

These larger industrial areas do not incorporate public parks or gardens within their built form. The only green spaces that exist are often unkempt, overgrown and covered in dust from the nearby factory chimneys. There are public rights of way running through these sites, although many have been closed to the public or are unwelcoming.

Springhead Enterprise Park has incorporated some vegetation into the layout of the site, with a combination of thick hedgerows and trees aligning the street, shielding the large corrugated iron units from view. Vegetation within the site consists of small grass verges and some tree lined boundaries, but throughout the entire industrial hinterland there is no usable public open space, only landscaping used to soften the hard edges of the overbearing industrial sector.

Settlement Pattern:

The existence of these sites has come about through a need for transporting goods be it by road or river over considerable distances. As such the location of these industrial areas has centred on the location of close proximity to the River Thames and the A2(M).

However, internal connectivity of these sites can often be poor, with road users having to navigate through neighbouring residential areas to access the A2 from the riverfront for example.

The development of these industrial areas has been on an ad hoc basis, as one unit closes down, another is established. This has led to the creation of a

dysfunctional space where all recent development (post-war), neither complements nor seeks to improve the current surroundings.

Buildings:

There are a wide variety of industrial and commercial buildings around the periphery of Gravesham. Industrial areas include a range of factories, small office units, workshops, storage units, and boat yard buildings. More recently, such areas have started to be regenerated with the development of riverside apartments and flats.

The type of materials used in the construction of these buildings is indicative of their level of functionality. All these buildings, whether heavy industrial or light commercial, use large quantities of the same material in their construction, creating an indistinguishable landscape.

The heavy industrial areas use large amounts of concrete, both in their buildings and the road surfaces. The commercial buildings, enterprise parks and superstores use large amounts of corrugated metal paneling, complemented by expanses of glass frontage to break up the continuity of the sheet panels. These buildings are often surrounded by harsh steel fencing defining their private boundary edges. On more modern developments, landscaping is used to soften the hard edge of the buildings facades.

Northfleet Embankment contains some of the largest industrial factories in the borough, many of which dominate the landscape views from various vantage points particularly from Northfleet and east of Gravesend town centre.

Around the Canal Basin area, there are a number of distribution depots, small workshops and Victorian boat yard buildings, situated in a largely disorganised manner. Although the majority of the riverside buildings are still in use, most of them are not used for their original purpose. For instance, some of the warehouses aligning the rivers edge that were once used for distribution are now used as boat repair workshops.

Although much of Gravesham's industrial space is not being used as originally intended, there is still a high level of activity throughout that helps maintain a sense of vibrancy and activity.

The type of activity occurring within this sector has dictated the massing and materials used in the construction of these buildings. The buildings are functional and, as a result, offer little in the way of aesthetic quality. They create a very harsh, hard edge to the borders of the borough, particularly when looking south across the River Thames from Essex.

Local Materials:

The materials used in the construction of these heavy industrial and commercial buildings and the materials used within the context of the street reflect the type of land use. There is a large amount of concrete and corrugated metal used throughout the sites in both the construction of factory buildings, container drums, even in the road construction and boundary walls surrounding the perimeter of the larger factories.

Away from the heavy commercial sector, the Springhead Enterprise Park is dominated by corrugated iron shell buildings, all in the same colours creating a feeling of unity throughout the site.

None of the industrial or commercial buildings use local or natural materials, rather man-made heavy duty materials fit for purpose. The use of such materials, especially around Northfleet Embankment, Canal Basin and the Springhead Enterprise Park all enhance the sense of private space and the need to be segregated from the rest of the town.

Landmarks:

Throughout the industrial and commercial areas there are numerous landmark buildings that dominate not only the sites they are situated in, but also impact on the surrounding townscape due to the sheer scale and massing of the units.

The chimney stacks from the cement works rise high into the Northfleet skyline, acting as landmarks and are visible from around the town and surrounding areas, including parts of the town centre and even further south, depending on local topography.

The recently developed Kimberly Clark distribution unit situated within Northfleet Embankment dominates the space and can be seen from miles around, and is a major landmark visible from across the River Thames, in Essex.

It should be distinguished that landmark buildings within the industrial and commercial areas are due more to their size and visibility rather than their historic interest or aesthetic quality.

Road Network:

The local road networks have been a crucial factor in the location and growth of these sites since they require good access to major trunk roads for the transportation of their goods. However many of these areas are situated adjacent to the River Thames rather than situated to major roads, in order to provide access to transportation via the river.

Internal road networks are often lower quality, poorly maintained and only give access to a site through a single entrance/ exit point resulting in a series of congested junctions. This continual heavy usage from HGV lorries has had sever impacts on the quality of local roads with a number of pot holes and cracks appearing in the asphalt and concrete road surfaces as a result.

Conclusion

The industrial and commercial areas of Gravesham have their own distinctive characters, largely due to the distinctive land use characteristics and the associated large scale industrial buildings.

The heavy industry sector along the banks of the River Thames has developed over hundreds of years from that of a small port used for transporting goods

locally and the establishment of a small tourist industry in the 19th century, to that of the home of multi-million pound minerals industries, as well as trade and distribution centres.

The large scale factory buildings dominate the local streetscape but also impact on wider vistas. Chimney stacks and factory buildings can be seen from miles around which not only dominate the skyline, but greatly impact upon the character of Gravesham as a whole. Since these buildings can be seen from various arrival points around the Gravesham borough, particularly east around Northfleet and to the west long the A226 corridor, it immediately creates a sense of place upon arrival.

The lack of green space, poorly maintained highways and bland materials used throughout these industrial areas create the feeling of a private, functional space, There is a segregation between public and private spaces, resulting in the industrial areas becoming isolated from their neighbours. This lack of unity and contrasting land uses between the industrial areas and neighbouring areas, creates conflicts such contrasting aesthetic qualities and disruptive views.

Condition

Legibility of these industrial sites is extremely difficult and confusing. Due to the way development has occurred on an ad hoc basis, spaces have, in the main, been 'infilled' rather than strategically located. This has resulted in buildings being sited at the bottom of cul-de-sacs, with one road in and out of an industrial area, disconnected from its surroundings and with a lack of appropriate signage to indicate otherwise. The lack of information on entering these sites further enhances the segregation between town and industrial hinterland.
Legibility rating: Incoherent

The industrial hinterland is defined by the large factory, storage, workshop units that sprawl across the townscape. The many industrial units act as visual detractors not only on an immediate streetscape level but also on a borough wide level. The industrial built environment is visible from across the borough and therefore has much greater visual impacts than any other part of Gravesham's built environment.
Visual Detractor rating: Many

The functional integrity of the space is positive. There are a number of different types of industry located in these areas, but due to the commonalty of the services provided there are few conflicts of use. Despite the apparent lack of any coherent space and the ad hoc nature of the development that has occurred, the industrial areas and enterprise parks work successfully simply because the sites are fit for purpose. They achieve little more than their basic functionality.
Land Use rating: Defined

The historic riverside past has left behind remnants of the original Victorian boat yards. However due to the high demand for modernisation and development of the freight and primary and secondary industries, much of this was removed and replaced with newer custom built units fit for purpose. This has resulted in much of the cultural integrity of the area being reduced and a distinct character area forming, separate from that of its surroundings.
Cultural Integrity rating: Few

Sensitivity

The industrial hinterland has a much defined set of land uses and very distinctive built form. Views of these areas are very distinguished from within and outside their respective site boundaries. The massing of the buildings and the materials used in their construction are further distinguishing features that set this space apart from every other part of the borough.
Distinctiveness rating: Very Distinct

There are a minority of buildings that reflect the Victorian industrial past, but the majority of the built form is modern.
Continuity rating: Recent

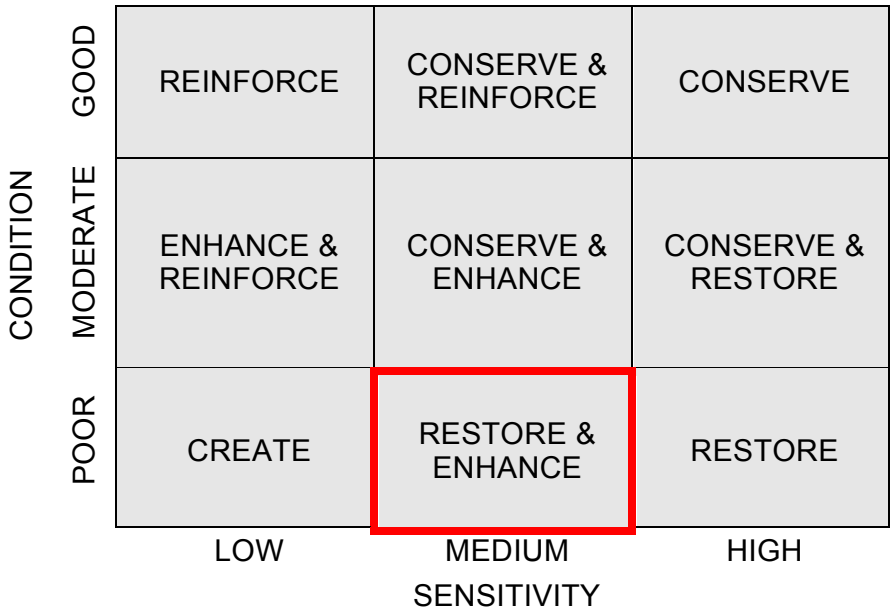
The expansive area and stature of the built form creates a very dominating landscape. Buildings and chimneys can be seen from all over, both in and outside of the area boundary.
Landform rating: Insignificant

Due to many of the industrial areas being located on the edge of the River Thames and the changes in topography that surround these areas, views in and out can be extensive, from key vantage points.
Views in/out rating: Open

Guidelines: Restore & Enhance

Guidelines for the future:

- Retain and restore buildings of historic value.
- Encourage redevelopment that seeks new uses for old buildings.
- Restore brownfield land with mixed use development.
- Restore green spaces where long lasting improvements can be made, particularly along the Thames & Medway Canal situated in the Canal Basin area.

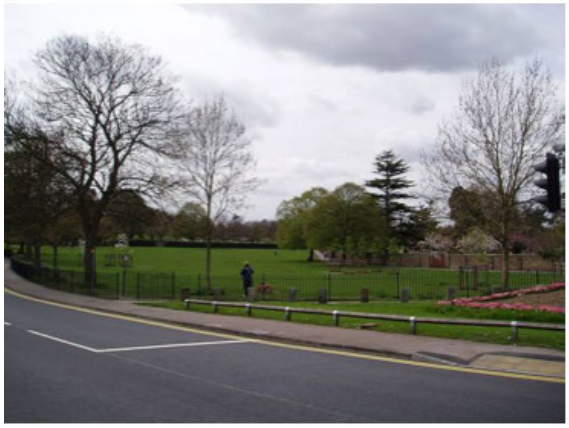


Victorian/ Edwardian Suburb

Views & Topography

Land Use

Green Spaces



Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

The Victorian/ Edwardian suburb forms a near concentric circle around Gravesend town centre, (see Appendix 1). The development of this suburb can be directly related to the growth and development of the riverside from the 4th century onwards, with housing for factory employers and employees being developed close to the riverside and also within close proximity to the town centre.

The A226 runs directly through this historic quarter from east to west while the A227 connects the A2 to the south, through the Victorian suburbs and into Gravesend's town centre.

Views & Topography:

Land around the town centre is gently undulating with open views of the River Thames and Tilbury Power Station from various vantage points. Although Northlfeet Embankment and Canal Basin Industrial Estates are situated at a lower level than that of the rest of the town, the undulating topography of the surrounding townscape creates views into the sites from many of the surrounding roads.

From the south west side of the town centre, views of these industrial estates, particularly the chimneys, are visible from London Road/ Overcliffe and even as far south as First Avenue and Gouge Avenue around Dover Road Community Primary School.

South of the town centre and around Windmill Hill there are some of the most extensive views of Gravesend, including the industrial estates adjacent to the River Thames and large areas of the surrounding landscape. Windmill Hill also has almost unobstructed views of the local Guru Nanak temple to the northeast.

To the south east of the town centre, there are considerable views looking north towards the Canal Basin Industrial Estate from the A261 Old Road East and the surrounding residential areas.

Apart from the views of the surrounding industrial sites there are also some positive street vistas. This can be largely attributed to the defined block structure and use of straight streets. Good examples of this are the residential streets that adjoin Dover Road East and Old Road West.

Further examples of positive street vistas can be found edging the town centre with views of local landmarks. Sight lines, such as those north from The Grove, across Baddington Street and into Harmer Street with the location of the Jubilee clock tower, act as positive views and aid users in their orientation of the town.

Land Use:

The land use is broadly defined as residential. Unlike industrial areas or certain parts of the town centre and even some of the more modern residential areas, the Victorian/ Edwardian suburbs remain relatively undeveloped with large areas of original Victorian and Edwardian housing.

There are many pockets where more modern development has occurred, with the inclusion of some post war housing and recent 1970s – 1990s developments, but there remains an overall emphasis on Gravesham's Victorian roots within these areas.

Due to the close proximity to the town centre there are few retail services required within these suburbs. Some local convenience stores do exist, along Singlewell Road for instance, but these are minor compared with the larger stores within the town centre. Other than local tertiary services, land uses consist of community facilities such as churches, public houses, school, libraries and some pockets of recreation space.

Green Spaces:

There are a number of open green spaces within the Victorian/ Edwardian suburb, including Woodlands Park, located west of Wrotham Road. Adjacent to Central Avenue is some functional green space, in the form of allotment gardens. The allotments form a central green space within the centre of a perimeter block between Central Avenue and Northridge Road. There is also a small commemorative garden at Clarence Place, near Windmill Hill, with attractive grounds and well maintained gardens.

Other than the aforementioned main parks and gardens, green spaces are restricted to school playing fields or small greens on the junctions of roads.

The amount of greenery on a street level is determined by the type of housing that is located there. The larger, semi-detached Victorian properties are often situated with tree lined streets, with grass verges and larger front gardens, helping create an open and lush green space that creates a softer edge to the surrounding hard landscape. The streets with higher density, terraced Victorian houses are often afforded smaller front gardens, the lack of street planting leaves the built environment to dominate the streetscape.

Settlement Pattern:

Many of the Victorian/ Edwardian streets are based upon the formation of a simple block structure. This allows for good accessibility and easy navigation between the suburbs and the town centre. The majority of streets are linear allowing for extensive views along the streets, further enhancing the ease of movement within the residential areas.

There is little evidence that newer developments have affected the street layout. The spaces that have been developed tend to be infill developments that insert modern housing and flats into the existing plot structure, therefore not significantly affecting the settlement pattern nor impacting on the ease of movement.

Windmill Hill is particularly distinctive because of how the changes in topography have affected the settlement pattern. Windmill Hill consists of main north–south and east–west connecting routes with the adjacent side roads leading into cul- de-sacs and dead ends. The legibility of the space is difficult not only because of the incoherent street structure, but also because of the mix of period architecture situated around Windmill Hill, which does little to unify the space. Despite Windmill Hill's lack of consistency, it still creates an area of distinct character and one to be preserved.

Buildings:

The majority of the built environment consists of Victorian terraced or semi-detached dwellings, Edwardian semi-detached properties and some modern infill developments of either flats or bungalows.

A high density of Victorian housing stock can be found around the Bat and Ball area, with some fine examples located along side streets adjoining Darney Road and Wrotham Road. These excellent Victorian examples are complete with original detailing around the doors and windows which all contribute to the unique sense of place.

Other prime examples of continuous streets of Victorian housing can be found on Park Avenue, south west of the town centre; streets adjoining Old Road West and also around Central Avenue.

These residential areas have been built at high densities with the majority of properties consisting of two-storey terraced and semi-detached dwellings, with some pockets of flats and apartments further increasing the rate of dwellings per hectare. There is an area of bungalows around London Road where density is lower.

Local Materials:

The Victorian housing is largely constructed from red brick, which offers a sense of continuum throughout the street. The consistency of materials is disrupted by some modern infill development that uses a range of rendering techniques, including pebble dashing, red clay tiles or even weather boarding.

Flint detailing in both boundary walls and building facades is an example of how locally sourced materials enhances the facades of otherwise indistinct residential buildings. This level of detail brought about through the use of local materials helps define the area on not only a street level but also on a town-wide and regional basis.

Landmarks:

Due to the residential nature of these areas, landmark buildings occur less frequently and the architectural design of buildings is less dominating than equivalent buildings found around the town centre or even within the industrial areas.

The Victorian school building of Dover Road Community Primary School, situated on the junction of Dover Road East and Park Avenue is an example of a local landmark. Due to its siting on the corner of a busy road junction, its impressive Victorian architectural features and its focus for community activity, this building has established itself as a landmark within its suburban context.

Many of the Victorian, Edwardian and some Georgian properties have distinctive, original façade features. These act not only as marks of personalisation on individual properties but also as identifiable details that create a sense of place, aiding cohesion throughout an entire street.

Road Network:

There are a number of main arterial routes that run through the Victorian and Edwardian residential suburbs. Dover Road East runs east to west, connecting Gravesend town centre with Northfleet. Dover Road East becomes Old Road West before turning into Old Road East. This section of road network connects the Bat and Ball and Windmill Hill estates and key Victorian/ Edwardian residential suburbs to the surrounding town.

Whitehill Road, leading into Parrock Road; Central Avenue leading into Windmill Street; Wrotham Road and Thames Way act as the main north–south connectors, linking traffic from the A2 through to the town centre. These are the main routes that carry the majority of commercial, freight and visitor traffic. Observations would suggest that due to the relatively low level of traffic on many of these side roads, it is the aforementioned road network that carries the majority of local traffic through these Victorian and Edwardian suburbs.

In addition to the local road network the railway line plays a definitive role in the functionality of the Victorian suburb, both in terms of the built environment and movement around the space. Although an important part of Gravesham's transport network and something that should be encouraged and developed as an alternative to car travel, the railway that connects Gravesend with surrounding Medway towns dissects many residential areas causing severance and making navigation difficult.

Conclusion

The Victorian Edwardian Suburb has many distinctive features, none more so than the distinctive qualities of the housing stock. Unlike modern housing developments, the quality is in the detailing of the facades, both in the door archways, bay window frames and roof detailing, amongst others features.

Long linear groups of Victorian housing, each with this level of detail create an overall sense of unity within the street. As well as the detail of the facades, a certain level of personalisation of each property helps to minimise repetitiveness in the built environment whilst still ensuring attractive and unified streets.

This combination of unity and character in the built form and personalisation of

the individual property creates a very positive sense of place.

The connected structure of the street layout also aids the creation of unity within the overall townscape. The simple block structure and the connected streets not only helps aid navigation on a micro level, moving around from street to street but also on a macro level (especially for car users) as people move from east to west, north to south, around the suburbs of Gravesham.

Many facilities originally intended as recreational ground for the residents of the Victorian housing estates, have over the years been built upon. For the houses that have little private green space (front and back gardens), this leave the public realm dominated by hard landscape. There are areas, mainly the lower density properties, where private green space is more abundant and this helps create a more positive streetscape.

Many of these residential areas are surrounded by busy roads; lack quality communal green space and are lacking service provision. In some instances, especially in modern housing estates, the housing stock dominates the streetscape without contributing positive levels of activity into the street. However, because of the character and unity of the built environment, the Victorian streets create spaces with identity and purpose that are well connected to the town centre and local services.

Condition

The defined structure of the street and the consistency of the built environment help create a unity within this residential space. The streets are well connected and despite the local topography creating some disconnected spaces, the area functions well, aided by being well connected to the town centre.
Legibility rating: Unified

The Victorian and Edwardian housing creates a strong overall visual unity but ad-hoc, infill development has interrupted the consistency with a number of non-characteristic developments, ranging from small modern housing units to larger scale flat and apartment buildings.
Visual Detractor rating: Some

Regardless of the age or style of the housing, land use is consistent throughout. There are occasional pockets of commercial development, particularly closer to the town centre, but the overwhelming land use type remains residential.
Land Use rating: Defined

The long streets of Victorian housing with many original features still intact, and the positive vistas this creates, enriches the streetscape and brings a level of consistent character that much of the borough is missing.
Cultural Integrity rating: Many

Sensitivity

It is the consistency of the built form, in terms of the land use, the building styles, the materials used and the architectural features that make the Victorian and Edwardian suburbs so unique.
Distinctiveness rating: Very Distinct

Despite the amount of recent infill development that can be found in many of

these originally Victorian streets, the dominating features remain the Victorian and Edwardian period details that create the character. The materials and architectural features stand out as more distinctive than the more modern alternatives.
Continuity rating: Historic

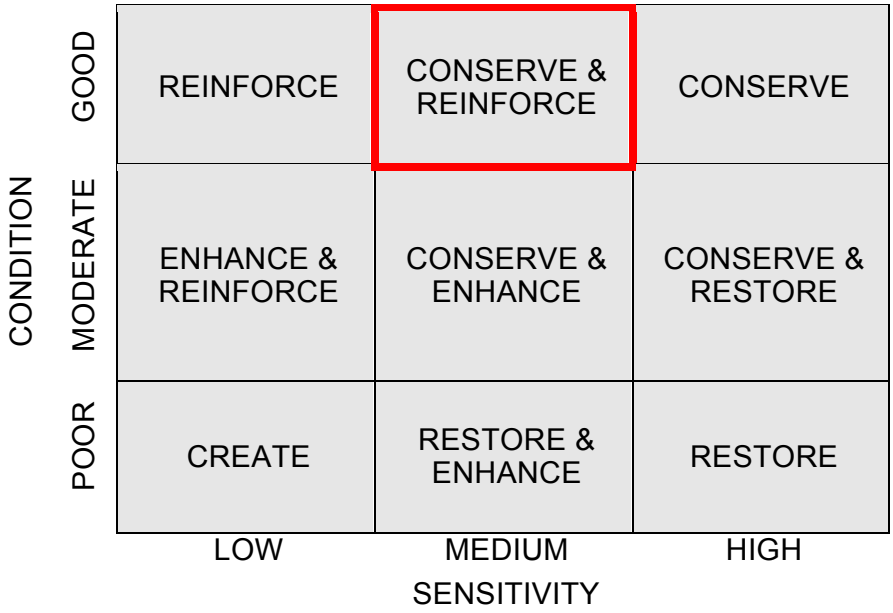
The consistent built form and in general relatively level local topography mean there is little in the landscape that stands out as particularly different from the rest of the street. Features within the streetscape are generally uninterrupted.
Landform: Insignificant

There are some views north from residential areas around Saddington Street, London Road and particularly from the top of Windmill Hill. These views extend across the River Thames and into Essex. However, the majority of the Victorian estates have been engulfed in the last century by more modern developments, restricting views of the neighbouring countryside. Infill developments have increased the density of the built environment, further reducing views in and around these residential spaces.
Views In/Out rating: Enclosed

Guidelines: Conserve & Reinforce

Guidelines for the future:

- Conserve buildings of historic importance
- Conserve the uniformity of historic streets and restrict infilling that damages coherence
- Conserve skyline by ensuring development doesn't break local rooflines
- Reinforce active communal green spaces
- Strengthen community bonds by introducing community spaces e.g. meeting places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CONSERVE & RESTORE
CREATE
RESTORE & ENHANCE
RESTORE
LOW
MEDIUM
HIGH
SENSITIVITY

Inter/Post-war Suburb

Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Inter and post-war housing development occurred largely around the south, southwest of Northfleet and Gravesend. This suburban area is closely connected by the A2 to the south and by the A226 which runs east to west. The A227 is the main north–south connecting route that joins this suburban area to the town centre.

Views & Topography:

This area of suburban development; the naturally undulating topography and the close proximity of the neighbouring Green Belt all combine to create some extensive views of the surrounding landscape and residential streetscape.

The residential areas of Chalk; Westcourt and New House estates and the housing around Watling Street, all neighbour the Green Belt that surrounds the urban area. This creates a positive sense of open space that surrounds an otherwise high-density residential area.

The topography throughout much of the suburban landscape is consistently undulating which creates positive street vistas and views into neighbouring estates. Open views of landmark buildings or green spaces help to create a more identifiable streetscape, aiding the ability to navigate and move around what can often be repetitive, indistinct residential estates.

Land Use:

These suburban areas are largely residential, with the majority of the streetscape dominated by a combination of terraced or semi-detached housing. Depending on the locality, there are some residential areas with local shopping parades providing a small selection of local services to nearby residents.

Schools and churches form the other most common land uses, often with large building footprints. These facilities are in some cases the only examples of community buildings and provide an alternative land use in otherwise mainly residential areas.

Diversity of land uses is very much dependent on the location of the suburb. Suburbs in close proximity to the town centre often provide complementary services to the town centre. Whilst suburbs furthest away from the town centre tend to include a greater choice of services locally. For example suburbs furthest from the town provide retail outlets, such as local convenience stores, as these are not in direct competition with town centre outlets.

An example of this is the range of services provided along Overcliffe within the 'Thames Way East' zone. Child-minding services, an HGV recruitment agency, law firms etc align this street, all of which have located within this largely residential area due to lower rental costs compared to the town centre. In the New House estate, services consist of a local convenience store, chemist, food takeaway and hairdressers, all able to continue trading because they are a comfortable distance from other competitors.

Green Spaces

The majority of green space within these suburban estates are situated around local primary and secondary schools and are therefore unavailable for public use the majority of the time.

Some estates do have designated recreation grounds and Chalk and Milton Road have dedicated allotment gardens, which provide good quality open space for the enjoyment of local residents and provide habitat opportunities.

However, a design feature of many of these post-war housing developments was to have a designated open space adjoining the housing development rather than having an integration of green spaces within the development. This has resulted in some of the residential streets being left void of any soft landscaping, resulting in housing dominating the streetscene. Westcourt is a prime example of this.

Chalk and the New House estate are good examples of where well-kept private gardens can spill out into the public realm and create a softer edge to an otherwise hard landscape. Residential suburbs closer to the town centre tend to have smaller front garden plots, resulting in the private green space being unable to dominate the public street space.

Tree lined streets are common in some residential areas, however, damage to some species has discouraged any replanting, resulting in some streets being irregular and unbalanced in their appearance.

Settlement Pattern:

Wombwell Park is a housing development constructed with a basic block structure, resulting in each of the residential streets being connected to another making navigation straightforward.

Many of these post-war housing developments departed from this commonly used Victorian technique of creating simple block and plot structures. This change in technique has resulted in the creation of larger, unconnected blocks, with winding streets, some with impermeable block structures and a higher number of cul-de-sacs and dead ends.

The Victorian model meant all residential streets were equally accessible and therefore equally frequented by pedestrians and latterly motorists. The inter-war and especially the post-war 1950s-70s developments have moved away from this philosophy. The suburbs around Gravesend are now linked by main arterial routes that carry the bulk of traffic around the borough, such as Whitehill Lane/ Valley Drive and Singlewell Road, while adjoining roads tend to act as carriers for local, residential traffic.

This type of settlement pattern does have some benefits for its local residents but for the borough as a whole, it works less effectively. The large formation of cul-de-sac streets creates quiet roads within residential areas. However, this type of defined road hierarchy does force traffic onto the main roads, making some routes through Gravesham considerably busier than others.

With the extensive use of cul-de-sacs throughout post-war residential suburbia, connectivity is poor and movement around an estate is restricted to certain roads. This kind of restricted movement reduces natural surveillance of side streets and creates issues of personal safety due to a lack of activity in areas where pedestrians do not regularly enter. This is especially evident in estates aligning Watling Street and post-war developments in the Chalk area. This is an example of how the structure of the built environment impacts on the use of the town.

Buildings:

With the vast majority of these suburban areas consisting of residential properties, the built form is often familiar and repetitive throughout. The built form consists of semi-detached and terraced housing with a number of bungalows, especially around Chalk. There are a number of flats and apartment developments closer to the town centre, some examples being at Overcliffe, where Victorian garden plots have been developed.

Housing is mainly two-storey, with flats and apartments rarely exceeding three or four-stories. As previously mentioned, housing during the post-war period was built quickly and at a low cost, this approach favoured prefabricated buildings. Where such methods have been used, this has resulted in both a plain looking built environment with few distinguishing features and one that has, in places, become derelict and run down.

This is not to say all inter and post-war housing is poor quality. There are estates, such as Chalk, New House, Christian Fields, Riverview Park and those around Coldharbour Road, where the housing has been personalised and contributes well to the quality of the public realm. Where care has been taken over the presentation of the garden space and the housing frontage, the overall contribution

to the public space is usually positive.

Local Materials:

Due to the repetitive nature of the built environment, the type of materials used are consistent throughout a particular housing estate. Housing is either built from red or yellow brick, with a variety of rendering techniques used. Red clay tile cladding is commonly used on many 1960-70s builds, while whitewashed walls are commonplace on the social housing around Dickens Road, off Milton Road East. Weatherboarding is another frequently used technique and features on housing frontages along Old Watling Street.

Landmarks:

Within this residential context there is little in the way of landmark buildings. Local schools and churches act as the main landmarks, but this is usually because of their size and community function rather than their historic or aesthetic importance. There are impressive church buildings on both Milton Road East and Old Road East, both of which act as local landmarks.

Road Network:

Northfleet and Gravesend have been developed with a hierarchical road system. Hall Road, Coldharbour Road, Singlewell Road, Whitehill Road and Valley Drive are some of the main north to south arterial routes that connect these residential estates with the A2 and the town centre.

Dover Road, Old Road West and Old Road East are the main roads running east to west that connect the outlying residential areas like Chalk to Wombwell Park. The majority of the remaining road network consists of quiet residential streets, often poorly connected, and some cul-de-sacs that discourage traffic from using them as through routes.

This hierarchical road network effectively loads what are considered the 'main routes' and this is where the majority of the traffic management systems are located, such as traffic lights, signalised pedestrian crossings and traffic calming. Since most of the heavy traffic is channeled along these main routes, traffic management is less common in residential areas.

Conclusion

Inter and post-war housing estates are epitomised by the indistinguishable architecture, irregular street structure and their minimalist attitude to green spaces. This type of development, dominated by row after row of identical housing, creates a place that is lacking in character and difficult to navigate.

Housing developments of this nature are typical of the era in which they were built. Post-war, resources were scarce and time constraints meant housing was needed immediately. This created a rush for 'quick-fix' housing on a large scale, and such development dominates Northfleet and Gravesend today. All other housing developments from the 1960s onwards have been accommodated around the structure of the estates built in the 1940s and 1950s, leading to further divergence in the overall harmony of the built environment.

The post-war house building programme that was undertaken in the 1940s and 1950s has left an impression of mass production around many of these estates with few attempts made to distinguish one from another. Little attempt was made to incorporate a centre or focal point into the design of these estates. As a result many of them remain as single land use entities; housing estates without a core. There are in places a number of schools and/or churches that act, as landmark buildings and centrepieces but these are less effective as magnets for community involvement since not all residents use them.

These suburban developments have been more successful where a certain level of personalisation has taken place. Unlike Victorian and Edwardian housing developments that are awash with intricate detailing around the building façade, post-war architecture has acted as more of a blank canvas for the personalisation of properties. This level of personalisation has helped achieve a stronger sense of place and character.

Many of the post-war housing estates are simple box designs with flat edges, with no detailing, standard brick facades, little or no rendering and some with small front gardens plots. Despite the standardised building techniques that have created these estates, the key to either their success or failure as coherent built spaces is dependent on ownership.

Some owners have taken pride and care in the presentation of their property, which often spills out into the garden, which then has a positive affect on the public realm, for instance, properties around Chalk.

On publicly owned estates (and even formally publicly owned estates), alterations to building facades and gardens are harder to achieve and therefore often contribute less to the public realm than the privately owned equivalent.

There are many other factors that affect the success of a particular street or estate, such as the presence of quality open green space or well connected streets and a supply of local services. However, it is the issue of ownership and a level of personalisation on a micro scale that tends to make the most significant differences to a street or estate on a macro scale

Condition

Legibility of these spaces is dependent on the age of the estate and therefore the type of street structure employed. For the majority of inter and post-war housing estates the street structure is based on a series of irregular, unconnected streets

making navigation difficult. The repetitive nature of the built environment also makes legibility difficult, as there are few distinguishable features within large areas of housing.
Legibility rating: Coherent

There are very few visual detractors with the majority of properties occupied and active helping to maintain the visual unity of residential streets. However, where properties are unoccupied and derelict, which detracts from the uniformity of the rest of the street.
Visual Detractor rating: Few

Functional integrity is obvious due to the distinctive singular land use. Many of these residential estates have little in the way of services or community functions which makes these spaces well defined.
Land Use rating: Defined

These large scale housing developments were rarely built around any pre-existing historic landscape; rather they were a result of the high demand for housing after the World Wars. Much of the built environment is therefore of a very similar age and as a result lacking in historic content.
Cultural Integrity rating: Few

Sensitivity

The distinctiveness of inter and post war housing estates is epitomised by the large scale, single use housing estate; the regimented building structure and the plain architectural design of the built environment.
Distinctiveness rating: Distinct

Although some streets are poorly connected and navigation is difficult, the sheer consistency of the built form is continual throughout many of these spaces.
Continuity rating: Recent

The topography of the local landform offers positive views along streets and sometimes into neighbouring estates.
Landform rating: Apparent

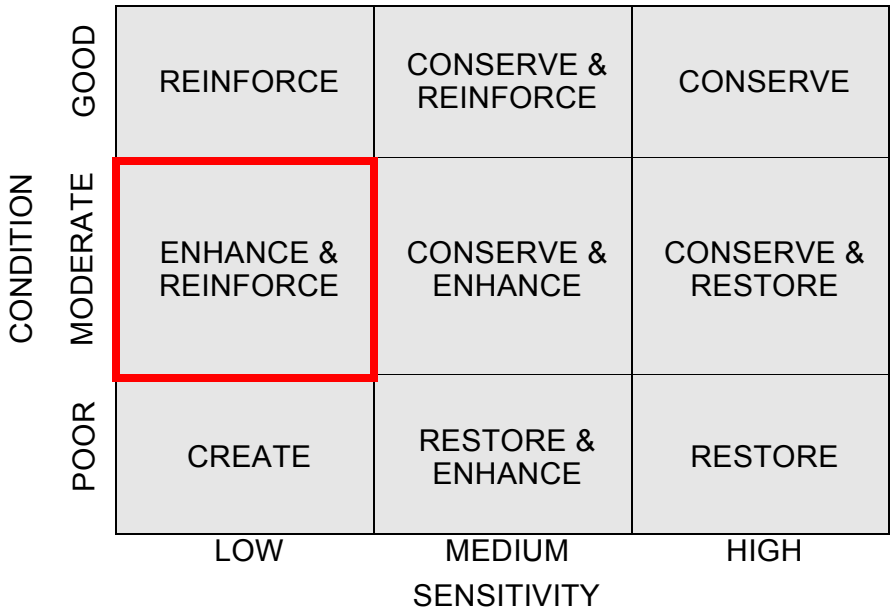
Due to the location of the suburbs on the edge of the town and bordering the Green Belt, there are some extensive views across neighbouring fields. However, these are more likely for residents located on the edge of the suburbs rather than closer to the centre who are obstructed by the built form.
Views in/out: Intermittent

Guidelines: Enhance & Reinforce

Specific guidelines for the Inter/Post–war suburbs are to:

- Reinforce community identity through improvements to communal facilities
- Reinforce sense of place through public realm improvements that sympathetic to age of built environment

- Enhance green space provision and provide active spaces for minors



Modern Suburbia

Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

The most modern suburban housing developments have occurred on the very periphery of Gravesend. The main areas of development are focused on Springhead Road and Pepper Hill, south of Northfleet; the estates around Coldharbour Road to the south of Gravesend and Trinity Road and Dering Way to the east of the town centre.

These modern developments are situated close to all the major link roads. Residential areas around Coldharbour Road are close to the A2(M), and Dering Way and Springhead Road estates are closely situated to the A226 Thames Way and Rochester Road link.

Views & Topography:

The estates situated along Trinity Road, Pepper Hill and Coldharbour Road have fairly undulating topographies all of which reveal open views along their main roads. Bader Walk and Cheerywood Drive are good examples of this within the Coldharbour Road estate.

Trinity Road has a slight change in topography that increases views of the Sikh temple, located on Khalsa Avenue, which can be seen from the entire. The views from this point also extend to the nearby heavy industrial estates and the associated chimney stacks, which now form a noticeable backdrop to this residential area.

The Pepper Hill estate is built on a slight incline and, due to its positioning on the edge of the town, views into the surrounding countryside are extensive, forming a major part of the estates character and sense of place. However, views of the electricity pylons form a slight visual detraction.

Land Use:

These residential estates act as single land use spaces and due to their relatively small size, compared to neighbouring estates built between the 1900s and the 1970s, provide little or nothing in the way of local services or community provisions.

The growth in popularity of the car from the 1960s onwards has meant local residents have become increasingly mobile, now more so than ever. This has been reflected in the design of these housing estates with the introduction of garages and the lack of service provision due to the ability of residents to easily travel to service centres locally.

Green Spaces:

The majority of new estates are built with the premise that people desire some form of private garden space, however small. The housing built along Dering Way is an example of how typical 'two- up, two-down' properties have included some amount of private garden space. Although, comparatively small, the front and sometimes rear garden plots act as the only green space within these estates.

The modern developments that have occurred around Trinity Road have done so around previously established recreation grounds and sports clubs. These facilities offer good quality green spaces for the local community, although some are restricted to access for club members only.

Some of the newest development in Gravesend has occurred at the end of Damigos Road. Central to the development is the SUDS system (Sustainable Urban Drainage System) that offers some green space, although in this instance is fenced off, restricting the usefulness of the open space to the general public (for health and safety reasons). This green space acts as an aesthetic addition to the estate rather than a functional recreation ground.

It is evident that the pressures of increasing building density to meet housing demands have had an impact on the amount, and quality, of the green space in modern housing estates.

Settlement Pattern:

Housing developments built between 1980 and the early 21st century are dominated by cul-de-sacs. The majority of housing estates, until very recently, have favoured the use of cul-de-sacs to create quiet, sleepy, disconnected roads. Throughout these developments, there is a single route in and out of the estate with all the residential streets adjoining this main route and ending in a cul-de-sac or dead end road.

This system of cul-de-sacs creates a number of issues, one being the lack of connectivity throughout the site. These estates give little choice when moving around the area and force all pedestrian and vehicular traffic onto the same routes in and out of the space leading to issues of congestion and noise and air quality.

The structure of the settlement pattern also creates a lot of dead space, with the

back of one house facing onto the front of another. This reduces the natural surveillance of the street and affects security and safety. For these reasons, the most modern housing estates in the Gravesham borough (currently under construction) are moving away from this form of house building and returning to the creation of defined blocks. This encourages active frontage into the public realm and connectivity between spaces, the same as the Victorian and Edwardian housing developments achieved.

Buildings:

Buildings consist solely of two-storey houses, with some four-storey flats and apartments situated around Damigos Road. The style of the residential units is largely consistent throughout, with the majority comprising semi-detached houses, each with a private garage and/or driveway, a small front garden plot and slightly larger rear garden.

Local Materials:

Building materials throughout these modern housing developments are consistent. Yellow, red and grey bricks are commonly used materials with some patterns in the brickwork especially around the window and door frames.

Housing developments from the 1980s have more examples of rendering with weatherboarding and sometimes red clay tiles incorporated in the detailing of the building frontages.

Ashmore Gardens, off Landseer Avenue, close to the A2, has a number of newly built detached and terraced houses, some of which have included flint detailing in the building façade.

Landmarks:

The housing estates covered in this section of the report are mainly located on the periphery of the town and therefore lack the landmark buildings that are associated with the town centre. However, the modern housing developments built around Trinity Road are close enough to the town centre to be influenced by the presence of some major landmark buildings, such as the Sikh temple being built on Khalsa Avenue.

The Sikh temple rises above existing rooflines and the ornate building contrasts with the surrounding residential streets.

The other major landmark building in the Trinity Road area is The Old Barracks building, which now accommodates a number of commercial enterprises, including The National Autistic Society.

For people using Trinity Road, these buildings create positive reference points, helping to aid navigation by breaking up the repetitive nature of housing estates.

Road Network:

The road network has been determined by the type of housing development that has occurred, as discussed in the Settlement Pattern section. These modern housing estates, built in the last 20 years, have made the use of cul-de-sacs, which has had an affect on the layout, and functionality of the surrounding road network.

Accessibility to these estates relies on the accessibility of a single road. For the Pepper Hill estate, all housing is accessed through Painters Ash Lane. To access the housing around Damigos Road, Dering Way forms the main access route.

Other major routes are the A2260 Springhead Road, which is the main connecting road to the estates around Haldane Gardens. Landseer Road, Hillary Road and Coldharbour Road are the main routes through the estates north of the A2. All other roads are minor, disconnected, residential streets.

This type of road network affects functionality by loading these main routes with all vehicular and pedestrian movement, whilst reducing such activity in the neighbouring residential streets.

Conclusion

The character of these modern housing developments has, amongst other things, been determined by their geographical location. The housing estates located at Pepper Hill, Springhead Road, Dering Way and those around Coldharbour Road are situated on the periphery of Northfleet and Gravesend, with little else other than housing contained within their site boundaries. Without the presence of any historic or distinct architectural features to complement these housing developments, these areas are lacking individual character. There is nothing in the design or layout of these suburbs to differentiate them from other similar estates built in recent times.

One characteristic that all these modern housing developments share is the lack of distinctive architecture. However, the modern housing developments around Trinity Road are influenced by a number of distinguishing local features. The Sikh temple, The Old Barracks building and pockets of Victorian housing all help add character and a sense of place, differentiating it from other modern housing estates.

Some of the modern housing developments are lacking features that distinguish the period within which they were built, especially the case when housing design aims to mimic past periods, particularly popular is the mock Tudor effect found in Bronte View off Parrock Road. This eagerness to copy architectural features of the past, and the resulting indistinct modern estates, misses the opportunity to add to the character of Gravesham that has been shaped over hundreds of years by genuine, original architecture.

This lack of distinctive built form is not compensated in other areas. The street structure is difficult to navigate; there is little usable public green space and there is a lack of any focal point for community activity. These modern housing developments have become isolated satellite estates, all of which suffer from a lack of identity.

Condition

In terms of visual unity, the legibility of these spaces is determined by the layout of the road network, the settlement pattern and the type of architecture present. The road network is a series of unconnected cul-de-sacs, making movement into neighbouring spaces difficult and only possible by a single route. The indistinguishable architecture provides little sense of place and assistance in terms of orientation.
Legibility rating: Incoherent

The outlying housing estates around the periphery of Northfleet and Gravesham contain few visual detractors. All of these estates are carbon copies of each other with nothing to interrupt the continual pattern of housing. The only exception is around Trinity Road with the location of the Sikh temple situated on Khalsa Avenue, The Old Barracks and the pockets of Victorian housing. Overall, building patterns are consistent and repetitive and offer no visual alternatives.
Visual Detractor rating: Few

Land use is residential throughout. Unlike some suburbs which host small retail centres or community focal points, these modern housing estates are solely residential spaces.
Land Use rating: Defined

Cultural integrity is minimal for the same reasons as above. Land use is strictly residential and these developments have occurred either as replacements for existing land uses, or have been developed on green field sites.
Cultural Integrity rating: Few

Sensitivity

Although clearly a residential suburb with a distinct land use, building types and defined density, the lack of distinguishable landmark buildings, materials, green space, community facilities and legible streets contribute to forming a forgettable set of spaces, almost completely indistinguishable from other modern housing estates.
Distinctiveness rating: Indistinct

Modern building materials, the layout of the road networks and quality of the public spaces are all a reflection of the era in which they were built.
Continuity rating: Recent

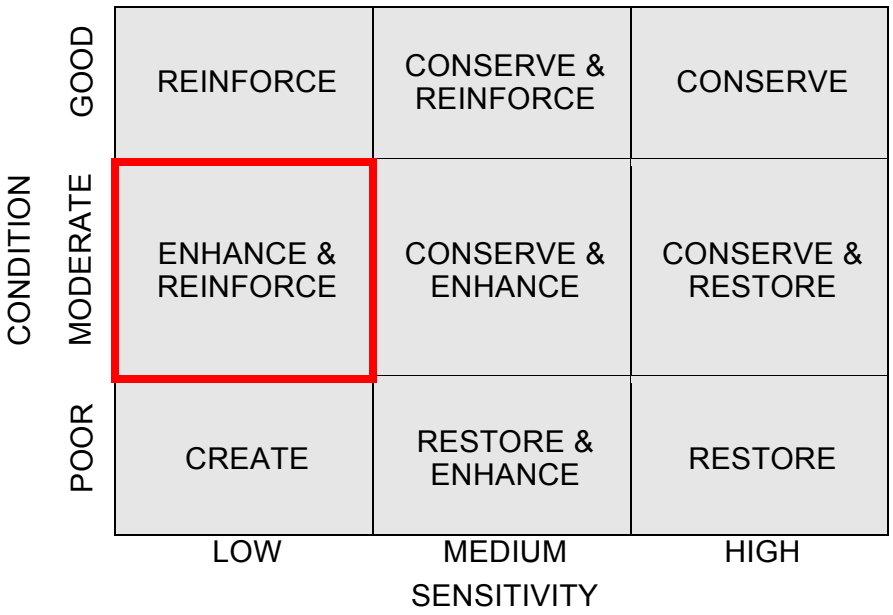
The gently undulating topography throughout much of Gravesham extends to these modern residential areas and creates some positive views along several of the streets.
Landform rating: Apparent

The majority of these modern developments are situated on the edge of town, creating many extensive views of the surrounding countryside. These views take in both the protected green belt but also, around Pepper Hill, suffer from being in close proximity to overhead pylons, which detracts from the otherwise positive nature of views.
Views in/out rating: Intermittent

Guidelines: Enhance & Reinforce

Guidelines for the future:

- Enhance the quality of future built environments through prescriptive design guidance documents.
- Enhance the public realm in new suburban developments through the addition of Section 106 agreements during the planning control process.
- Enhance public amenities and create a centre for community activity, micro and macro scale.
- Enhance freedom of movement by opening up spaces and reducing number of cul-de-sacs.
- Reinforce existing green spaces.



Northfleet High Street

Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Northfleet High Street is located on the western border of the Gravesham boundary, approximately 1.5km east of Swanscombe. The High Street is also a close neighbour of the nearby Northfleet Embankment industrial site and is only 500m from the River Thames and the associated heavy docks industry consisting of mills and warehousing.

Views & Topography:

The local topography greatly influences the character of the streetscape. Towards the western end of the High Street, the level falls away revealing the entrance to an industrial estate, coupled with Ebbsfleet Football Ground. This clearly demarks the end of the residential area and the beginning of a commercial/ business sector. Opposite Our Lady of the Assumption Catholic Church, there is another considerable change in topography, with extensive views of the large industrial sites, which line the River Thames. The once active chalk quarries that surround the High Street have left behind chalk cliff faces that now separate part of the town with its surroundings. Therefore, any residential development that has occurred over the years has been constrained by the physical landform. This in turn has had an impact on the accessibility and connectivity of the surrounding street network and general layout of Northfleet as a whole.

Land Use:

Land use within the character area is well defined with a few commercial activities occurring along the edge of the High Street and several residential estates adjoining it. The majority of commercial activity is aimed at providing services to the building/ trade industries. There are also a number of used car sales garages and pockets of light industrial activities, i.e. mechanics.

Other community buildings consist of a primary school, three churches, library, Portlands Club, Northfleet Veterans Club, several public houses and the Rainbow Centre, a community facility set up by the Ebbsfleet Covenant with the aim of providing child minding and other youth facilities for residents in the local area.

Green Spaces:

There are pockets of green space located around Northfleet High Street, although the overall character forms an impression of high density. The primary school playing field adjacent to the High Street and the small community garden behind St Botolph's Church are some of the larger examples. The community garden, however, has fallen into disrepair and is now potentially an area to visit with caution because of the lack of any inward surveillance, especially after dark. There are small areas of communal green space around The Hive estate and a small play area.

The open space that does exist is generally unmanaged, derelict or in poor condition. The mature Horse Chestnut trees are very distinctive around The Hive development and the football ground, define the street scene in this area and also enclose and screen the housing estate.

Settlement Pattern:

Building density differs between the High Street and the surrounding residential area. The High Street is built at comparatively low density with the majority of buildings two or three storey, often with good-sized gardens to the rear. The residential development that has occurred adjoining the High Street has consisted of high density, high rise flats and large blocks of terraced 'two up, two down' housing. This is typified by The Hive development.

Buildings:

Building types differ quite considerably between those located on the High Street and those in the surrounding residential areas, reflecting the change in land use between commercial and residential. There are a number of timber framed buildings located on the High Street, all with large windowed frontages, exemplifying the commercial activity that occurs there.

Residential buildings differ considerably as well, from the Victorian semi-detached housing along Springhead Road to the high density, high rise 1960's/1970's flats at The Hive estate. There are also pockets of pre-war development along the High

Street as well as post-war 1950's development around East/West/North Kent Avenue. Building materials are fairly consistent with red and yellow brick being used for the majority of house building.

Local Materials:

Located along the edge of Northfleet High Street, separating the public and private realms, are several sections of retaining walls and railings. There is a large yellow brick retaining wall rising from the football ground going east that separates the main road from large-scale social housing. There are several examples of distinctive flint walls, although dirty from years of chalk dust/heavy traffic and in poor condition.

There are a number of railings located along the High Street, both as functional pedestrian barriers, boundary markers and heavy duty tree protectors. The mixture of steel and iron barriers are distinctive features that segregate the busy High Street and the pedestrian footpaths, furthering the impression that Northfleet is a vehicle dominated space.

The Hive housing estate that dominates a large section of the High Street is predominantly a red brick development. More recent developments built in the last 20–30 years tend to be red brick whereas many of the post war developments around Station Road, Stonebridge Road and Railway Street have whitewashed walls or have been finished with a pebble dash render.

There are a number of buildings that reflect the period in which they were built, for instance, those located around St Botolph's Church have a stronger historic identity. However, there are a number of properties that have undergone substantial alterations to their façade resulting in a lack of unity between certain parts of Northfleet. This is certainly the case along the High Street where original residences have been altered to include glass fronted retail spaces, a departure from their original use and styles.

Landmarks:

In amongst the relatively low-key commercial and residential buildings, the three church buildings and the Portlands Club (cement works club) create significant landmarks on this otherwise indistinct streetscape. The Sir Giles Scott Catholic Church of Our Lady of the Assumption is a red brick building which towers over the surrounding landscape and is visible from miles around.

St Botolph's Church, located off The Hill is smaller in stature, less dominating but equally as significant with its memorial square, graveyard, public gardens and connected community buildings.

Road Network:

Due to the physical restraints imposed on the High Street by its close location to the River Thames and redundant chalk pits, as well as its close proximity to large scale heavy industry, much of the local road network is poorly connected. There are a number dead end streets and cul-de-sacs resulting in the High Street becoming a traffic corridor between Gravesend and Swanscombe. This has resulted in the High Street becoming a busy thoroughfare and creates a severance between the northern and southern residential areas.

Conclusion

Northfleet High Street forms a busy transport corridor, which links Gravesend with Swanscombe and Dartford. The High Street has few common 'High Street' functions, with only some services catering for local people. Most commercial activity is aimed at the industrial sector, furthering the negative influence heavy industry is having on the area.

The small square to the east of the character area, in front of St Botolph's Church, which was once the commercial and social centre of Northfleet, has potential for regeneration. Its traditional municipal buildings, increased sense of human scale and vacant small commercial units all indicate that the space could potentially once again become a hub of activity for the growing local community.

Throughout the character area there are examples of small-scale hard details e.g. railings and flint walls which are historically characteristic of the area and should be restored and enhanced where possible. Larger architectural features, including the redundant large chimneys, make a positive contribution to the character of the townscape and make a direct reference to the industrial heritage of the area. This reference should be maintained where possible to reinforce the sense of place.

Condition

Due to the high number of different housing developments that have occurred in this area over the decades, there is little consistency throughout the built form. Streets are generally disconnected and the surrounding landform only serves to further disrupt the connectivity of this space.
Legibility rating: Incoherent

There are some very large landmark buildings (Our Lady of the Assumption Catholic Church and St Botolph's Church of England) which although are impressive buildings in their own right, further detract from creating any kind of unity. The close proximity of heavy industry also contributes to its low levels of visual unity.
Visual Detractor rating: Some

The Northfleet High Street is in very poor condition as a functional community space. It is defined by forming part of a busy traffic corridor between Gravesend and Swanscombe. Despite the High Street's poor condition, overall land use of the area is defined, largely by the high coverage of residential properties.
Land Use rating: Defined

The poor quality streetscape and housing, coupled with little cultural heritage creates an area of very poor functional integrity. Throughout the character area there are several examples of vandalism and neglect to both the streetscape and local buildings that further reduce the cultural integrity of the area.
Cultural Integrity rating: Few

Sensitivity

There is little sense of place or any feeling of a unique identity within Northfleet, due in part to the dominance of the highway. Apart from some key landmark buildings, the lack of any significant distinguishing features and binding community

land uses means this area struggles to create a character of anything other than a transport corridor with some residential dwellings between Gravesend and Swanscombe.
Distinctiveness rating: Distinct

The majority of the built environment, particularly The Hive estate, the materials used throughout Northfleet and the road network are the dominating features that overpower the pockets of cultural heritage.
Continuity rating: Recent

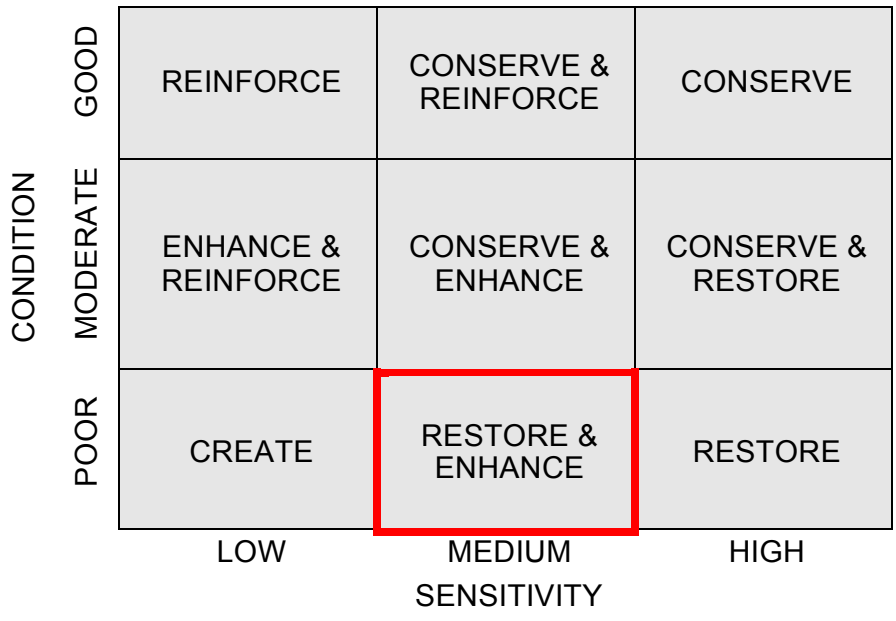
Due to the local topography and some large landmark buildings, Northfleet High Street and surrounding residential areas do have a relative dominance on the localised townscape. Any significant changes in land use or built form in and around the High Street would have an impact on local vistas, especially from the west and from the River Thames.
Landform rating: Apparent

Northfleet's topography and its position between heavy industrial land to the north and west, and the location of redundant quarries and pits to the south have resulted in extensive views into the surrounding landscapes.
Views In/Out rating: Open

Guidelines: Restore & Enhance

Specific guidelines for the Northfleet High Street are to:

- Enhance the main High Street streetscape and public realm using a palette of locally distinctive materials
- Restore typical 'High Street' functions to the area
- Enhance the appearance of local housing stock through public realm improvements
- Enhance the connectivity between residential areas currently severed by the busy High Street
- Enhance the connectivity between the High Street and both Northfleet and Ebbsfleet International Station



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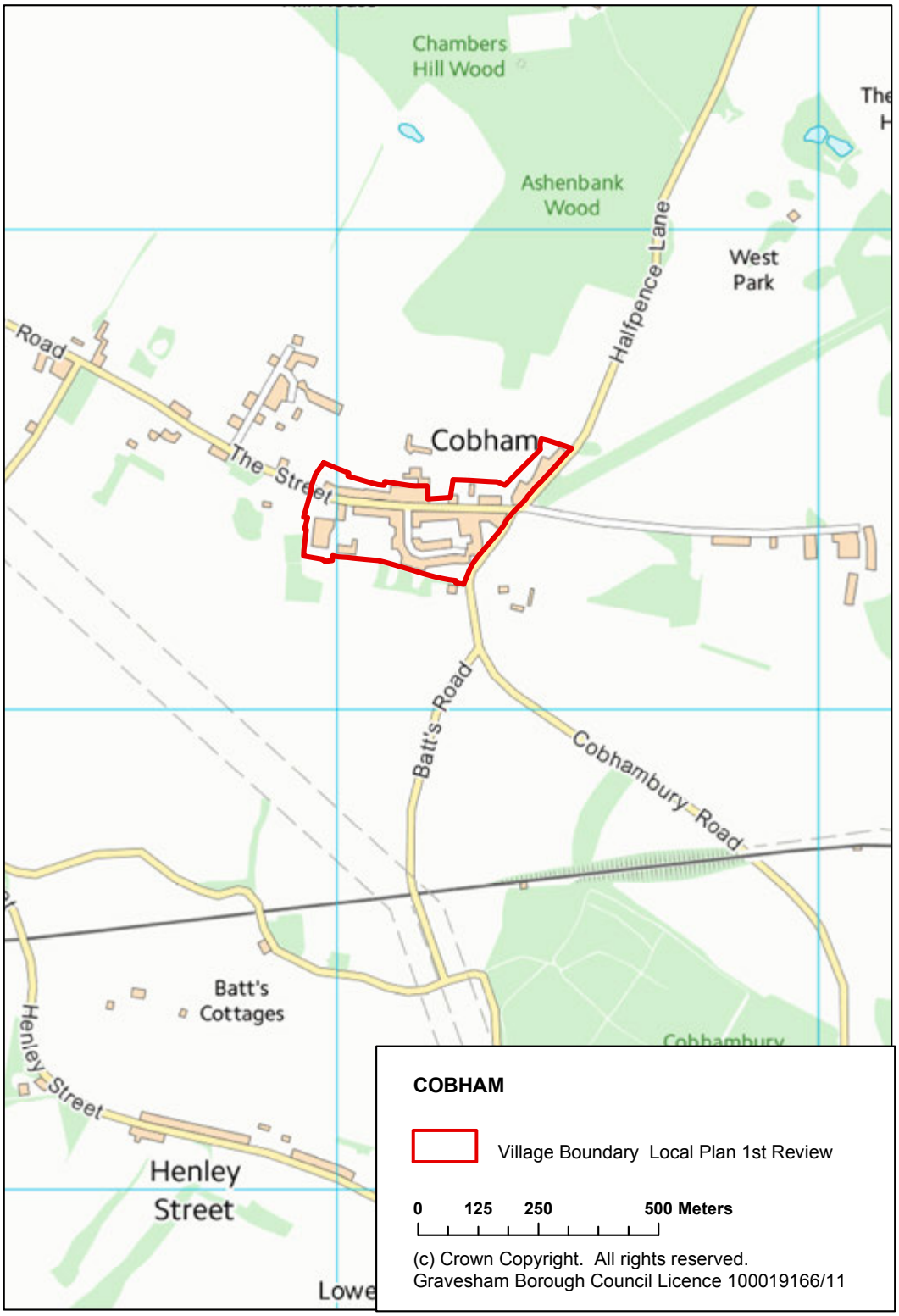
Cobham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Ashenbank Wood
West Park
Halfpence Lane
Road
The Street
Cobham
Batt's Road
Cobhambury Road
Batt's Cottages
Henley Street
Henley Street
Cobhambury
Lowe
COBHAM
Village Boundary Local Plan 1st Review
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Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Cobham is located in the centre of the Gravesham borough, approximately 1.2km south of the A2, at the junction of The Street/ Halfpence Lane. The village boundary, from east to west, is under 500m in length and under 400m from the most northern point to the most southern point, making Cobham the smallest village in Gravesham, and smaller than the majority of the housing estates in Northfleet and Gravesend.

Views & Topography:

Cobham consists of one main arterial route through the village, The Street, with a number of small residential streets adjoining it. The main view within the village is along The Street, which is a continuous, linear road with uninterrupted views from east to west. Due to the high number of historic buildings of interest, The Street retains very positive views of a quintessential English countryside village.

The Street does not have many views of the surrounding countryside due to the layout of the aligning built environment but views of the countryside do start to open up towards the ends of The Street as it intersects Halfpence Lane to the east, and Battle Street to the west.

The majority of residential areas aligning The Street have extensive views of the surrounding landscape from the rear of the properties.

Land Use:

Cobham is largely a residential area with a mixture of housing types but with a number of community facilities aligning The Street, such as Cobham Primary School, a village convenience store, St Mary Magdalene Church of England and several public houses, including Darnley Arms, Ship Inn and the Leather Bottle.

Lawrence Drive is the most recent addition to Cobham's housing stock with a cul-de-sac of post-war housing, located opposite Cobham Primary School.

Green Spaces:

The village recreation ground, behind Cobham Primary School, is the only area of public open space. The green space around St Mary Magdalene is also open to the public but the presence of a graveyard makes this area a place for quiet contemplation rather than a functional open space.

Despite much of the green space aligning The Street being privately owned and therefore not in public use, the well-kept gardens add to the character of The Street. The combination of the picturesque streets and the neighbouring countryside creates a positive sense of place, and one that helps define Cobham's overall character.

Settlement Pattern:

The Street is the main route in and out of Cobham and acts as the main connection to the surrounding residential streets. Halfpence Lane, Battle Street and Lawrence Drive are the only other residential streets, with a mixture of housing types with properties ranging from the 14th century through to the postwar housing development on Lawrence Drive.

This simple settlement pattern and its relatively small size mean all roads are well-connected making navigation easy.

Buildings:

Cobham Primary School is a small, 19th century, single storey, flint clad building with a small garden area at the front, facing onto the street, and a large school playing field set to the rear. The school has been extended over the years, including an extension to the east and new out-building to the north of the original. The detailed frontage of the original school building creates positive views both along The Street and also for local residents leaving Lawrence Drive, looking north.

There are three public house buildings located along The Street, they are; Darnley Arms, Ship Inn and the Leather Bottle. The Leather Bottle, built in 1629, has a distinctive a timber frame façade and large gardens making this an attractive destination for locals and visitors to the village. Located on the western edge of the village, it acts a significant landmark upon entering Cobham. Darnley Arms and the Ship Inn are both distinctive 17th century buildings adding further interest to an already unique street.

The St Mary Magdalene C of E church dates back to the early 13th century and is an impressive parish church building, especially, considering the relatively small size of the village. The church a large natural stone building sits on a slight incline, overlooking the western entrance to the village. The graveyard to the north of the church creates the entrance scene, while a number of associated church buildings, including the Church College have been added from 1360 onwards.

There are a number of distinctive residential buildings located on The Street, including those opposite the entrance to the church and some 17th century examples to the east of the school. These buildings further contribute to the overall age and unique character of this village.

Distinctive architecture is common throughout Cobham and is not restricted to just community buildings but is present throughout the residential areas as well. This helps enhance the historic character and originality of the space, whilst making it active and functional as a living community in the 21st century.

Local Materials:

The majority of historic buildings along The Street are red brick, many with distinctive minor detailing, either around window or door frames, some with engraved dates on the building facades.

The 19th century additions, usually residential, are often white washed walls with distinctive black window frames, surrounded with large garden spaces.

The school building has a flint building façade, a material that can be found in places around the village, including a small pocket of residential buildings near the western entrance to Cobham. The New College of Cobham, situated to the south of the main church building, is another large flint building, though not visible from The Street it forms another significant landmark building.

There has been a recent upgrading of the public realm, including the introduction of traffic management

measures along The Street, i.e. lane narrowing and priority passing lanes. These works have included a replacement of all pavement materials and the introduction of natural stones and granites into the palette, helping to unify both the public and private realms through the use of suitable materials.

Landmarks:

Cobham is awash with distinctive, historic buildings, especially along The Street. St Mary Magdalene church and the Leather Bottle public house are significant public buildings on the western edge of the village boundary. 19th century housing on the eastern edge of village is equally as distinctive. Together these buildings act as landmark buildings defining both the entrance into and the exist out of Cobham.

Road Network:

The Street is the main arterial route through the village, with Lawrence Drive and Battle Street being the only major residential streets adjoining it. Lawrence Drive is a small cul-de-sac, with fewer than 30 dwellings and Battle Street is similar in nature with fewer than 20 dwellings present.

Since many of the local residential streets are cul-de-sacs they do not act as through routes for local traffic, which, consequently, loads The Street as the only way in and out of the village. The recently implemented traffic management scheme along The Street does create some localised congestion, especially at peak hours, as traffic 'bottlenecks' around the western and eastern entrances to the village, waiting to pass through. During non-peak hours, there is little traffic and therefore little or no congestion.

Conclusion

The Street is the main arterial route in and out of Cobham with a large number of historic buildings aligning it. The village is well maintained, both in terms of public and private spaces and has retained many original features that contributes to its distinctive sense of place.

The public spaces, streets and roads have been sympathetically upgraded to reflect the historic nature of the village and this has helped reduce the dominance of the car. There are a large number of services present in a comparatively small village, including a local school, shops, church, public houses, all of which help foster a local community spirit.

The historic landmark buildings, consistent and distinctive use of materials and extensive views of the surrounding countryside, all contribute to creating a strong sense of place and positive character. This makes Cobham a high quality residential area and a quintessentially English village.

Condition

Legibility throughout Cobham is good, largely because of its small scale and number of historic landmarks that help define nodal points throughout the public realm.

Legibility rating: Unified

There is little in terms of the built or natural environment that detracts from the uniformity of what exists on The Street and the adjoining roads. Even the modern 20th century housing that is slightly out of keeping with other historic landmarks, is not considered as a visual detractor because of its high quality finish and well maintained appearance.

Visual Detractors rating: Few

Land use is well defined with a range of community facilities located on The Street and all residential properties either located on Lawrence Drive or Battle Street.

Land Use rating: Defined

Cobham's cultural integrity is enriched by its high number of historic buildings, from the 13th century church, the 15th century convenience store, the 16th century public houses and the 17th century residences, all located on or near The Street. It is the distinctive historic built environment, complimented by high quality green spaces that create Cobham's distinctive sense of place.

Cultural Integrity rating: Many

Sensitivity

The relatively small size of Cobham, coupled with the high number of historic landmark buildings creates a distinctive sense of place. The buildings, the materials used, the architectural features throughout the village, the dominance and importance of The Street and the range of community services, tightly packed into a small space all create a very recognisable village community.

Distinctiveness rating: Very Distinct

The consistency of materials used throughout the built environment, mirrored in the redeveloped public spaces, creates a village that is unified and cohesive, linking all the spaces together to form one identifiable community.

Continuity rating: Historic

The built environment that aligns The Street is what creates its character. The landform is dominated by a number of landmark buildings, both in terms of their age, size and architectural qualities. The high density of historic buildings dominates The Street and gives it its defined character.

Landform rating: Dominant

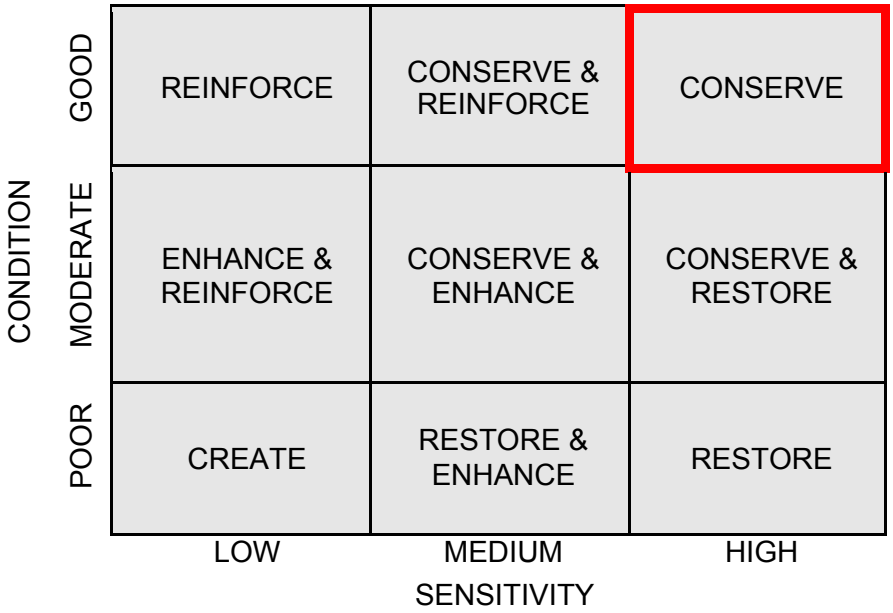
Cobham is surrounded by extensive views of the neighbouring countryside and due to the relatively small size of the village, a large number of residences have views of the surrounding landscape. Views of the countryside from The Street are restricted by the built form, however, views open up at the west and eastern ends of The Street.

Views in/out rating: Intermittent

Guidelines

Specific guidelines for Cobham are to:

- Conserve all buildings of historic value and refuse modifications that harm authentic characteristics.
- Conserve views along The Street and into neighbouring countryside.
- Conserve the consistency of materials used throughout the built environment, both in public and private developments.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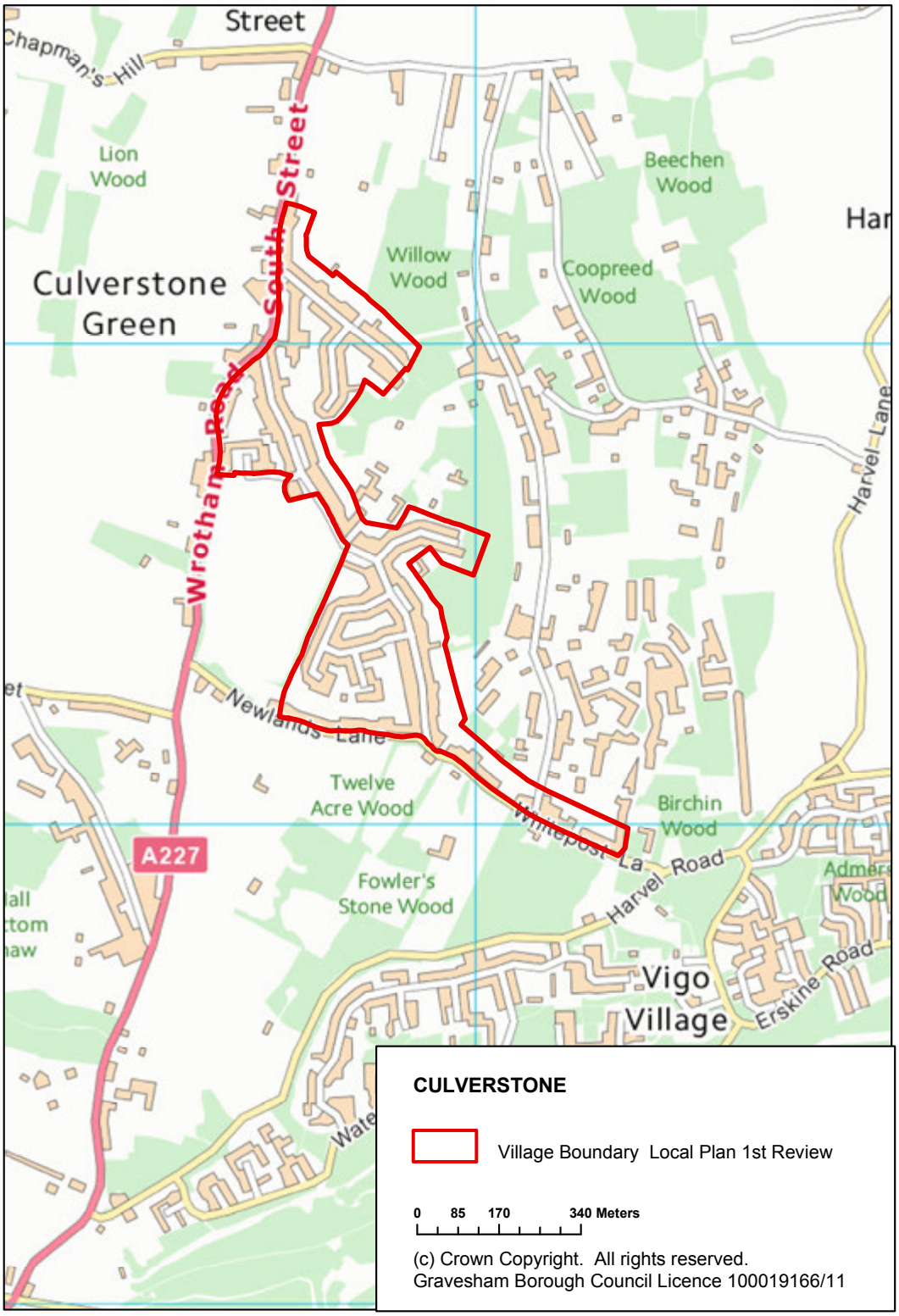
Culverstone Green



Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

The village settlement of Culverstone Green is situated in the south of the Gravesham borough, approximately 8.5km south of the A2(M) along the A227, and 0.5km north of the southern edge of the borough boundary.

Culverstone Green is located between Meopham, 1.5km to the north, and Vigo Village, 0.25km to the south. The A227 connects all three villages together and acts as the main arterial route through Culverstone Green. It is also the focus for small scale retail outlets that support the village.

The village has developed along the linear route of the A227 Wrotham Road with all residential development connecting onto either this main road or Whitepost Lane that adjoins it.

Views & Topography:

The topography of this residential area is undulating, especially around the junctions of Whitepost Lane / Conifer Drive, and Whitepost Lane / Meadow Lane. The undulating topography, coupled with the alignment of the roads, creates an interesting set of residential streets, which reveals interesting street vistas as you move through the site.

There are several farms neighbouring the site to the west and south, such as Culverstone Manor Farm, Woodlands Farm, Newlands Farm and Tiger's Hall Farm. These all have open fields that provide extensive views across the Green Belt that surrounds the village boundary. To the east, Beechen Wood and Ridge Wood provide a covering of mature specimen trees, which, due to the undulating topography, restricts views out into the wider countryside.

Land Use:

The village is primarily residential in character with a number of local services, such as Culverstone Community Centre, which has an outdoor play area and recreation ground. There is also a local convenience store and petrol station located on the A227 Wrotham Road and Culverstone Primary School, opposite Willow Walk on Wrotham Road.

Green Spaces:

There are a number of dominant green spaces throughout Culverstone, none more so than the recreation ground located on the western edge of the village. This provides the local community with sports pitches with nearby changing rooms and a play area for juniors and infants. There is also a skate park located on the far

western edge of the field. The Community Centre and recreation grounds create an active green space that attracts usage from the local population by making it more attractive and user friendly.

The majority of residential properties within Culverstone are detached and located on large plots with deep front and rear gardens. These generally well maintained gardens create an attractive soft edge to the low-density built environment. It is commonplace that boundary demarcation is low level or non-existent, which causes the private garden to spill out into the public realm, helping to create an attractive streetscape.

The surrounding farmland, woodlands and Green Belt are visible throughout the village, whether in the form of direct views into the countryside or seeing the tops of trees located in the surrounding woodlands.

Settlement Pattern:

The A227 Wrotham Road that connects Culverstone with Meopham to the north and Vigo to the south is a main arterial route, but it is Whitepost Lane that has the majority of residential developments adjoining it. Whitepost Lane forks off from Wrotham Road, just south of Culverstone Primary School and forms the main route that several residential streets are connected onto.

There are four cul-de-sac developments that adjoin Whitepost Lane within the village boundary, each of which contain approximately 15-25 houses, often bungalows. Carters Hill Lane, Meadow Lane, Rhododendron Avenue and Beechwood Drive are other side roads that connect onto Whitepost Lane and lead into neighbouring residential areas within the designated Green Belt.

Buildings:

The majority of residential properties are detached, often located on large plots with deep front and rear gardens. Residences located along either Wrotham Road, Whitepost Lane or Newlands Lane tend to be set back from the road, by approximately 12-20 metres. Plots within cul-de-sacs, such as Willow Wood Road, Conifer Drive and Silver Birch Avenue, tend to be built at slightly higher densities and are located nearer the road and with smaller garden plots. Building heights are between one and two storeys. The overall low density and low building heights increase visibility in and out of Culverstone as well as helping to integrate the countryside into the townscape.

Local Materials:

The newer residential developments along Conifer Drive are all yellow brick buildings with a mixture of white weather board cladding or red clay tile cladding. This is the only street where there is a distinct uniformity in the building materials. Materials used in all other streets throughout Culverstone Green are more varied, with a mixture of red, yellow and grey brick, and a variety of cladding techniques used, including the aforementioned as well as pebble dashing and white washed walls.

Older residential buildings have included some flint detailing, both in building facades and retaining walls. One particularly fine example of this is located on the junction of Wrotham Road and Whitepost Lane.

Landmarks:

Culverstone Green is a residential development with a high level of consistency in building style and massing. The only buildings that fragment this level of uniformity are the Culverstone Community Centre on Mountfield Close and the Primary School on Wrotham Road. These buildings stand out as focal points for local activity but are not architecturally significant enough to be considered landmark buildings.

Road Network:

The majority of residential developments are situated either on or adjoining to Whitepost Lane. It is a quiet, in places, single track country road that connects Wrotham Road with Harvel Lane; the road that borders Vigo Village.

The residential streets that adjoin Whitepost Lane are all cul-de-sacs and back onto a series of farms and wooded areas. The presence of local farmland and protected Green Belt woodlands restricts house building to small-scale infill developments along single cul-de-sac streets, which effectively reduces the connectivity of the street network. These cul-de-sacs are quiet streets, disconnected from their surroundings, which in turn creates a slightly fragmented sense of place.

Conclusion

Culverstone Green is a linear development with a series of residential cul-de-sac streets adjoining it. The low-density residential development, coupled with extensive green spaces and undulating topography, both public and private, create an open streetscape that provides extensive street vistas and views into the surrounding countryside.

The variety of community services, including the convenience store and Primary School on Wrotham Road and the Community Centre on Mountfield Close provides a relatively high frequency of services for a relatively small local population. These buildings are not of any distinctive aesthetic quality but they are a focus for community activity.

The village does not have a particularly distinctive built form due to the variety of late-20th and early 21st century housing developments. However, the presence of significant green spaces, both within the village and surrounding it, creates a very distinct character, that helps soften the impacts of the built environment on the natural environment.

Overall, Culverstone Green is an attractive village, which has largely been sympathetically integrated into the local landscape and has created a number of extensive street and landscape vistas.

Condition

All residential streets are connected by Whitepost Lane, which aids navigation around the village, however, the continual use of cul-de-sacs interrupts the flow of movement between streets.

Legibility rating: Coherent

The Community Centre, Primary School and convenience stores are the only main detractors in an otherwise consistent built form. These buildings are often shielded from view by a large specimen trees, helping to reduce their impact on the consistency of the townscape structure.

Visual Detractors: Few

Land use is consistently residential with small pockets of retail or civic amenities aligning the Wrotham Road.

Land Use rating: Defined

The majority of the built form is post-war residential with few significant historic buildings. It is the ancient woodlands that border the village, which creates any historic streetscapes views.

Cultural Integrity rating: Few

Sensitivity

The consistency of the land use, building styles and density, coupled with the attractive natural environment that enhances the built form creates a unified built form, but not a distinctive one. The infill development that has occurred over the last half century has failed to create a unique village character and therefore overall distinctiveness is relatively low compared to neighbouring villages in the borough.

Distinctiveness rating: Distinct

Materials and building designs all reflect the post-war era of development that dominates the village. There is little evidence of a historic village core that would add to the overall sense of place

Continuity rating: Recent

There are areas of undulating topography that create extensive street vistas and views into the surrounding landscape but these are not commonplace throughout the village.

Landform rating: Apparent

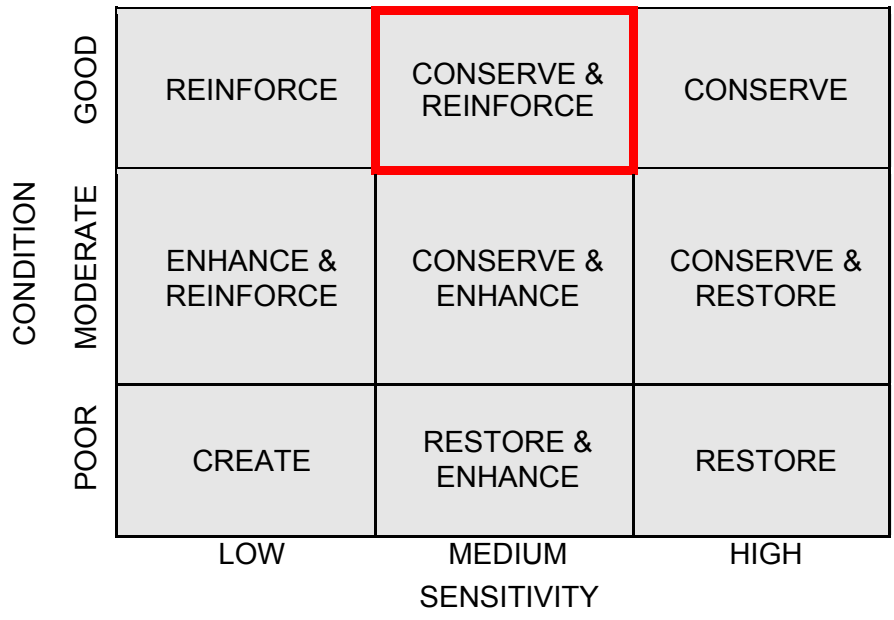
The undulating topography helps create extensive views in and out of the site; however, the built form does restrict some views from Whitepost Lane into the surrounding countryside.

Views In/Out rating: Open

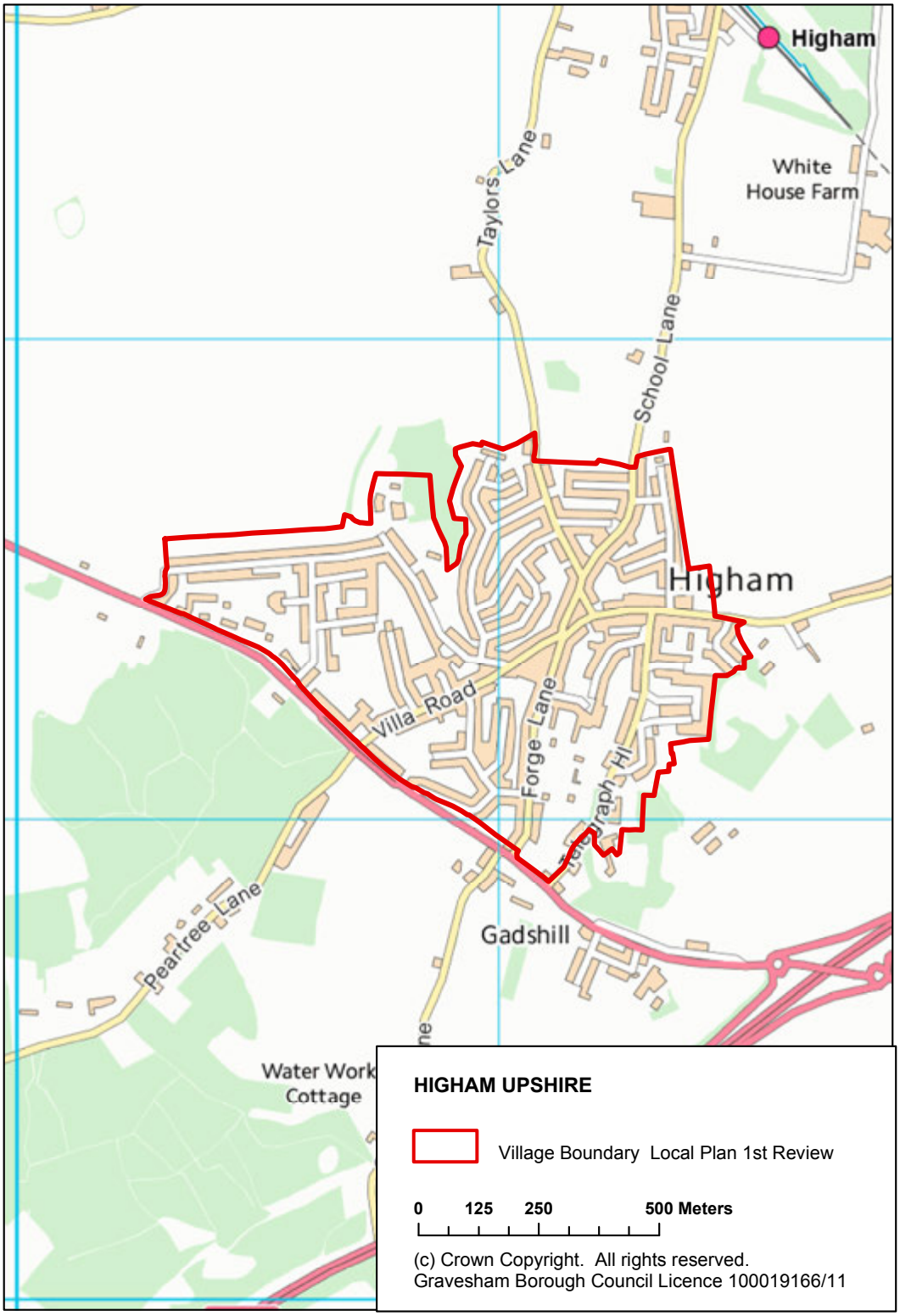
Guidelines

Specific guidelines for Culverstone Green are to:

- Restrict development that reduces views across the village and into the surrounding countryside
- Conserve ancient woodland that adds character to the built environment
- Conserve quality green spaces, including the recreation ground



Higham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White House Farm
Taylors Lane
School Lane
Higham
Villa Road
Forge Lane
Gadshill
Pearetree Lane
Water Work Cottage
HIGHAM UPSHIRE
Village Boundary Local Plan 1st Review
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Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Higham is situated in the east of the borough, on the northern side of the A226 Gravesend Road and approximately 1.2km west from the Gravesham boundary. The village is approximately 1km from north to south and 1.2km from east to west, making it one of the larger villages in the borough.

Views & Topography:

The topography of the village is gently undulating throughout, with extensive views of neighbouring streets. The main route through the village is Villa Road, running north to south, which offers extensive views of the village, including rows of housing, the Gardeners Arms public house and St John's Church spire. These buildings and structures typify the townscape qualities of the village. Walmer Avenue to the west and Telegraph Hill to the east of the village also offer extensive views in and out of the village with the tops of houses and St John's Church spire visible from several locations.

There are certain roads, like Brice Road, where due to the topography of surrounding streets, the positioning of houses and large-scale vegetation, views have been restricted. This is not the norm though, with the majority of properties having positive views, either internally of the village, or externally of the surrounding landscape.

Many of the streets and properties that border the village boundary have uninterrupted, extensive views of the surrounding countryside.

Land Use:

Higham is predominately a residential settlement with a small number of local services catering for the needs of the local population. Services include a Post Office, library, St John's Church, Higham Congregational Church, and several public houses, including the Gardeners Arms and the Sir John Falstaff. The small row of shops, situated on School Lane, include a convenience store, hairdressers and bakery.

There is also a large car sales plot situated on the Gravesend Road, which makes for an unattractive entrance scene to the south of the village. There is another smaller garage repair workshop located on Holytree Drive, but this is set back from the road and far less dominating than the garage located on Gravesend Road.

Green Spaces:

The low density at which the settlement is built has allowed for large areas of private garden space, both front and rear plots. The well maintained private gardens spill out into the public realm, enhancing the streetscape and softening the edges of the built environment.

There is little in the way of public green space, except around the St John's and St Mary's Churches. However, activity around the Churches is restricted to maintain their tranquil nature.

Settlement Pattern:

The high number of cul-de-sacs that exist determines the village settlement pattern. Much of the internal road network is unconnected because of the cul-de-sacs, which in turn has segregated the village into areas containing the same period housing, rather than the streets being awash with a mixture of housing types. For example, the modern housing on Darby Gardens is situated within a newly built cul-de-sac, with neither the street nor the architectural style being connected to its surroundings.

There are a number of 19th and early 20th century properties that are set back from the main roads with large garden plots. In several instances, these have now become surrounded by 1950-70s developments that dominate the streetscape, resulting in the older housing being less visible from the main public footpaths. This has an impact on the perceived age of the village, since many of the villages original buildings are often hidden from view.

Buildings:

Building density is low because of the high number of large detached properties with good sized garden plots throughout the village. Many of the streets are aligned by bungalows, some with first floor conversions, especially along Norah Lane and Walmer Avenue. Many of these properties were built between the 1940s-70s, although there are a number of new builds located on Norah Lane.

There are large areas of the village, such as the housing located along Oak Drive, Beech Grove and Ash Crescent, which were built in the 1950s/60s and are uniform in their size, style and use of materials. Such development creates unity throughout the street and helps create a strong sense of place. Brice Road has created a similar sense of place through the building of 1960s/70s semi-detached housing, tied together through a consistent use of materials and building styles.

There are some examples of Edwardian and Georgian properties set back from the road. But the built form that dominates and creates the sense of place, is largely mid to late 20th century housing.

Many properties have undergone a high level of personalisation. The more recent builds tend to be less ornate and decorative in their architectural design, which in some instances has encouraged a degree of alteration or amendment, either to the built form, in the way of extensions, or through the introduction of new materials or styles.

Local Materials:

The 20th century housing that dominates the majority of the streets uses red and yellow brick with a variety of rendering techniques, including white weather boarding, red clay tile cladding and some pebble dashing. Older properties, especially the larger period houses, have more detailed architecture, some with wooden carvings, especially around the door and window frames.

Landmarks:

The church spire of St John's acts as a major landmark and visual reference point throughout much of the village. Due to the undulating topography and the large number of bungalows and other low level development, the church spire sits high above the roof line and can be seen in the backdrop of nearly all streetscape views.

On a smaller scale, Higham Congregational Church, situated on Villa Road acts as another landmark building, not for its size or dominate form but for its period and architectural detailing. Although only a relatively small building, it is situated on a main route through the village and adds character and a sense of quality of space to its surroundings.

Road Network:

Higham relies on a number of key connecting roads, Villa Road becoming Hermitage Road is the main east to west route with Forge Lane taking traffic north onto Taylors Lane and School Lane. These are the main routes through the village into the surrounding countryside, although there are a number of other roads that connect onto the A226 Gravesend Road as well.

The remainder of the internal road network is made of a some minor roads and series of cul-de-sacs and unconnected dead ends, making navigation complicated and inefficient for users wishing to move between residential streets.

Conclusion

The built environment is dominated by large areas of post-war housing, with a high number of bungalows and other low-density properties that helps to create a feeling of space. The less obvious period buildings that are set back from the main road ensure that the village maintains an underlying sense of historic character, even though they are not the most visible buildings in the streetscape view.

The other most distinguishing features of the village are the large front garden plots that spill out into the public realm and enhance the quality of the streetscape and village as a whole. The overall quality of the soft landscape helps reduce the dominance of the built environment, and helps to integrate the village with its countryside context.

The undulating topography creates positive views and ties together the built form through the way in which all the key elements of the townscape are visible from many of the residential side roads and cul-de-sacs. The extensive views of surrounding streets and the neighbouring countryside all help create a very positive sense of place. St John's Church spire creates a positive backdrop further enhancing the townscape character.

Condition

Legibility is mixed; the street network is poorly connected making navigation and movement around the space difficult. However, due to the consistent use of materials and housing styles, streets are well tied together through common architectural features.

Legibility rating: Coherent

Street layout and the types and quality of the built form are consistent throughout. Properties are maintained to a high standard and the only built form that detracts from the norm is the large church buildings with impressive spires.

Visual Detractor rating: Few

Higham is a residential settlement with only a small number of local services, catering to the needs of the local population.

Land Use rating: Defined

The impressive church buildings of St John's and the Congregational Church on Villa Road, as well as the variety of period residential properties helps create a village identity routed in the past. The dominance of more modern housing developments does dilute the cultural integrity of the area.

Cultural Integrity rating: Some

Sensitivity

The land use, buildings types and the green space that surrounds them are very distinctive features that helps create a positive sense of place. However, the streetscape is dominated by more modern housing with a less impressive use of materials that reduces the overall distinctiveness of the village.

Distinctiveness rating: Distinct

The more apparent built form that creates the sense of character is modern. Although period architecture does exist in the village, often in the form of community buildings, such as churches or public houses, the sense of place is created by the more dominating modern developments.

Continuity rating: Recent

The undulating topography and the extensive views it creates is one of the key characteristics of the village.

Landform rating: Dominant

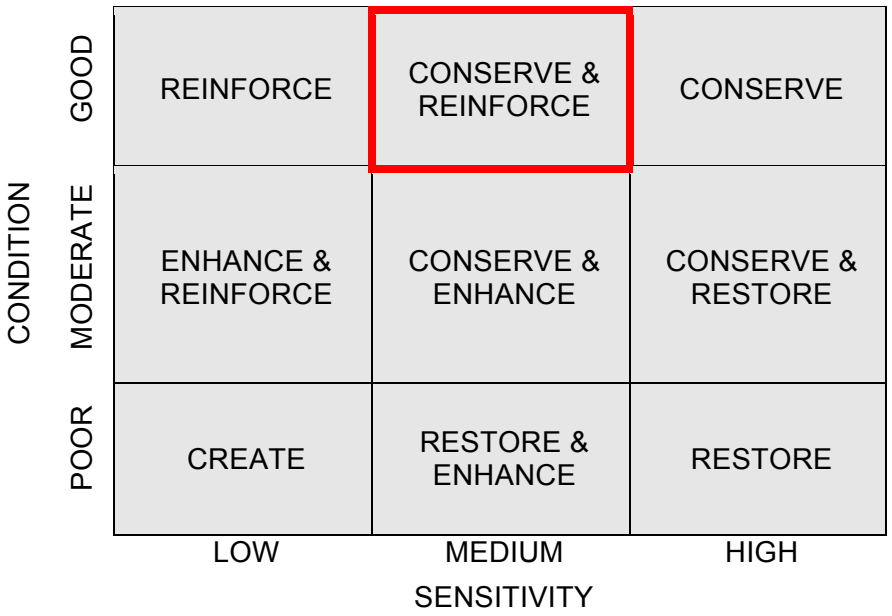
Views in/out of the village are determined by the topography of a street. Some streets, particularly those located on the edge of the village have extensive views of the surroundings, while others are restricted by a combination of the local topography, built form and vegetation.

Views in/out rating: Intermittent

Guidelines

Specific guidelines for Higham are to:

- Conserve the buildings of historic interest
- Conserve streets where consistency of materials creates distinctive character
- Conserve roof lines to maintain views through the village and into the surrounding countryside
- Reinforce and improve existing public green spaces
- Create provision for sports and recreational facilities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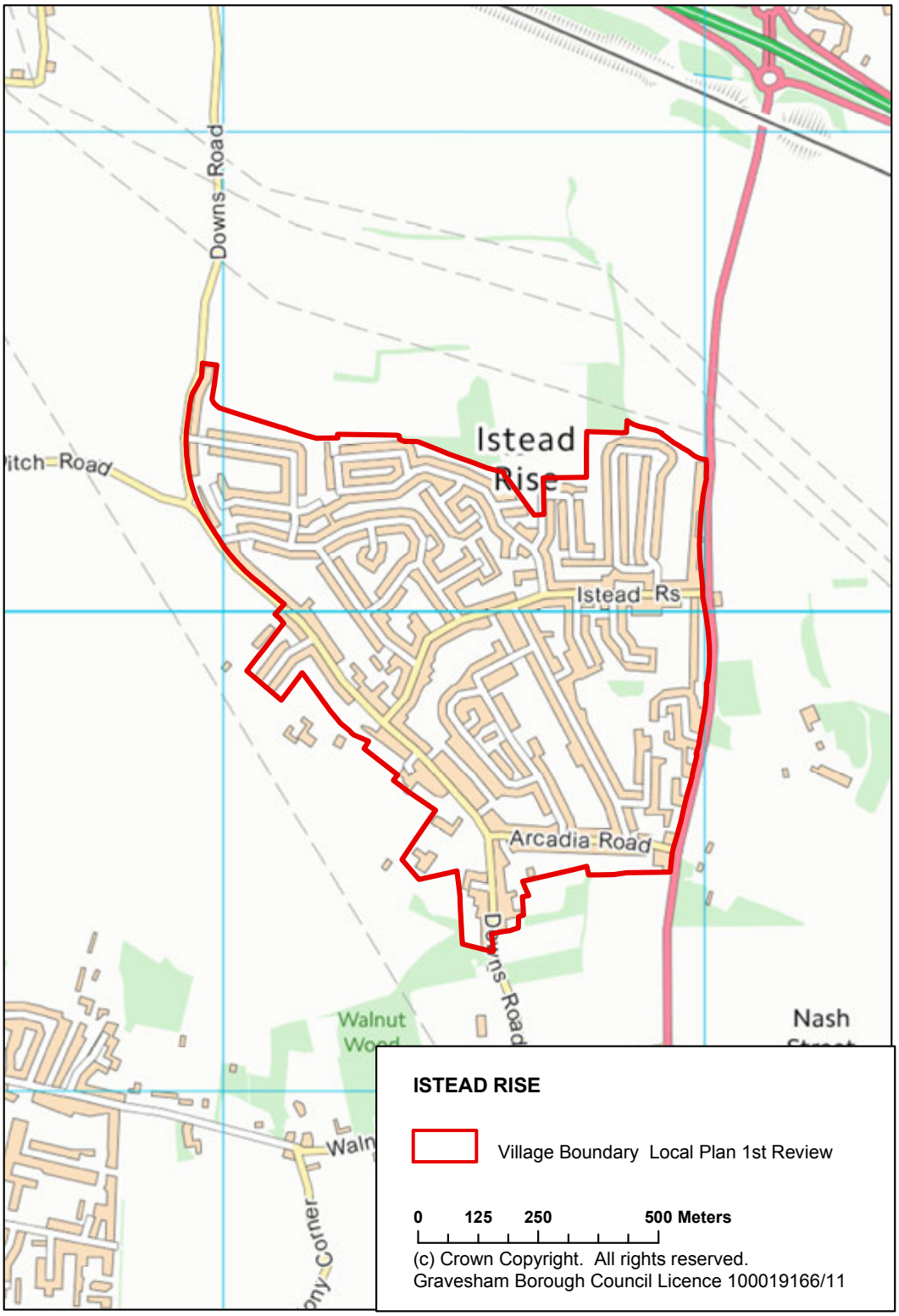
Istead Rise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Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Istead Rise is located approximately 4km south of Gravesend Town Centre, and is situated to the west of the A227 Wrotham Road, approximately 1.5km south of the Tollgate Inn junction of the A2(M).

Meopham is the closest neighbouring village to Istead Rise and is located approximately 1.7km to the south. Istead Rise is buffered from the A2(M) and neighbouring villages by the Green Belt, which includes Willerby Farm to the west of the village, and Huntondown Wood to the east.

Views & Topography:

The topography throughout the village is very undulating, which creates a number of key views along residential streets, as well as extensive views of the neighbouring farmland and Green Belt.

One particularly significant view looks east along Istead Rise towards the junction with the A227 Wrotham Road. The rise and fall of the road level, coupled with the tree lined streets, frames an extensive linear view that goes beyond the village boundary and into the neighbouring countryside.

Upper Avenue, Flowerhill Way, Arcadia Road and Castlefields all provide extensive views across the rooflines of buildings and into neighbouring streets. The layout of the streets and location of plots, lends itself to creating a stepped terrace of houses as the topography of a street falls away.

Land Use:

Istead Rise is a predominantly residential development with a small number of local stores to service the local population. Located on the junction of Upper Avenue and The Drove Way, is a small parade of seven shops, including a convenience store, pharmacy, butchers and bakers. A number of other village civic amenities exist in the form of Istead Rise Primary School, located on Downs Road; St Barnabas Church, located on Upper Avenue, between Biddenden Way and Flowerhill Way, and the Memorial Hall on Lewis Road.

Green Spaces:

The majority of green spaces within the village boundary are private garden plots. Due to the relatively low

density at which residential streets have been built, there are generally large front garden plots throughout the village, which creates a soft edge to this otherwise hard landscape.

The quality of the soft landscape is positive and with very low or no perimeter fencing around individual plots, front gardens tend to spill out into the public realm creating attractive streetscapes that helps unify the village's internal and external green spaces.

The only communal, functional green space is the Recreation Ground located on the northern border of the village, accessed off Worcester Close. This space includes a small play area and skate facility, as well as a large grassed area.

Local topography and the extensive views this creates of the countryside, and the unification of green spaces, is a major factor that contributes to the villages overall sense of place.

Settlement Pattern:

Istead Rise is located to the west of the A227 Wrotham Road and is well connected to Gravesend Town Centre and a number of surrounding villages to the south. However, the village's street layout is often disconnected and difficult to navigate.

There are some connected streets and some informal block structures that aid ease of movement around the village. For instance, residents anywhere along Biddenden Way can access local shops via either Flowerhill Way, Crockenhall Way or Upper Avenue. Connected streets give choice and allow users to navigate the space with greater ease, wherever the origin and destination.

However, disconnected, cul-de-sac streets, such as Worcester Close have the opposite effect and restrict movement. Some residences along Worcester Close are as little as 60m from shops but due to the layout of the highway and pedestrian network the distance to walk to a shop is approximately 350m. The Drove Way is another example of how a single cul-de-sac road and its lack of connections to its surroundings have reduced choices, which restricts movement. Pedestrians walking from the end of The Drove Way to Downs Road can take a route of approximately 400m, using a number of pedestrian footpaths but for a vehicle to travel to the same point on Downs Road, a distance of 1.6km must be travelled through the estate.

This lack of connectivity is a negative characteristic that contributes to the poor legibility of Istead Rise as a whole.

Buildings:

There are some examples of Victorian housing located along Downs Road, these being some of the original buildings at Istead Rise. The majority of residential developments have occurred post-war and taken on several different forms, depending on the era in which they were built.

There are some examples of post-war housing interspersed around Istead Rise, commonly in the form of 1940s/50s detached bungalows with large garden plots. However, the majority of bungalows, such as those located on The Knole, Hill Close and Worcester Close are all 1960s/70s developments with off-street parking provided.

The majority of the built environment consists of semi-detached housing from the early 1960s and 1970s. These housing developments include some large garden plots, many of these plots have a driveway with residential buildings that integrated garages.

There are a number of housing styles used, and in particular, distinctively different roof pitches, that vary the streetscape, especially in areas of changing topography. There are many examples of regular pitched gable

roofs, but residences located along The Drove Way include much higher pitched gable roofs, which helps make the streetscape distinguishable.

Building density is generally low, with each unit located in relatively large plots. Each unit is no more than two-storeys which preserves views across roof lines and into surrounding landscapes.

Local Materials:

Red and yellow brick buildings are prominent throughout the village with a range of rendering techniques used to differentiate each unit within its streetscape setting. The most common rendering techniques are a mixture of red clay tile cladding, pebbledash rendering or white weather boarding, especially popular on 1960s/1970s developments. These materials are often used in more modern developments as well, to help integrate new builds with existing architectural designs.

Pre-war houses use a mixture of materials to create greater detailing around window frames and doorways. Some buildings have large white washed facades with red brick detailing around the window frames. Such buildings add distinction to an otherwise regular and continuous streetscape.

Landmarks:

There are some large, distinguishable residential buildings along Downs Road, which form recognisable markers on an otherwise uniform streetscape. However, these buildings do not have the massing or distinctive architectural qualities to be considered landmark buildings.

The same could be said for St Barnabas Church, the Memorial Hall and the shopping precinct. They are all buildings that break up the regularity of the residential streetscape but are not aesthetically significant enough to become landmarks.

Road Network:

The A227 Wrotham Road is the main route that connects Istead Rise with Gravesend to the north, and Meopham and other surrounding villages to the south. There are a series of smaller country lanes that connect Istead Rise to Dartford to the west and Sole Street and Cobham to the east.

The internal road network of Istead Rise depends on the accessibility of two main routes; Downs Road that runs from north to south along the western edge of the village, and Upper Avenue, leading onto Istead Rise (highway), which runs west to east connecting Downs Road and the A227 Wrotham Road. There are other routes that can be taken to move north to south, or east to west but they are less direct.

The remainder of the road network is a combination of poorly connected residential streets and cul-de-sacs. The connected roads have become the main routes through the village, while the cul-de-sacs remain quiet and unused.

Conclusion

The changing topography creates extensive views across the attractive surrounding countryside and the majority of residential properties have views of the surrounding Green Belt, if not from ground level, then often from first floor. These extensive views from various parts of the village are one of the most defining characteristics of Istead Rise.

The quality of the private green spaces, coupled with the extensive views of the surrounding countryside, create a lush, pleasant natural environment that acts to both soften the built form within Istead Rise and create a link between the village and its surroundings.

There is a level of consistency of built form throughout the village, without there being any buildings that stand out as particularly individual, or buildings of obvious similarity that would create an overall sense of unity. There is enough diversity within the village to discourage an overall sense of collective character.

Overall, Istead Rise is an attractive village with positive green spaces but it suffers from a lack of identity due to the present built environment. Constant infill development from the 1940s onwards has whittled away any distinctive character; this has an adverse effect on its sense of place.

Condition

Infill developments have been 'stuck on' to existing main streets, this reduces the permeability and connectivity of the street network. The indistinct built form does not aid navigation since there is a lack of identifiable markers along the streets.

Legibility rating: Incoherent

Housing stock is well maintained and there are no other parts of the built environment that detract from the consistent residential streetscape.

Visual Detractor rating: Few

Istead Rise is a residential development foremost, with some local services to cater for the needs of the local population.

Land Use rating: Defined

There are some Victorian and pre-war houses on Downs Road but the majority of the built environment is post-war, mid-20th century housing.

Cultural Integrity rating: Few

Sensitivity

The topography and associated views, coupled with the green spaces create distinctive village features but the built form does not have the historic qualities to be distinctly different from other comparative housing developments.

Distinctiveness rating: Defined

The choice of materials in both the post-war housing and the more recent developments, only serves to enhance the modernity of the village.

Continuity rating: Recent

The changing topography is a key feature throughout the village and creates a number of extensive views, both internally, of winding and dipping streetscapes, and externally of the surrounding Green Belt and farmland.

Landform rating: Dominant

Views along streets are made more interesting when the topography changes dramatically. However, changing

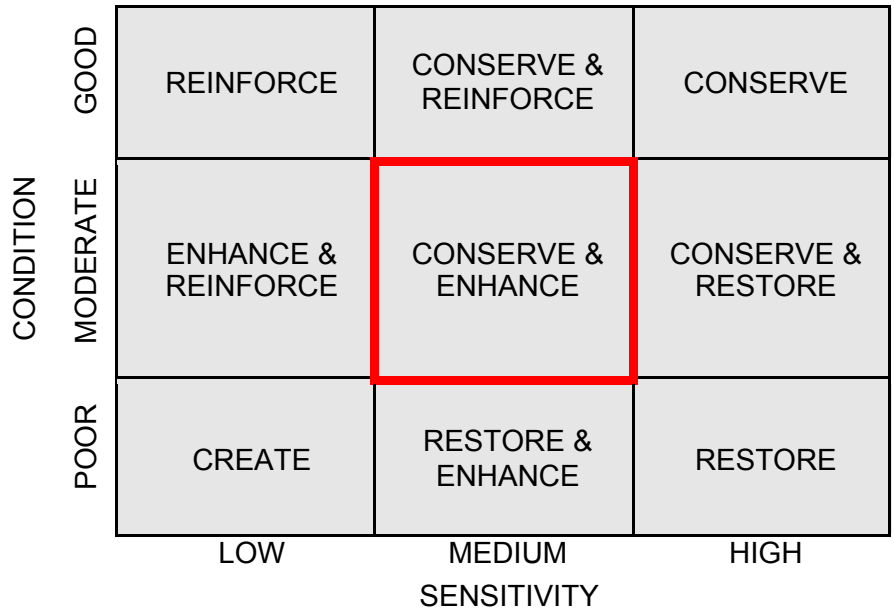
topography can equally restrict views.

View In/Out rating: Intermittent

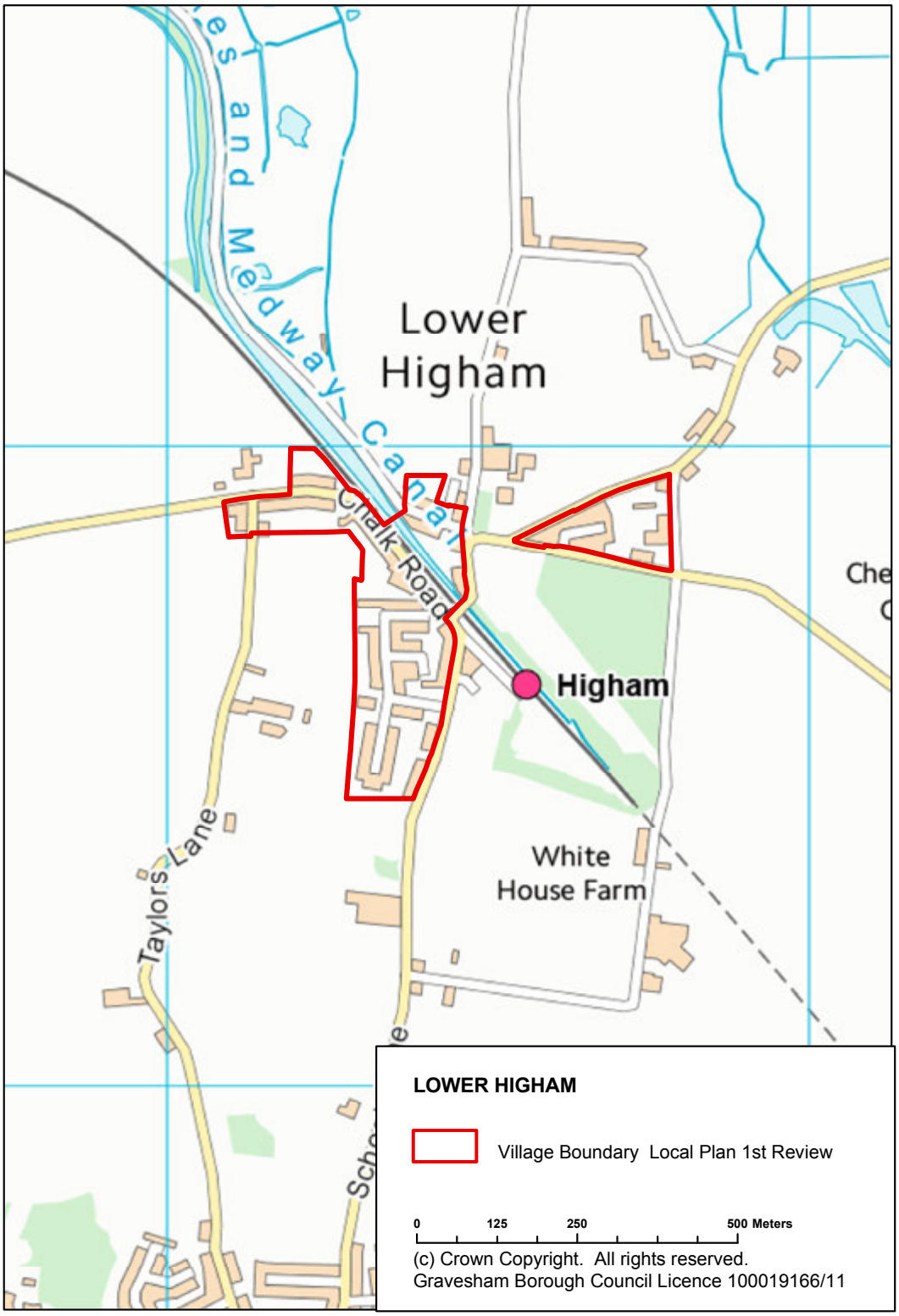
Guidelines

Specific guidelines for Istead Rise are to:

- Conserve distinctive views by restricting height of developments
- Enhance public green spaces throughout the village
- Enhance public realm, especially shopping precinct
- Enhance connectivity of spaces where possible



Lower Higham



Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Lower Higham is located in the north east of the Gravesham borough, approximately 0.75km north of its nearest neighbour, Higham. The village is approximately 6.5km due east of Gravesend Town Centre and is approximately 5.5km north of the Shorne Country Park junction of the A2(M).

Lower Higham is one of the smallest villages in Gravesham, with an east to west extent of 0.75km and a north to south extent of 0.5km.

Views & Topography:

Topography is mildly undulating, with man made earth works, such as the banks that enclose the railway line, being the only major exception to this. The level change that occurs along residential streets is not significant enough to alter the streetscape views or extend or reduce views into the neighbouring countryside.

Views from residential streets into the surrounding countryside are extensive. This is mainly due to the low density built form of the village, rather than the topography creating vistas.

Land Use:

Land use is primarily residential but is complemented by a number of other services, provided to cater for the needs of the both the immediate village population and surrounding communities.

Higham railway station is located on the eastern edge of the village boundary with the railway line intersecting the village on a northwest to southeast axis. The Gillingham to London line that runs through the village connects Higham to Gravesend.

Apart from a small local garage situated on the Chalk Road and the numerous farms that surround the village, Lower Higham has little else in the way of commercial activity.

Green Spaces:

There is little public or private green space in the village but the network of local public rights of way, connecting the village with the surrounding farmland and green belt, creates a strong link to the neighbouring countryside and softens the edges of the built form. The countryside that borders Lower Higham creates a positive sense of place throughout the village.

The tree lined street of Steadman Close is an attractive example of how green spaces have framed an otherwise plain streetscape and created a distinctive residential street that stands apart from other local examples. Large private front gardens are generally less common in Lower Higham, which reduces the amount of green space visible from public footpaths.

Settlement Pattern:

The village of Lower Higham is divided in two by the Medway to London railway line. To the west of the railway, residential development has been focused along Chalk Road, with Steadman Close being the only residential development that branches off of Chalk Road to form a separate residential street.

Residential development to the east of the railway line is focused along Canal Road and Lower Rochester Road with a small cul-de-sac development on Martins Close.

The settlement pattern of Lower Higham is primarily a linear development that has developed into small scale cul-de-sacs that are not connected to either the main arterial routes, or other local residential streets. There is no consistent pattern of development and therefore understanding the space is difficult. Legibility is further hindered by the presence of the railway line that causes severance between the two parts of the village.

Buildings:

Despite the relatively small size of the village, there are a number of different period buildings contained within it. The Chequers public house is a three-storey Victorian building, located on the junction of Canal Road and Church Street and provides the village with much needed architectural detailing that is absent in much of the remaining built environment. Opposite The Chequers is a small row of three terraced Georgian town houses, each three-storeys in height, and each with distinctive period detailing around the window frames and doorways.

Steadman Close consists of mainly post-war 1940s properties with some later 1950s-70s residential developments focused around the adjoining Reynolds Fields and Lake Drive. Chalk Road also has a number of post-war properties, the majority of which are semi-detached, each with small front gardens and long rear gardens. The more modern developments along Reynolds Fields and Lake Drive are built at higher densities with small garden plots and fewer architectural details. All post-war buildings have fewer distinctive architectural features, which creates a bland frontage and projects negatively onto the public realm.

Martins Close, located off Lower Rochester Road, has a number of post-war, semi-detached bungalows that further reduce the overall density of the village and create some attractive green spaces.

Apart from the development along Steadman Close, there remains a lack of unity between components of the built environment, partly because of the pattern of development; partly because of the different building styles, and partly because of the severance caused by the railway line. These factors have contributed to create a less than characteristic Kentish village; instead, Lower Higham lacks a distinctive character since parts of the built environment have failed to combine to create any form of cohesive character.

Local Materials:

Due to the relatively small size of the village, there is little variation in the type of materials that are used throughout. The majority of buildings are red brick, some with white weather boarding or pebble dash rendering to add detailing to the façade.

There are some distinctive features on the Georgian town houses along Church Street and there is also some detailing on The Chequers that distinguishes it from other residential developments but overall, there is a consistency of materials used throughout the village.

Landmarks:

The Chequers public house is the only period building of distinctive enough quality, to qualify as a landmark. The majority of the village's built form consists of indistinguishable residential developments.

Road Network:

Due to the severance caused by the railway line and canal, there are two parts of the village, each with their own main arterial routes. School Lane, which connects Higham and Lower Higham, and turns into Chalk Road, is the main north-south connecting route. Lower Rochester Road is the main east to west connecting route and is situated north of the railway line.

Residences are either located on these main connecting routes or in small cul-de-sacs adjoining them. There are no other residential streets connecting onto these main arterial routes.

Conclusion

The strong presence of post-war housing, the mature tree lined streets and extensive views of the surrounding countryside, combine to create positive village attributes. However, the relatively small size of Lower Higham should translate into a small village with a nucleus of housing with perhaps some commercial activity. Instead, development has occurred in a linear fashion along Chalk Road, with Steadman Close being the only major housing development not on Chalk Road. As a result, Lower Higham is lacking any centre or hub, which adversely affects its ability to create any truly recognisable form of character or identity.

Condition

Despite having few roads, Lower Higham has several, unconnected streets, which, coupled with the severance caused by the railway line has created some poorly connected spaces.

Legibility rating: Incoherent

Lower Higham service station creates a negative frontage onto Chalk Road and the random paraphernalia located on Canal Road, next to The Chequers public house, create further visual detractors in an otherwise attractive village streetscape.

Visual Detractor rating: Some

Land Use is predominantly residential and the style and type of built form reinforces this throughout the

village.

Land Use rating: Defined

The few historic buildings within Lower Higham, such as The Chequers and Railway Tavern public houses, coupled with the Georgian town houses on Street Church Street, are distinctive enough to raise the overall heritage profile of the village.

Cultural Heritage rating: Some

Sensitivity

The consistent residential land use, building styles and materials help tie the space together but the severance caused by the main roads, railway line undo this, and effectively fragment any cohesive characteristics the village has cultivated.

Distinctiveness rating: Distinct

There are some examples of 18th and 19th century architecture but the majority of the built environment is dominated by post-war housing.

Continuity rating: Recent

The slightly undulating topography along some residential streets does help create extensive views into the surrounding countryside and is a key characteristic of the village.

Landform rating: Apparent

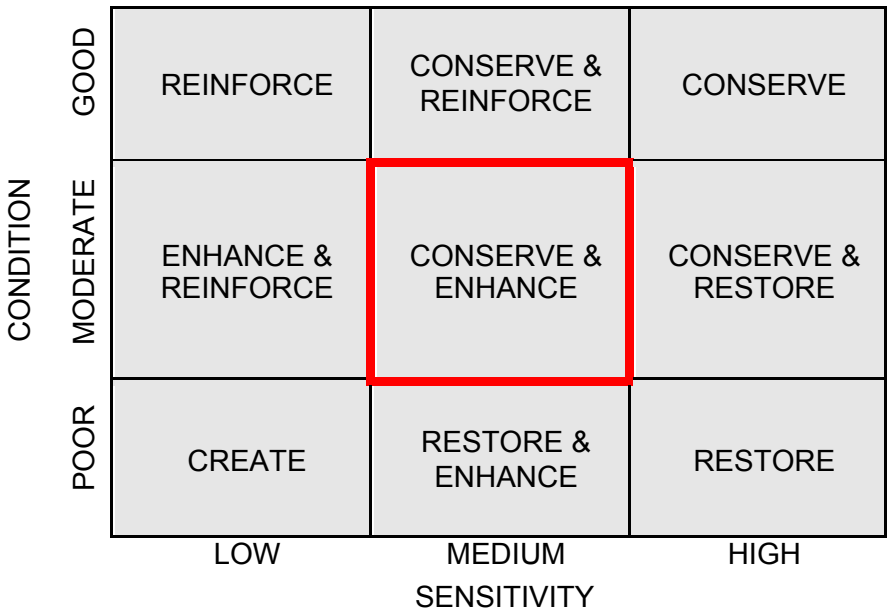
Views into the surrounding Green Belt are extensive, particularly north towards the River Thames.

Views In/Out rating: Open

Guidelines

Specific guidelines for Lower Higham are to:

- Conserve village character by ensuring new development is sympathetic but distinctive
- Conserve views of surrounding Green Belt
- Enhance public realm and connectivity of spaces


CONDITION
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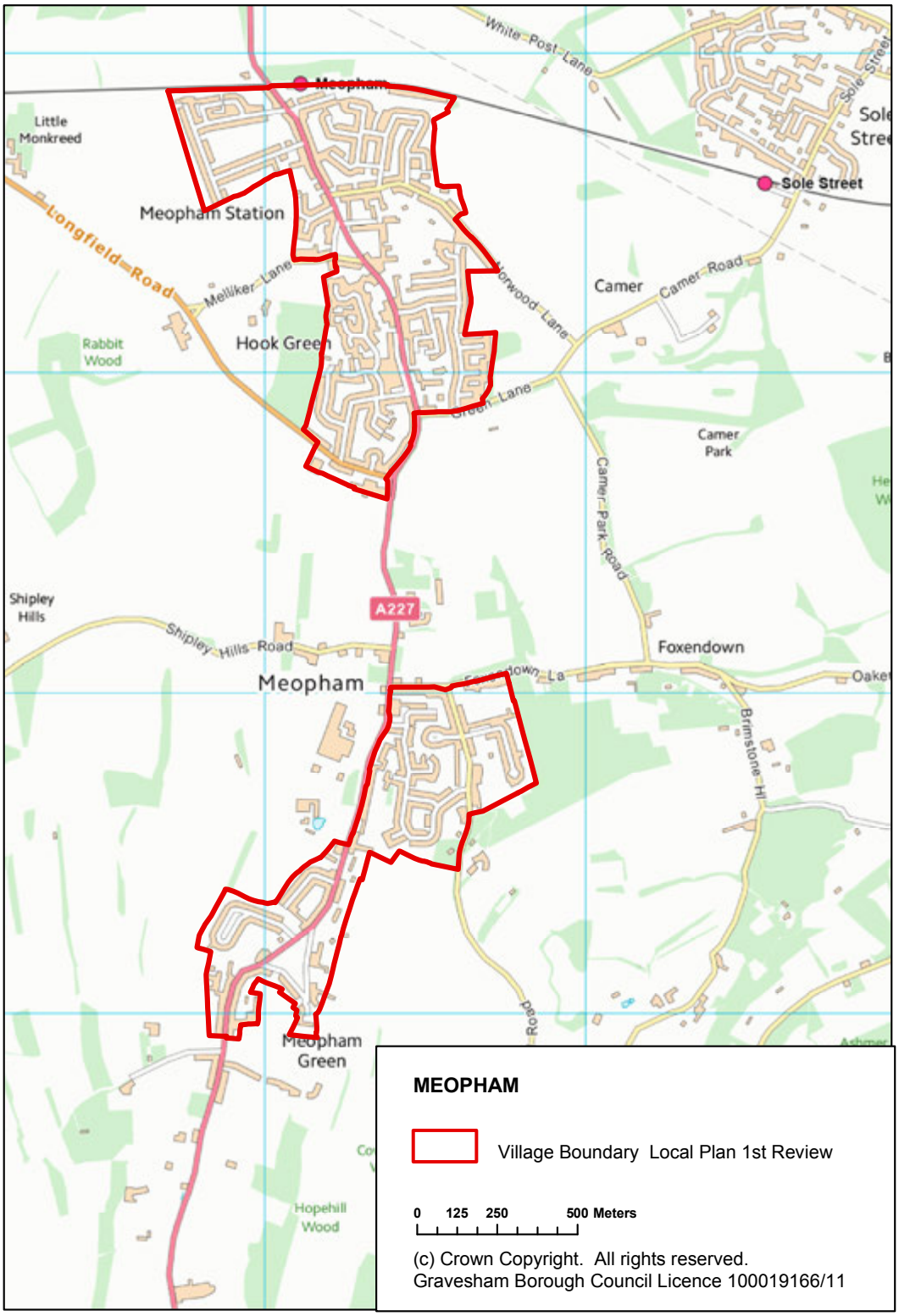
Meopham


Meopham
Little Monkreed
Meopham Station
Longfield Road
Melliker Lane
Hook Green
Rabbit Wood
White Post Lane
Sole Street
Camer
Camer Road
Lonwood Lane
Green Lane
Camer Park
Camer Park Road
Shipley Hills
Shipley Hills Road
A227
Meopham
Foxendown
Brimstone Hill
Meopham Green
Hopehill Wood
MEOPHAM
Village Boundary Local Plan 1st Review
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Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Meopham is located approximately 3.5km south of the A2(M) and the southern border of Gravesend. The A227 runs directly through the village, connecting Gravesend Town Centre with a number of villages to the south, including Culverstone Green and Vigo Village.

The village is divided into two separate settlements, connected by the A227, and is one of few villages in the borough with rail access to London via the Southeastern train line.

Views & Topography:

The topography of the site is gently undulating, more so along the main roads, where views extend and open up to reveal vistas of tree lined streets and deep front gardens with houses set back from the roads.

Visibility within residential streets is generally more enclosed, due to the number of large specimen trees that border residential boundaries, containing views both into the street itself and sometimes out into the surrounding countryside.

It is common for residential developments, especially in the northern part of Meopham, to back onto each other, restricting any possible views of the neighbouring landscape. There are still a large number of properties that border the Green Belt boundary and they often have extensive views of their surroundings, however, the street layout does restrict visibility in places, more so than in other smaller surrounding villages.

Land Use:

Meopham is primarily a residential settlement with some small-scale amenities provided for the local population. Services, such as convenience stores, bakers, public houses are all found located on the A227 Wrotham Road. The largest selection of services is situated on the junction of Longfield Road and Wrotham Road and includes a small garage amongst other amenity shops.

Other public services include the Meopham Railway Station, located off Station Road, Meopham Primary School on Longfield Road and a doctor's surgery on Wrotham Road, opposite John's Road. The Meopham Village Hall, also situated on the Wrotham Road, provides a meeting point for a host of local activities.

The A227 Wrotham Road forms the focus for all community and amenity services, while the main residential streets adjoin this main arterial route at regular intervals along its length.

Green Spaces:

There are a number of large communal greens, such as Meopham Green, located towards the south of the village. This open green space provision encourages a level of public interaction with the space, activities include cricket matches as well as other informal functions, all of which increases the levels of activity within the public realm.

There are several smaller green spaces on the corners of junctions, which allows for planting and landscaping helping soften the edge of the built environment, particularly important along the edges of the A227 Wrotham Road, an example being the junction between Wrotham Road and Station Road.

As well as the public green spaces, there are some quality private green spaces that spill out into the public realm, helping to create a softer edge to the built landscape. Plot sizes, especially those aligning the A227 Wrotham Road, tend to be large, and often include large front gardens with distinctive tree specimens bordering the front boundary. The density of the vegetation along the A227 Wrotham Road, creates an attractive border but often restricts views of the housing, and can, at times create a sheltered corridor effect with little or no view of the street from the residence.

Within the residential context, boundary markers, such as fences and hedgerows, are less dominating and instead of creating a sheltered corridor, they open up the space and create a less obvious division between the public and private realms. The edge of the private boundary is not marked by a high sided fence panel and therefore creates a more pleasant public realm by being able to share in the attractiveness of the private garden spaces.

Several residential streets border neighbouring countryside and this creates an attractive green backdrop. Foxendown Farm is situated to the east of Hadley Close, and The Larches is a small wooded area located directly behind the row of houses. This further softens the built environment by surrounding residential plots with tall, specimen trees.

Settlement Pattern:

The A227 Wrotham Road is the main arterial route through Meopham, with all residential areas adjoining it. The age of the development has determined the structure of the street layout and the resultant settlement pattern.

Postwar developments, such as those along John's Road and New Road to the north of the site, are situated on long linear streets, sometimes with smaller adjoining streets, depending on the type of infill development that has occurred subsequently.

Development that occurred during the 1960s and 1970s tends to consist of winding, irregular streets that connect onto the A227 Wrotham Road, with a series of smaller cul-de-sacs adjoining them. This particular form of development has resulted in the original, larger properties facing onto the main street, but where infill development has occurred, especially along cul-de-sacs, the back of neighbouring properties face onto the public realm, reducing the surveillance of the street. The siting of these plots has meant that blank boundary walls align some streets, creating dead spaces.

Some of the most modern developments, such as that along Strand Close and The Russets, built around the 1980s, are situated on a series of 'S-bend' roads that arch round with a number of cul-de-sacs coming off at irregular intervals. This series of cul-de-sacs, although only a matter a metres from the A227 Wrotham Road,

are not connected to it, which creates poorer levels of connectivity.

Buildings:

There are a variety of period buildings aligning the A227 Wrotham Road, ranging from large detached properties, such as the White House, to semi-detached Victorian town houses, Edwardian detached houses and many 1950s/60s infill properties that developed in between the spaces left by the other period builds.

Meopham, like many other villages throughout the borough, has a considerable number of bungalows. This type of housing is focused along John's Road, New Road and Orchard Drive. The original properties built along these streets date back to the 1940s/50s but due to the market demand for them, there are several infill developments built from 2000 onwards.

There is a small amount of post-war, terraced housing along Station Road, however, the majority of residential streets are built at lower densities with most streets along the east of A227 Wrotham Road consisting of detached and semi-detached properties with medium sized gardens.

The lowest density streets are found to the west and southwest of Meopham, along Strand Close and the adjoining streets, and around Pitfield Drive and Steele's Lane, which surrounds the village green. The low densities are maintained by not exceeding the standard building height of two-storeys.

Local Materials:

Materials used along the A227 Wrotham Road, both in buildings, walls and surfacing, are considerably more varied than those used in the estates adjoining the main road. Building facades along the main road consist of different brick colours and natural stones combined to add character and details, reflective of their period. Walls are finished in a variety of colours, adding a level of personalisation missing from surrounding areas and the flint used in retaining walls offers more than the standard wooden or brick boundary marker. Asphalt paving and roads are consistent throughout.

The residential side roads are more consistent in their choice of materials. Red brick is most commonly used with either a red clay tile cladding or dark wood weather boarding. For buildings using yellow brick, white weather board cladding is often used. Boundary fencing, if used, usually consists of low level red or yellow brick retaining walls.

Landmarks:

The most noticeable landmark in Meopham is the windmill, located opposite Meopham Green. Visible, heading north along the A227 Wrotham Road, the dark wooden windmill sits above the existing roof lines and can be seen from around the village green and creates an iconic landmark feature, unique to this village.

Other landmarks consist of distinctive residential buildings, such as the White House situated on the green at Melliker Lane and the Victorian town houses situated on the A227 Wrotham Road, 0.2km south of the railway station.

Road Network:

The A227 Wrotham Road is the main arterial route through the village and connects the southern and northern parts of the settlement together. There are also number of country roads that connect onto the A227 Wrotham Road from both the east and west.

The residential street network is often unconnected to other residential streets, creating an impermeable street layout that in turn creates spaces that are difficult to navigate and move around, especially for pedestrians. The high frequency of dead ends and cul-de-sacs means all traffic is forced to return to the A227 Wrotham Road, creating a congested main route through the village.

Conclusion

Meopham is one of the boroughs larger villages and as such provides a range of services and amenities for its local population. The village, which is connected by the A227 Wrotham Road, has a number of distinctive period buildings aligning it, each with distinguishable architectural features and characters that help define the areas sense of place. The low building densities and large garden plots along this street have created a soft edge, to an otherwise busy main road. The quality of the green spaces, both public and private, has improved the overall worth of the public realm and softens the hard edges of the townscape.

The housing estates that align the Wrotham Road and are built at slightly higher densities, have fewer individual buildings of distinctive architectural character, but collectively create an attractive set of streets, that have a level of personalisation in them that breaks up the consistent form of the built environment.

The views along the A227 Wrotham Road, coupled with the quality green spaces, such as Meopham Green, and distinctive built environment, combine to create a positive first impression of the area. The side roads, although of a different period, and therefore different character, still create a positive streetscape that helps generate a distinctive sense of place.

Condition

The street layout of cul-de-sacs and dead end roads make movement around the streets difficult, especially for pedestrians. The consistency of the built form helps unify the street, slightly improving navigation.

Legibility rating: Coherent

There is a consistent use of materials and building styles throughout the village, especially within the estates adjoining the side roads. These areas are well maintained and add character to the village, with little detracting from this overall sense of place.

Visual Detractors rating: Few

The residential land use is well defined, with many period properties aligning the A227 Wrotham Road, which sets the character for the area.

Land Use rating: Defined

There are several period properties aligning the A227 Wrotham Road, which sets the historic context for the area, such as the White House on Melliker Lane. The windmill, opposite Meopham Green, is a distinguishable landmark that further enhances the village's historic character.

Cultural Integrity rating: Some

Sensitivity

The distinctive land use, quality green spaces, historic built environment, and landmark features, such as the windmill, all help create a distinguishable village character.

Distinctiveness rating: Very Distinct

Despite the impressive period buildings that align the A227 Wrotham Road, the majority of the built environment is comprised of mid-20th century housing and it is this that dominates the overall character of the village.

Continuity rating: Recent

The undulating landform, especially along the A227 Wrotham Road, creates important street vistas that help contribute to the navigation and character of the built environment.

Landform rating: Apparent

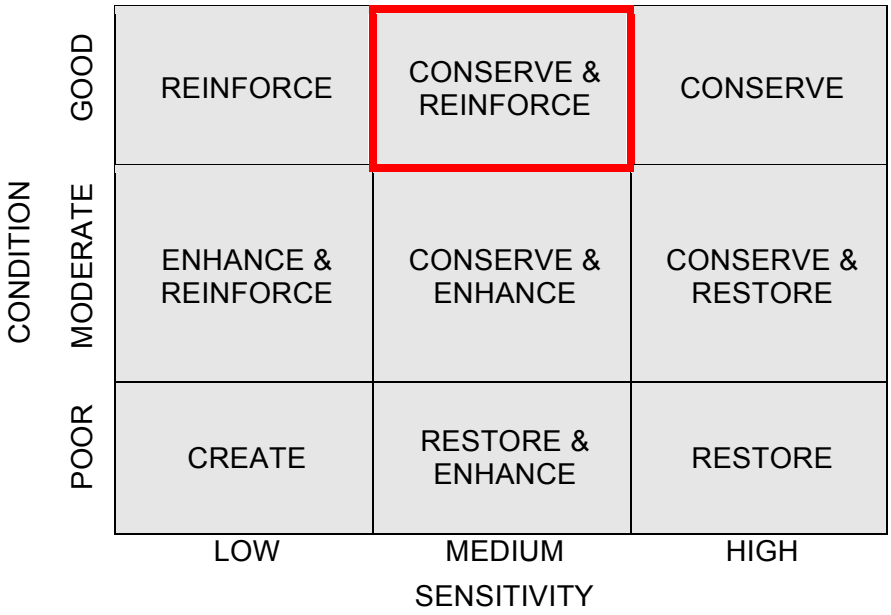
The bordering farmland and Green Belt create extensive views from the village into the surrounding countryside. These views exist both from the rear of residential properties, and also along certain points of the A227 Wrotham Road. Views from denser residential areas are often restricted.

Views In/Out rating: Intermittent

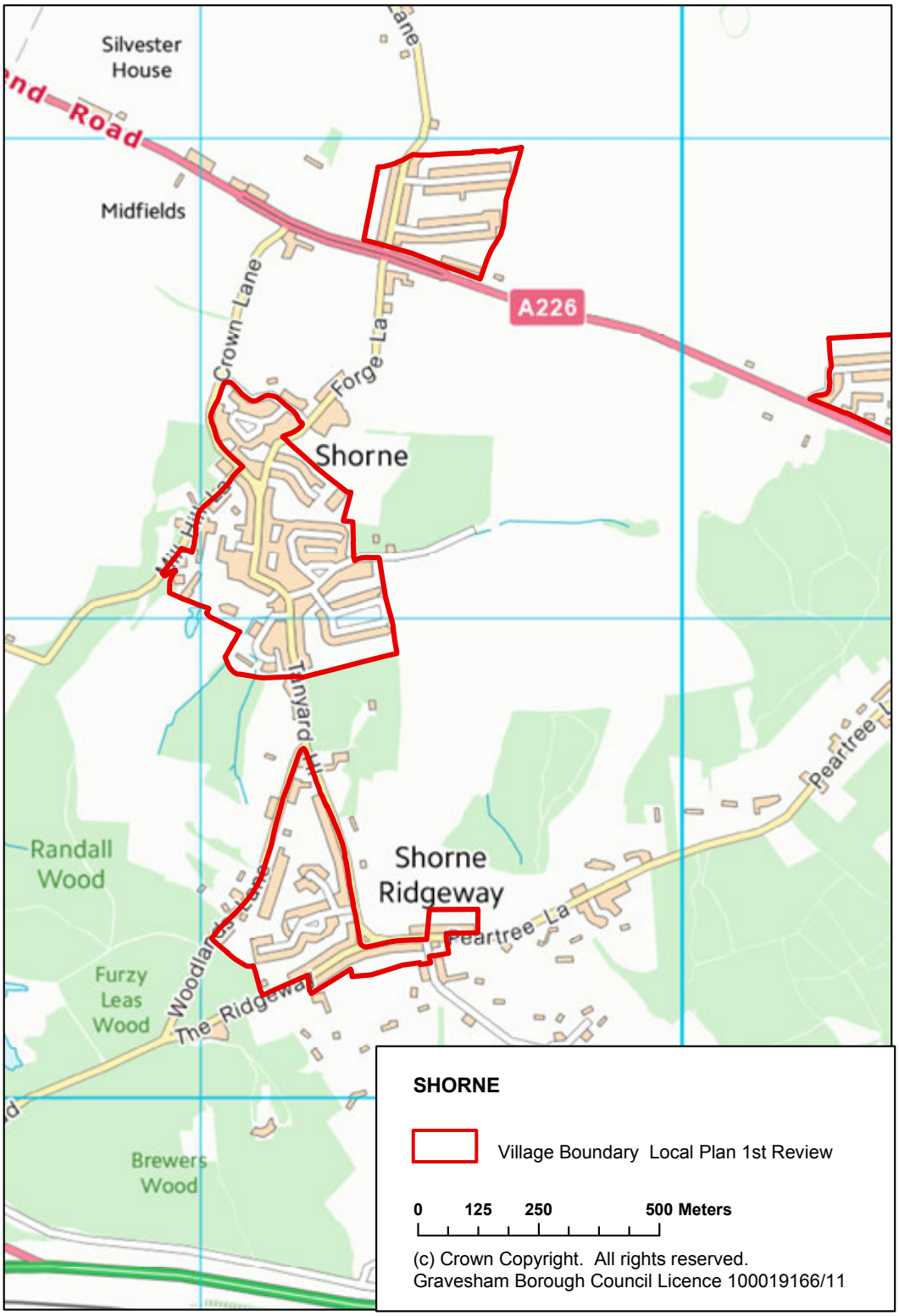
Guidelines

Specific guidelines for Meopham are to:

- Conserve buildings of historic interest
- Conserve overall character of streets that contain historic buildings
- Conserve roof lines to maintain views across the village and into the surrounding countryside



Shorne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Road
Midfields
A226
Crown Lane
Forge La
Shorne
Tinyard
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Peartree La
Randall Wood
Furzy Leas Wood
Brewers Wood
SHORNE
Village Boundary Local Plan 1st Review
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Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

The village of Shorne is located approximately 1km north of the A2(M), with Shorne Country Park situated between the southern boundary of the village and the edge of the A2(M). Due to the presence of the Green Belt, Shorne is divided up into three distinct areas, with the northernmost part of the village segregated by the A226 Gravesend Road.

Views & Topography:

The topography of the site is considerably undulating, especially along the main streets between the three village settlements. Shorne Church of St Peter and St Paul, is situated high up on Butchers Hill and has extensive views from the top of the spire, taking in views of the village and the surrounding countryside. Similarly extensive views can be seen from Warren View, which extend across the whole of the village, including views of key buildings such as Shorne Church.

The quality and abundance of large trees and other green spaces, both private and public realm, restrict some views into the village and out to the countryside, but overall views are positive and greatly influence the character of the village.

Due to the relatively small size of the village, the majority of private properties back onto open countryside or are situated at the top of a hill, creating extensive views of the neighbouring Green Belt and agricultural land.

The topography surrounding the villages, especially to the north and west, is flat, which creates extensive views from Shorne to the River Thame. Some of these views include industrial areas, resulting in views of larger factory units and the high rise chimney stacks.

Land Use:

The three village settlements are primarily residential with a small number of local shops and services providing for the local community. The residential settlement to the north of the A226 Gravesend Road and the settlement furthest south are solely residential, with no provision of local services.

The Street, which runs through the centre of Shorne, acts as a village centre, with the provision of a

convenience store, florist and hairdresser, located opposite Shorne Village Hall. The Rose and Crown public house, also located on The Street, and Shorne Church, located on the neighbouring Butchers Hill, collectively form the main public gathering areas for the village.

Green Spaces:

The low building densities have enabled the creation and maintenance of several quality green spaces, both public and privately owned. The public spaces consist of tree lined streets and large greens, often forming the centre piece within a cul-de-sac development. There are also a number of small green spaces on the corners of road junctions, helping to break up the dominance of the road network through residential streets.

The quality of the private green spaces also contributes to the overall quality of the streetscape. There are many examples of large specimen trees and hedges in front garden plots that spill over into the public realm helping to soften the edge of the hard landscape. In a number of instances, the density of the soft landscape hides residential properties from view, creating a much softer environment.

The surrounding countryside and the extensive views across the Green Belt and farmland, creates an attractive edge to the village, which further reduces the impacts of the built environment and creates a positive natural character.

Settlement Pattern:

The northernmost settlement in Shorne consists of three linear residential streets, two of which are cul-de-sacs. Internal movement around this settlement is difficult because of the lack of any simple block structure that would connect the linear streets together, making movement more efficient. Its lack of connectivity, the severance caused by the A226 Gravesend Road, and its distance from the other Shorne settlements makes movement between the spaces difficult, often prompting enforced use of the private car.

The southernmost part of Shorne forms a triangular settlement pattern, with Woodland Lane to the west and Tanyard Hill to the east, and The Ridgeway running east to west along the southern boundary of the village. Most development has occurred within the triangular settlement, with some larger, older properties on the periphery. Racefield Close is the only residential street within the triangular settlement, and consists solely of bungalow properties surrounded by communal green spaces.

The central Shorne settlement has developed from having a single linear street to having a number of cul-de-sac developments adjoining it. The Street, which runs through the centre of the development, connects onto Forge Lane to the north and then onto the A226. Tanyard Hill, which connects Shorne to the south, now has four connecting streets that extend into sizeable residential areas, each consisting of between 15 and 30 properties.

Throughout Shorne, particularly in central areas, there is no interconnection between residential streets, making all pedestrian and vehicular movement dependent on access to and along The Street. The lack of connectivity creates very quiet residential streets.

Buildings:

Shorne contains a varied mix of period and more modern residential buildings. The southern settlement has a variety of buildings ranging from large detached residential properties located on extensive plots of land, through to smaller detached bungalows, situated on smaller plots but with large communal gardens.

Woodland Lane and Tanyard Hill contain some of the grandest period buildings in Shorne, whilst also having a

large number of more modern developments, ranging from 1960s detached properties through to recent builds from the last decade, all of which have a distinctive character. The bungalows and semi-detached properties on Racefield Close are less distinctive buildings, with fewer distinguishable features creating a sense of uniformity.

The northernmost settlement consists of mainly bungalows, ranging from 1930s to 1970s developments, with the occasional modern infill development. These buildings, although not impressive in their architectural form, do have a certain character created by the high level of personalisation to the properties.

The more historically impressive buildings are located either along The Street, or directly adjoining it. Shorne Church is a large flint walled building, which, because of its location on the top of Butchers Hill, creates a significant built focal point for the village. There is also a series of attractive Victorian residential properties along The Street, which helps to enforce its status as the historic core of Shorne. The remainder of the residential development tends to consist of post-war 1950s and 1960s detached housing.

Local Materials:

The most commonly used materials consist of red brick frontages with the use of either dark hardwood weather cladding or red clay tile cladding. There are also a lot of white washed frontages, used in both examples of period and modern architecture.

The rows of Victorian housing along The Street have detailing in the stone work around the window and doors, and some private garden footpaths have original tiling details leading to the front doors.

The Street's public realm has some examples of natural stone retaining walls and the use of iron railings to delineate the edge of footpaths and highways. Moving away from The Street and into the more recent residential developments, standard highways materials are more commonly used, such as asphalt for both paving and highways.

Landmarks:

Shorne Church is a major landmark building for both its architectural qualities and its location on Butchers Hill, making it visible from several vantage points across the village. Although sometimes hidden from view because of the large specimen trees that surround it, views from Warren View extend across to the Church and pick out the spire rising above the surrounding tree and building lines.

Other buildings such as the Tudor cottage on Forge Lane or the Methodist Church (built 1893) on The Street, all add historic qualities to the village, and act as mental markers, although they do not physically dominate the street.

Road Network:

The connecting roads of Tanyard Hill, The Street and Forge Lane, act as the spine to which development has adjoined. This original route through Shorne, is narrow in places, especially through the centre of The Street but allows for good north to south movement, connecting the three settlements of Shorne together.

The connecting residential streets are all cul-de-sacs and in no way interlink with each other, creating quite defined and separated miniature residential estates. This lack of connectivity makes pedestrian movement around the village difficult.

Conclusion

Shorne is a disconnected set of smaller settlements but with an attractive, functional village centre that helps tie these areas together. The small collection of shops, village hall, public house and Shorne Church all act together to create a village centre that forms a common link between the otherwise separated residential streets.

The quality of the built environment, both period and modern, combined with the high density of green spaces, both public and private, creates an attractive village character. Both the surrounding countryside and the changing topography help to create extensive views of the surrounding landscape, which further softens the edges of the built environment.

Overall, despite the more modern housing developments that occurred around the 1960s, Shorne still retains it historic core qualities that create a distinctive village character with enough facilities and public amenities to maintain a vibrant and active built environment.

Condition

The layout of the street structure is incoherent, due to the high number of unconnected and irregular streets, however, because of the villages small footprint, navigation is made easier, with access to the main arterial route, The Street, never far away.

Legibility rating: Coherent

The quality of the built and natural environment is very positive with no obvious visual detractors.

Visual Detractors rating: Few

This residential settlement is clearly defined with the historic village core and civic amenities, adding to the overall quality and definition of the space.

Land Use rating: Defined

The Street, and the surrounding built environment, creates a rich historic streetscape, with variety period buildings, including Shorne Church, which overlooks the surrounding village and is visible from around the settlement.

Cultural Integrity rating: Some

Sensitivity

The defined land use, period landmark buildings, and quality green spaces all combine to create a distinctive village character tied together by the functionality of the village centre historic core.

Distinctiveness rating: Very Distinct

Despite the presence of some historic buildings situated along The Street, the overwhelming built form is that of the more modern 1960s housing developments in the surrounding residential side roads. The choice of building materials and architectural styles are modern additions to the village and influence its overall character.

Continuity rating: Recent

Internal landform is a dominant feature throughout the village, which shapes the character of the winding streets and reveals interesting and characteristic views of the historic streetscape.

Landform rating: Dominant

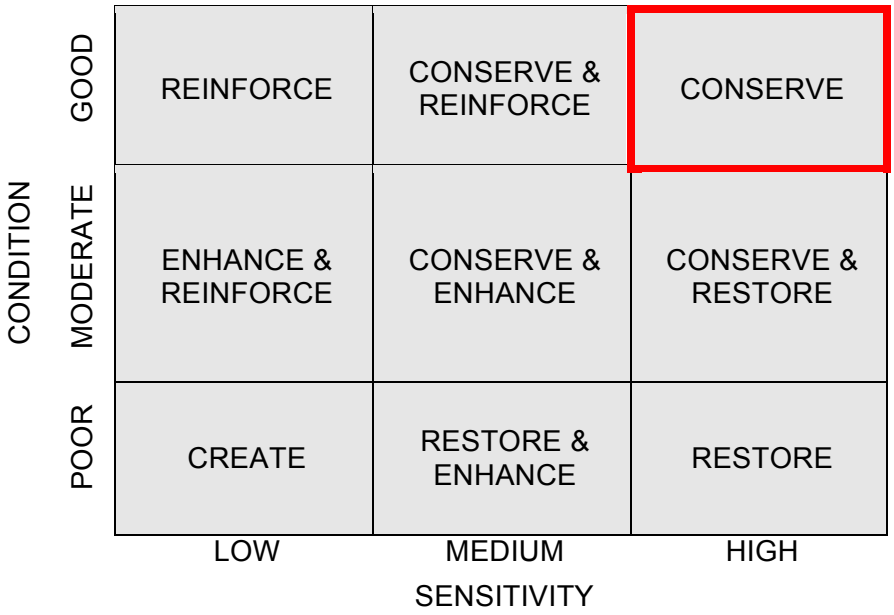
Within some residential streets, such as Warren View, vistas of the village and the surrounding countryside are extensive. However, in a number of instances, a combination of the local topography and collections of large tree specimens block views and create enclosed streets.

Views In/Out rating: Intermittent

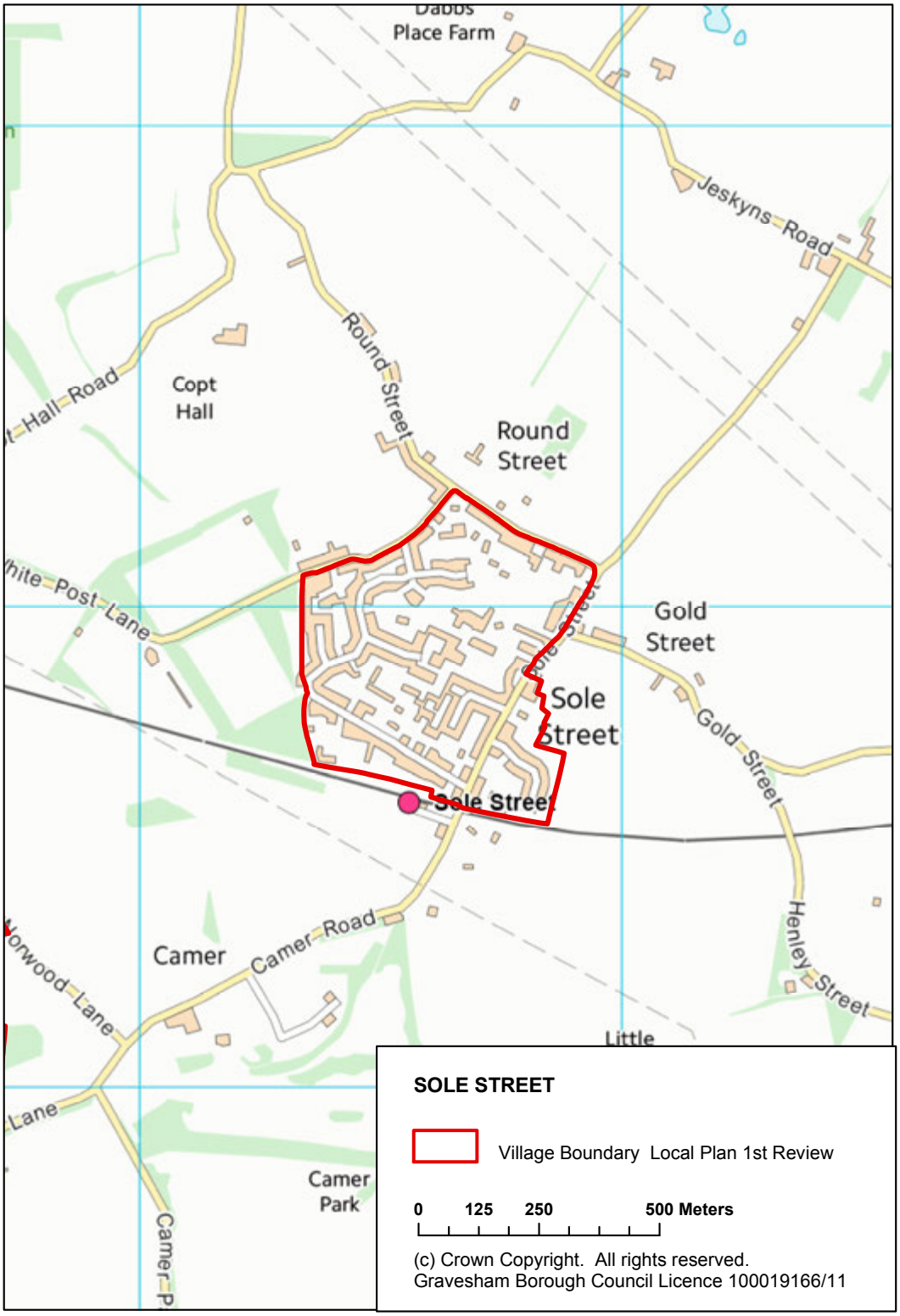
Guidelines

Specific guidelines for Shorne are to:

- Conserve buildings of historic interest
- Conserve overall character of streets that contain historic buildings
- Conserve roof lines to maintain views across the village and into the surrounding countryside



Sole Street


Dabbs
Place Farm
Jeskyns Road
Round Street
Copt
Hall
Hall Road
Round
Street
White Post Lane
Gold
Street
Sole
Street
Sole Street
Gold Street
Camer
Camer Road
Norwood Lane
Henley Street
Little
Lane
Camer
Park
Camer P
SOLE STREET
Village Boundary Local Plan 1st Review
0 125 250 500 Meters
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Views & Topography

Not available.

Land Use

Green Spaces

Not available.

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Sole Street is located approximately 2.5km south of Gravesend and the A2(M), and is directly east of north Meopham and approximately 1.5km from the A227 that connects Gravesend with the M26 motorway.

Sole Street is only 0.5km from its most eastern point west, and a further 0.5km from north to south, making it one of the smaller villages in the borough.

Views & Topography:

The topography through the village is moderately flat with views restricted to the immediate streetscape and views of the surrounding landscape limited to those with properties located on the borders of the village envelope. Streets tend to be enclosed by built form and natural vegetation, which restricts views into neighbouring areas.

External views of the surrounding countryside do exist for those located on the edge of the village, and an orchard to the northeast of the village, adds character to the streetscape view.

Land Use:

Sole Street is a residential development with limited community facilities to cater for the needs of the local population. This singular land use is reflected in the built environment with the majority of the village containing only residential properties of differing sizes and periods.

Green Spaces:

The low building densities and large garden plots have created a rich, green environment, although the majority of the soft landscaping is private with only some green verges and tree lined streets within the public realm.

The large front garden plots spill out into the public spaces helping to reduce the impact of the built environment on this small countryside village. Within the quieter residential streets, there are few garden fences and other boundary markers that help create the feeling of a greener public realm.

The village has little public communal green space. The only spaces that do exist are small strips of grass verge, which, with the addition of benches form informal gathering points and meeting places for the local community.

Settlement Pattern:

Despite the relatively small size of the village, the settlement is difficult to navigate because of the cul-de-sac road network that has been employed. White Post Lane, Round Street and Sole Street encompass the village and all the residential streets that adjoin them are cul-de-sacs. This makes moving between one residential street and another, difficult.

Each cul-de-sac street has between approximately 15 and 25 properties, and without any connecting formal or informal pedestrian links between these streets, navigating, from north to south, east to west, remains complicated.

Buildings:

All buildings within Sole Street are residential and built at a low density with large garden plots and nothing over two-storeys in height. Each of the six cul-de-sacs that make up Sole Street contains a different period of house building styles, with little evidence of infill development.

There are some streets of inter-war, 1920s/30s housing development, other streets with post-war housing and streets of red clay, tile clad 1950s developments, all of which are detached properties with large private gardens.

The demand for countryside bungalows during the 1950s/60s has resulted in such development occurring in Sole Street, and many of these can be founded aligning Sallows Shaw. Demand for properties in the countryside has seen Sole Street grow in the previous decades. With for example the addition of new housing built adjoining Manor Road, in Manor Court.

Residential streets in the village have been developed a decade or more apart from each other, which makes each of the streets distinctive by the style of architecture employed and the materials that were popular at the time of build.

The differentiation between these streets and the disconnected, separation created by the cul-de-sacs, means each of the streets is undisturbed by the building that has occurred around them. This has resulted in the creation of clearly defined, small sub-character areas within a still very small village.

Local Materials:

The use of materials is consistent throughout Sole Street, regardless of the period and architectural style of development. Red and yellow brick is the most common building material with a variety of renderings used to add detail. White weather boarding and red clay tile cladding are popular forms of rendering with some pebble dashing used on inter-war period properties.

The red clay tiles are perhaps the most common architectural feature that has been repeated throughout the village, firstly on some pre-war houses, then again in the 1950s and latterly has been used on the frontages of 1960s/70s bungalows.

Landmarks:

The only building with landmark qualities is that of the residential property located opposite the Sole Street, Scratton Fields junction. This impressive three-storey Edwardian building sits back from the pavements edge and neither dominates its plot nor the streetscape in general, but it does add an understated, historic quality that helps cultivate a sense of place, albeit, minor.

Road Network:

The road network is a large grid, formed by White Post Lane and Sole Street running north to south, and Round Street and Manor Road running east to west. All the residential streets that connect onto these roads are cul-de-sacs, which make navigation for pedestrians and motorists difficult because of the lack of any connectivity.

Conclusion

Sole Street is exclusively residential, without any form of community buildings at the heart of the village. This solely residential development is lacking any community focal point or meeting place, and as a result, each street creates a sense of disconnected independence, separate from all that surrounds it. The building style, materials, massing and building heights are uniform in each of the six cul-de-sacs, creating six unique streets, each with their own characteristics and identities.

The quality of the green spaces is a positive feature throughout the village, with the majority of private gardens being well maintained and contributing to the overall quality of the public realm, although not technically part of it.

The village does have a level of coherence running through it, due largely to the combination of consistent built form and the complementing green spaces. There is little else in the built environment that contributes to the village's character other than its residential built form.

Condition

The poor settlement layout makes navigation and general legibility difficult, however, the consistent use of materials in the built form helps to create a certain level of legibility within the street.

Legibility rating: Coherent

The quality of the built environment, supported by the high quality of the natural environment, both public and private, mean there are few visual detractors.

Visual Detractors rating: Few

Land use is mainly residential.

Land Use rating: Defined

Some of the residential properties date back to late 19th century and early 20th century but the majority of the built environment remains post-war.

Cultural Integrity rating: Some

Sensitivity

The land use type, architectural styles and materials, massing and heights are uniform throughout the village. The quality green spaces also create a very distinctive English countryside village character.

Distinctiveness rating: Very Distinct

Despite a number of historic buildings located sporadically around the village, the majority of buildings are post-war.

Continuity rating: Recent

Although much of the site is flat, because of its relatively small size and low building densities, views throughout the site are largely uninterrupted creating positive street vistas.

Landform rating: Apparent

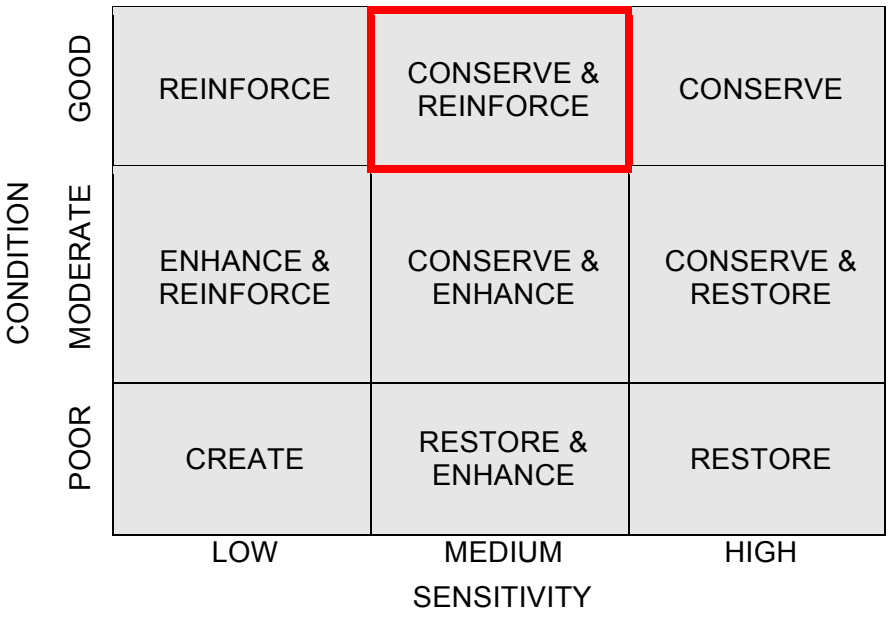
Those properties located on the periphery of the village have extensive views of the surrounding landscape, while some views within the village are more restricted because of the positioning of the built form.

Views In/Out rating: Intermittent

Guidelines

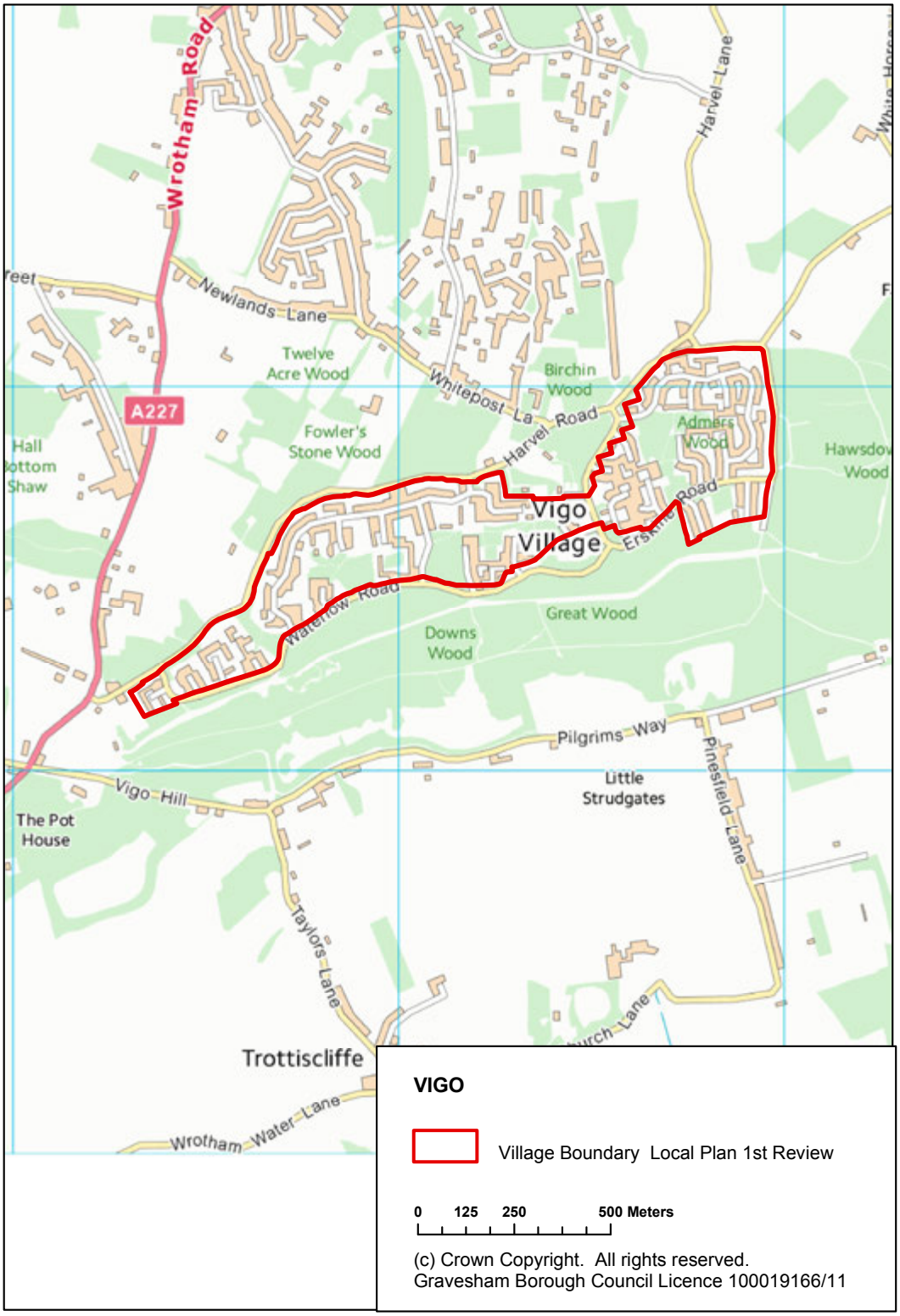
Specific guidelines for Sole Street are to:

- Conserve the buildings of historic interest
- Conserve streets where consistency of materials creates distinctive character
- Conserve roof lines to maintain views through the village and into the surrounding countryside



- Reinforce and improve existing public green spaces
- Create provision for sports and recreational facilities

Vigo Village



Views & Topography

Land Use

Green Spaces

Buildings

Local Materials

Landmarks

Road Network

Townscape Description

Location:

Vigo village is situated on the southern edge of the borough. The nearest village is Culverstone Green, to the north, connected by the A227 Gravesend Road, which passes along the western fringe of the village boundary. Vigo is approximately 13km south of Gravesend Town Centre and 11.5km south of the A2(M) that connects Gravesend with London and the coast.

The village is located on the northern edge of Trosley Country Park and is surrounded by ancient woodland, including Whitehorse Wood to the east.

Views & Topography:

The natural topography of the village is flat, with restricted views into the surrounding countryside, largely because of the mature trees that align the village boundary.

There are some positive street vistas around the village, with much of the built environment framed by mature tree specimens and green spaces aligning the road network.

Land Use:

Vigo village is a 1960s/70s residential development with a well-defined village centre that seeks to provide a number of key services to the local community, including a number of convenience stores, Vigo Primary School and The Villager public house, all located on and around Erskine Road.

Apart from the small village centre, the remaining land use is primarily residential with a number of small communal green spaces breaking up the consistent built form.

Green Spaces:

Building type and density of the housing stock is a contributory factor in the quality and dominance of the green spaces around the village. Terraced housing has smaller front garden plots, often with areas of communal green space, and the larger detached properties have larger front garden plots. This combination of small and

large scale private plots, adds to the overall quality of the townscape, through the combination of this network of green spaces.

Small plots usually consist of a simple grassed area but the larger front garden plots often have mature tree specimens that dominate the streetscape and soften the edges of an otherwise dominant built environment.

Public green space comes in several forms. The recreation ground, situated south of Harvel Road and north of The Villager public house, provides a range of facilities, including a small children's play area and football pitch. There are also a number of informal play areas around woodland, such as the space between Croftside and Churchside.

There are numerous grassed areas located around the village, including those on the edges of junctions and at intervals along Waterlow Road, creating a buffer between the main road and the fronts of residential areas.

The entire village is surrounded by woodland, whether it be ancient woodland to the south and east, or smaller areas of woodland to the north, such as Fowler's Stone Wood, Twelve Acre Wood or Barnfield Wood. Trosley Country Park to the south of Vigo is a positive influence on the character of the village as it creates an attractive backdrop to the residences that align Waterlow Road.

Settlement Pattern:

The village settlement is arranged around a myriad of meandering roads and cul-de-sacs streets. Harvel Road runs from east to west along the northern edge of the village and Waterlow Road, leading into Erskine Road, runs east to west along the southern edge of the village. However, along the entire length of both of these main routes, the village centre can only be accessed by three roads, the other twelve lead to cul-de-sacs. Connectivity of streets is very poor and the consistency of the built form and lack of many distinguishable features makes navigation difficult.

Harvel Road and Waterlow Road are the main connecting routes from the east of the village to the west. However, these routes are country lanes and have no pedestrian provision, which impacts on the way residents move around the village. The internal village streets do provide footpaths and an underpass under Erskine Road, east of the retail centre, but movement is still restricted by the number of cul-de-sacs present. There are networks of pedestrian-only routes that connect the cul-de-sacs.

As a result of this settlement pattern, pedestrians are forced to use unconnected internal routes and vehicles are forced to use external routes because of the restriction of movement within the village. This poorly connected set of streets has direct implications on the levels of pedestrian activity that occurs within the public realm, often resulting in high car dependency.

Buildings:

There are two quite distinctive areas within Vigo that have two sets of quite distinctive housing stock. To the east of Erskine Road, housing tends to be higher density, with small rows of terraced housing, consisting of three or four houses per unit. These buildings are situated on smaller plots with shallower front gardens and share communal on-street car parking facilities. Highview and The Coppice are the streets of highest residential density within Vigo.

To the west of Erskine Road, housing density is lower, with mostly detached properties, situated within large garden plots all with private garages. There are some streets, around the village's retail centre, with three-storey 1960s versions of the town house, but with garages located on the ground floor.

Building design is consistent on both a street and village-wide level. There are similarities in the housing style,

whether terraced or detached and this helps create a level of unity throughout the village, which in turn creates a distinctive overall village character. The style of housing is not unique to Vigo, indeed, similar properties can be found all over the borough, but the consistency and lack of infill development has maintained its originality and distinctive character.

Local Materials:

Red and yellow brick is the only building material used throughout the entirety of Vigo and building rendering consists of either white weather board cladding or red clay tile cladding. Each unit has large rectangular PVC window frames, often with a large white garage door. This level of consistency throughout the village is what has created a well defined character.

Landmarks:

The Water Tower located north of Beech Mast and west of The Coppice, is a noticeable landmark feature that rises high above the roofline of surrounding houses and stands out as the only non-residential built entity in the entire village.

The Villager public house, Primary School and small parade of shops act as a focal point for community activity but there are no historic buildings or buildings of outstanding aesthetic quality that would qualify as landmarks.

Road Network:

The village is connecting to surrounding villages and Gravesend Town Centre by the A227 Gravesend Road, which runs north to south along the western edge of the village boundary. Harvel Road adjoins the A227 Gravesend Road and runs east to west. Waterlow Road, Erskine Road and Commority Road are all connected to Harvel Road and link into the village. All other roads are cul-de-sacs and connect onto the three aforementioned roads.

Conclusion

A consistent use of building styles and materials ties the entire village together. There are very few examples of infill development, which has helped maintain the originality of the village and through that has helped maintain a unique character.

The small collection of local shops and services, the Primary School and The Villager public house, all centrally located within the village, help create a defined centre, with a number of public green spaces surrounding it, providing a mixture of retail and leisure facilities for the local community.

However, the street network has created a series of very poorly connected spaces and the uniformity of the built environment in no way aids navigation, since most streets are indistinguishable from one to another. This lack of connectivity makes movement awkward and ultimately is influential in people's decision-making when choosing how to move around the village, often resulting in high car dependency.

The originality and consistency of the built form, coupled with quality public and private green spaces, in and around the village, helps to create a distinct village atmosphere set within a more modern context.

Condition

The cul-de-sacs and unconnected street network, coupled with a lack of identifiable landmark buildings makes navigation difficult. There is no consistency in the layout of the street network, which makes the space difficult to understand.

Legibility rating: Incoherent

The quality of the housing stock is consistently high throughout, with the Water Tower being the only feature of the built environment that does not conform with its surroundings.

Visual Detractors rating: Few

Vigo Village is solely a residential development with a few local convenience stores to service the local community.

Land Use rating: Defined

The entire village was built from the early 1960's onwards, and is therefore lacking any distinctive historic buildings.

Cultural Integrity rating: Few

Sensitivity

The consistency of the built form, in terms of density, heights and materials, and the public and private green spaces make for a distinctive 1960s housing development that has cultivated a strong sense of character by maintaining its original features.

Distinctiveness rating: Very Distinct

The village was built from the 1960s onwards and has maintained a strong continuum of materials and building styles that keep the villages character rooted in the 1960s.

Continuity rating: Recent

There is little change in topography throughout the site, which restricts views beyond the immediate built form that aligns the streets.

Landform rating: Insignificant

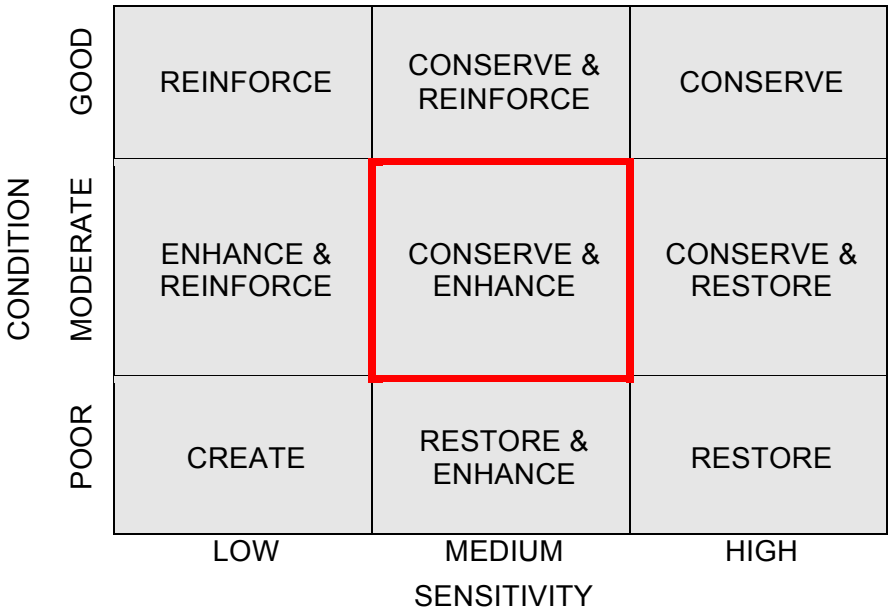
Harvel Road and Waterlow Road, and the residences that align them, have extensive views (more from 1st floor) of the surrounding landscape and into the Trosley Country Park and neighbouring ancient woodlands.

Views In/Out rating: Open

Guidelines

Specific guidelines for Vigo Village are to:

- Conserve character by ensuring new development maintains building styles.
- Development should be sympathetic but distinctive
- Conserve ancient woodland, in and around Vigo, that adds character to the built environment
- Conserve quality green spaces, including recreation ground
- Enhance public realm, especially shopping precinct
- Enhance connectivity of spaces where possible



Appendix 1:

TOWNSCAPE APPRAISAL

K E Y

1. Historic Town Centre Core
2. Industrial Hinterland
3. Victorian/Edwardian Suburbs
4. Inter/Post War Suburbs
5. Modern Suburbs
6. Northfleet

0 250 500 1,000 Meters

Drawn: PH

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Gravesham Borough Council

DARENTH DOWNS

PHOTOGRAPH

CHARACTERISTIC FEATURES

Smooth, open arable landscape on the chalk.
Crossed by major transport routes.
Scattered settlement.
Long views to the Kent Thames Gateway.

CONTEXT

Regional: North West Kent

Condition

	low	moderate	high
good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
moderate	CREATE & REINFORCE	CONSERVE & CREATE	CONSERVE & RESTORE
poor	CREATE	**RESTORE & CREATE**	RESTORE

Sensitivity

LANDSCAPE ANALYSIS

Condition

The landscape pattern remains coherent but many of the landscape elements are skeletal or redundant in use. The open, arable farmland is quiet, denuded of the more vulnerable heritage features such as hedged field boundaries. There are many detracting features: the urban edge intrudes into most views and the landscape pattern is subject to major interruptions from motorway transport routes. Suburban land uses and neglected land around settlements are also common detractors. The extent of woodland cover is insignificant except that it marks the tops of hills in isolated clumps; the unusual characteristics of some acid woodland upgrades the ecological interest of the area, which is otherwise intensively cultivated in areas of agricultural land use. Culturally, the enlarged, suburban development of formerly ancient and historical settlements have a high negative impact on the landscape.

Sensitivity

This area is considered to be of moderate sensitivity. The rounded, chalk landform is apparent in views of the landscape and visibility is high due to the openness of the countryside. Historic and ancient landscape features such as boundaries and woodlands are weak and indistinct. Some remnant hedges exist by the roadside, although the regenerative elm within these is known to be very vulnerable. There is very little sense of local distinctiveness or continuity of time in the current landscape elements.

LANDSCAPE ACTIONS

Create positive landscape features that are appropriate to the evolving land uses. This may include the creation of a cohesive urban edge which incorporates suburban land uses and appropriate pools of sustainable vegetation. Within agricultural land, field patterns should be created based on the cultural need and actual use of the land, but ecological interest may be augmented by the encouragement of less intensive cultivation techniques. Broader woodland cover may be restored on hill-tops, reflecting either the acid soils or chalk, depending on localised conditions. Wooded shaws may also be reintroduced, linked to wooded tops, following depressions in the chalk landscape, ideally in association with the less intensive areas of arable cultivation.
Restore the historical features of the road pattern, recreating banked and hedged boundaries which link with vegetation on the new urban edge and the augmented wooded hilltops.
Create major new woodland links and habitats along the motorway corridor.

SUMMARY OF ANALYSIS

Condition	Very Poor.
Pattern of elements:	Coherent.
Detracting features:	Many.
Visual Unity:	Interrupted.
Cultural integrity:	Poor.
Ecological integrity:	Moderate.
Functional Integrity:	Weak.

Sensitivity	Moderate.
Distinctiveness:	Indistinct.
Continuity:	Historic.
Sense of Place:	Weak.
Landform:	Apparent
Extent of tree cover:	Open
Visibility:	High.

SUMMARY OF ACTIONS

RESTORE AND CREATE.

Create an edge to the urban area
Create field patterns based on the integrity of current use and in response to the landform and soils
Restore woodland on tops of hills and in depressions on the chalk slopes
Create areas of acid woodland
Restore road pattern and features
Create new ecologically rich vegetative cover/woodland adjacent to motorway corridor
Restore ecological interest in the arable areas

previous <<

DARTFORD AND GRAVESEND FRINGES

PHOTOGRAPH

CHARACTERISTIC FEATURES

Contained by A2 and urban edges.
Some semi-natural heathland and woodland.
Some farmland with remnant hedgerows and trees.
Landfill sites. Fragmentation by roads.
Wide scale amenity uses.

CONTEXT

Regional: Thames Gateway

Condition

Condition \ Sensitivity	low	moderate	high
good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
moderate	CREATE & REINFORCE	CONSERVE & CREATE	CONSERVE & RESTORE
poor	**CREATE**	RESTORE & CREATE	RESTORE

LANDSCAPE ANALYSIS

Condition

This area is intensely physically fragmented, and the relationship between landform and landscape elements is obscured by urban development and the transport corridor. Semi-natural habitats such as Dartford Heath and exposed chalk faces (quarries) provide ecological interest, but these are few and specialised and do not form a coherent network. Heritage features associated with remnant chalk farmland are limited - some redundant hedges remain. The tightly-knit residential development is of mixed age and has a high negative impact on the area. Other, more recent features associated with land use include the planting and earthworks of reclaimed quarries, which are in variable condition. Overall, the landscape is considered to be in very poor condition.

Sensitivity

Visibility is moderate as the landform is unremarkable but views are generally unenclosed. There is very little continuity of time-depth in the landscape - historic cores to settlements are no longer apparent and very little characteristic farmland remains, most of which has only remnant hedgerow and tree cover. The lack of distinctive features which could be associated with the current dominant elements of the landscape, such as road networks and urban development, devalues the sense of place. Because the sense of place is weak, the sensitivity of the area is considered to be low.

LANDSCAPE ACTIONS

In order to regain its functional integrity, this area requires the evolution of new landscape features which will enhance the underlying landform and respect the current use of the land. Fragmented pockets of open land, reclaimed quarries and transport corridors may be linked to create a new landscape framework for amenity use and to recreate semi-natural habitats, such as acid scrub, where these are appropriate to the surrounding land use.

It is important to define the boundaries between the urban edge and the open farmland. The slopes of the chalk as they overlook the river estuary can also be enhanced by vegetation and new development patterns which follow the landform - in particular by the re-introduction of dense regenerative vegetation on the ridge.

SUMMARY OF ANALYSIS

Condition	Very Poor.
Pattern of elements:	Incoherent.
Detracting features:	Some.
Visual Unity:	Interrupted.
Cultural integrity:	Poor.
Ecological integrity:	Weak.
Functional Integrity:	Very Weak.

Sensitivity	Low.
Distinctiveness:	Indistinct.
Continuity:	Recent.
Sense of Place:	Very Weak.
Landform:	Insignificant.
Extent of tree cover:	Open.
Visibility:	Moderate.

SUMMARY OF ACTIONS

CREATE.

Create a new landscape framework to the existing and reclaimed farmland
Create an edge to existing urban areas
Create semi-natural habitats such as acid woodland and scrub
Create areas for amenity uses
Create cohesive landscape elements which enhance the nature of the underlying landform and embrace the urban nature of the area.
Create links between existing natural habitats into developed areas.

previous <<

SOUTHFLEET ARABLE LANDS

PHOTOGRAPH

CONTEXT

Regional: North West Kent

Condition

	low	moderate	high
good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
moderate	CREATE & REINFORCE	CONSERVE & CREATE	CONSERVE & RESTORE
poor	CREATE	**RESTORE & CREATE**	RESTORE

Sensitivity

CHARACTERISTIC FEATURES

Good quality soils developed on the Tertiary Beds overlying the chalk. A generally open arable landscape.
Open landscape allowing transport routes, pylons and settlement to dominate many areas.
Remnant unkept hedgerows, shelterbelts and woodland copses giving a scruffy and unmanaged feel.
Long views to the busy A2 (T) and Kent Thames-side beyond

LANDSCAPE ANALYSIS

Condition

This is a coherent landscape where the large-scale rural land use reflects the good quality soils. There are, however, many visual detractors which dominate the view, such as transmission pylons, trunk road, and CTRL. Remnant rural heritage features such as hedgerows, orchards and shelterbelts are few and are in poor condition. The 20th century development of historic village edges gives a high negative impact on the view. This area is considered to be weak ecologically - there is much intense arable cultivation which is relieved only by minimal, unmanaged patches of remnant hedgerow. The condition of this area is considered to be very poor.

SUMMARY OF ANALYSIS

Condition — **Very Poor.**

Pattern of elements:	Coherent.
Detracting features:	Many.
Visual Unity:	Interrupted.
Cultural integrity:	Poor.
Ecological integrity:	Weak.
Functional Integrity:	Very Weak.

Sensitivity

The undulating landform is apparent in the open views over the landscape area. Visibility is therefore high.
The main inherent characteristics which make up the landscape pattern have become indistinct. The historic features of hedgerow enclosure and the more recent shelterbelts are now indistinct elements of the landscape. Building forms on the edge of settlements do not contribute to local distinctiveness and there is very little time-depth to the landscape's current dominant features. The routes of established highways, which are considered to be of ancient origin, no longer have a great impact on the landscape.

Sensitivity — **Moderate.**

Distinctiveness:	Indistinct.
Continuity:	Historic.
Sense of Place:	Weak.
Landform:	Apparent
Extent of tree cover:	Open
Visibility:	High.

LANDSCAPE ACTIONS

This is a large-scale landscape which has become fragmented with redundant and diverse elements, and denuded of characteristic features. It requires simplification, but also acknowledgment of new functions.
Create a large-scale landscape based on large blocks of woodland and large blocks of arable cultivation. Create ecologically-rich corridors along transport routes. Create an urban edge which restores some characteristic enclosure features, using appropriate species which may be innovative.
Restore the impact of the original highway network, creating appropriate management plans to restore 'managed' characteristics to the landscape.

SUMMARY OF ACTIONS

RESTORE AND CREATE.

Create a simplified pattern within the landscape using large blocks of woodland, large areas of arable fields
Create an edge to the urban area - restore some enclosure, using characteristic rural features
Create functional agricultural features
Create ecologically rich corridors
Restore the positive impact of historic highway features
Restore open and controlled views across open farmland

previous <<

WESTERN THAMES MARSHES

PHOTOGRAPH

CHARACTERISTIC FEATURES

Low-lying flat, open marshland, fragmented by built development. Urban/estuarine context.
River uses.
Remnant grazing marsh and arable farmland.
Some localised ditches, dykes, wetlands and scrub.

CONTEXT

Regional: Thames Gateway

Condition

	low	moderate	high
good	REINFORCE	CONSERVE & REINFORCE	CONSERVE
moderate	CREATE & REINFORCE	CONSERVE & CREATE	CONSERVE & RESTORE
poor	CREATE	**RESTORE & CREATE**	RESTORE

Sensitivity

LANDSCAPE ANALYSIS

Condition

These small areas of low-lying, open marshland are greatly fragmented by views of industrial and housing development, creating discordant fragments of the character area. Views out are limited by sea defences and development. There are many large-scale visual detractors such as quarries and industrial parks, with associated access roads and signage some instances of tipping. Localised ditches, wetlands and scrub raise the ecological profile of the area, but only operate as weak networks, with the ditches being generally unmanaged and scrub vegetation becoming more prevalent. Some former grazing marsh has been converted to improved grassland. There is very little evidence of the cultural elements of the former estuarine grazing marsh or of natural links with adjacent areas - the functional integrity of this area is very poor.

Sensitivity

The built form and general land use within the area has a high negative impact. Many elements within the landscape such as roads and structures are recent and have become characteristic of the area, but are not locally distinct. Urban skyline features can be said to be recent characteristics.
The original sea defences and drainage patterns, which are the remnants of the historic character of the area, are generally overwhelmed by large engineering bunds and have become degraded through lack of appropriate management of watercourses. This is potentially a very distinctive landscape which currently has a poor sense of place. The openness of the area means that visibility is high.

LANDSCAPE ACTIONS

Create a new framework for the remaining area of marshland and open pasture, incorporating adjacent areas of commercial or residential development. In degraded areas, create a new landforms which incorporate new managed wetland and drainage features, but also enhances the existing historic features of the landscape such as ditches and dykes.
Restore habitats by enhancing the management of existing semi-natural grazing marsh and drainage systems.
Create new habitats such as reedbeds and salt marsh.
Create a visual containment to the remaining undeveloped marshland using features of land drainage and marsh e.g. a major peripheral drain which also serves as a natural habitat.

SUMMARY OF ANALYSIS

Condition — **Very Poor.**

Pattern of elements:	Incoherent.
Detracting features:	Many.
Visual Unity:	Significantly Interrupted.
Cultural integrity:	Poor.
Ecological integrity:	Moderate.
Functional Integrity:	Weak.

Sensitivity — **Moderate.**

Distinctiveness:	Characteristic.
Continuity:	Recent.
Sense of Place:	Weak.
Landform:	Apparent
Extent of tree cover:	Open
Visibility:	High.

SUMMARY OF ACTIONS

RESTORE AND CREATE.

Create a boundary feature to the remaining open marsh/grassland
Create reedbeds and salt marsh
Create a framework to the adjacent industrial activities, developing a design code which respects the inherent landscape conditions and enhances the industrial areas
Restore habitats by sensitive management

previous <<

Key Qualities Desirable to Safeguard:

- Sense of exposure and wildness.
- Complex pattern of small inlets, ditches and creeks.
- Long distance views to prominent natural and man made features.
- Mucking Flats and Marshes SSSI part of Thames Estuary and Marshes SPA and Ramsar Site.

Key Landscape Conditions and Options for Sustainable Development:

- It is unlikely that development of the scales listed in section 3.2.5 would be able to be accommodated successfully whilst safeguarding those attributes that contribute to the distinctiveness of the Mucking Flats LCA.

C5 – Tilbury Marshes

Key Characteristics

- Low lying, level landscape.
- Horizontal landform.
- Large scale landscape.
- Network of linear ditches.
- Southern skyline of dock cranes, chimneys, pylons and power lines.
- Close proximity of residential areas.

Overall Character

The character area is located in the south east of Thurrock adjacent to the River Thames. To the north the area is bounded by the Chadwell Escarpment Urban Fringe LCA which rises abruptly from the level marshland landscape. A broad wedge of the character area penetrates the Urban Landscape between the settlements of Chadwell St Mary and Tilbury. In general Tilbury Marshes LCA consists of level, low lying, drained alluvial marshland under predominantly arable farmland but with smaller concentrations of rough grazing land around Little Thurrock, Tilbury Fort and Goshems Farm. The enclosure pattern is defined by straight ditches and dykes creating predominantly rectilinear field shapes particularly in the west of the character area where the influence of the Chadwell Escarpment LCA is not as strong. Within the east fields are larger with irregular boundaries. In the south of the area adjacent to the River Thames there are two markedly different landmark buildings that visually articulate the long settlement period of this landscape and its changing function. The existing building at Tilbury Fort originated as a British Castle Fortress type Fort with four diamond shaped buttresses forming an overall pentagon, and was used as a defence throughout its history until the late 19th century. Tilbury Power Station is a 1400 Megawatt coal fired power station. Its concrete chimneys are visible from many locations within Thurrock and Kent Thames-side. A tight network of pylons and power lines emerges north from the power station across Tilbury Marshes LCA.

Evaluation

Sensitivity to very large-scale urban development – **High**
Very large-scale development would result in extensive degradation of the large-scale low-lying character of Tilbury Marshes LCA.

Sensitivity to substantial-scale urban developments – **Moderate**
The character area is strongly influenced by urban areas and utilities infrastructure. The addition of development of this scale, if sited appropriately would not degrade the overall character of the LCA.

Sensitivity to small-scale urban developments – **Low**
Small-scale development would result in only limited degradation of the elements that together combine to give the area's open, exposed character.

Key Qualities Desirable to Safeguard:

- The setting to Historic Tilbury Fort.
- Horizontal landform.
- Large scale landscape.
- Sense of exposure and openness.
- County wildlife and nature conservation sites.
- Historic pattern of drainage ditches.
- Historic green lanes.

Key Landscape Conditions and Options for Sustainable Development:

- Ensure that new development respects the setting of Chadwell Escarpment Urban Fringe LCA.
- Opportunity to create new landscapes associated with urban extensions in the west of the character area.
- Ensure that a linear area of marshland habitat is retained within Substantial-scale developments.

- Facilitate access to the marshes from settlement edges via green links.
- Soften the edges of developments with areas of open water and reed beds reflecting the moats at Tilbury Fort.

D1 – Aveley/South Ockendon Urban Fringe

Key Characteristics

- Pockets of agricultural land use.
- Weak enclosure pattern of gappy, incomplete or absent hedges.
- Harsh urban edges to some parts of Aveley and South Ockendon.
- Flooded gravel pits.
- Paddocks and equestrian land uses.
- Chaotic, fragmented character.
- Strong physical barriers formed by roads.
- Movement of traffic through major transport corridors.
- Noise intrusion from road traffic.

Overall Character

This character area lies to the north of the Mar Dyke River Valley Urban Fringe LCA and envelops the small settlements of Aveley and South Ockendon. It lacks the unifying elements that give a sense of cohesion and order to Bulphan or Langdon Hills LCAs and has a chaotic character. As an urban fringe landscape, it is transitional in nature and strongly influenced by the two settlements, which are separated by Belhus Park and the M25. The M25, A13, CTRL and C2C rail network are concentrated within the western half of the character area. Generally it is a degraded, impoverished working landscape subjected to a diverse range of land uses including recreation, transport and utility corridors, agriculture, mineral extraction, landfill and equestrian uses. The underlying physical character of the landscape is a gently undulating plateau that slopes gradually down to the eastern Fenland Landscape. Certain locations along the edges of the plateau afford long distance views across the Mar Dyke River Valley towards the predominantly industrial character of West Thurrock and Purfleet Urban LCA and the cluttered skyline of pylons, bridges and other structures.

Evaluation

Sensitivity to very large-scale urban development – **High**
The character area is strongly influenced by the two urban areas adjacent to it. The area contains valuable historic landscapes and wildlife conservation sites. Development of this scale would result in the loss of these features that are important to the LCA's overall character.

Sensitivity to substantial-scale urban developments – **Moderate**
Substantial-scale urban development could potentially make use of the less valuable landscapes within the area without degrading the overall character of the LCA.

Sensitivity to small-scale urban developments – **Low**
Low sensitivity due to the already strong influence and visual prominence of the two existing settlements of Aveley and South Ockendon adjacent to the character area.

Key Qualities Desirable to Safeguard:

- Flooded gravel pits which provide important habitats.
- Outward looking long distance views across the Mar Dyke River Valley.
- County Wildlife Sites.
- Local Historic Landscape at Belhus Park.
- Pockets of agricultural land that create a rural character.
- Inner Thames Marshes SSSI.

Key Landscape Conditions and Options for Sustainable Development:

- Ensure that development respects the existing historic landscape framework of the area and nature conservation sites.
- Potential to enhance the environment of the A13 corridor to complement appropriate development.
- Soften urban edges through structure planting and by strengthening existing hedgerows.
- Retain and enhance existing open space on the settlement edges and utilise them to enhance connectivity between them wildlife and recreation sites.
- Opportunity to create community woodlands.
- Thames Chase Forest initiative, Green Grid South Essex, RSPB Rainham, Wennington and Aveley Marshes Reserve (London Conservation Park), could attract funding and support establishment of an appropriate landscape framework for development.

D2 - Mar Dyke River Valley Urban Fringe

Key Characteristics

- River valley with moderate to steep valley sides to the east and broader floodplain to the west.
- Well wooded valley sides with significant areas of ancient woodland.
- Dominant infrastructure in the west.
- Areas of wet grazing on floodplain.
- Evidence of past mineral extraction.

Overall Character

The character area comprises the middle and lower sections, including the channel, floodplain and valley sides of the Mar Dyke River Valley. The M25/A282 and A13 (with their associated junctions) dissect the character area. To the east, the valley has moderate to steep valley sides, formed from clay and sand/gravel pebble beds. The narrow level alluvial floodplain contains a broad tract of grassland and is fringed by damp pastures with wet grazing. The valley sides are well wooded, including ancient semi natural ash/hazel or oak and mixed woodland of Brannet's Wood, Millards Garden and Brick Barn Wood. Individual pollarded willow riverside trees and small areas of self-regenerating scrub/woodland are also a feature of parts of the valley floor. The small settlement of North Stifford forms a focal point for attractive views along the eastern part of the valley and the Victorian brick railway viaduct and Edwardian Stifford Pumping Station provide distinctive historic built features. To the west, as the river approaches its confluence with the River Thames at Purfleet, the valley is broader, flatter and more open. Intrusive pylons, situated on the river terraces, dominate long views along the valley, with Watt's Wood providing a framing backdrop on the southern valley side. Warehouse buildings on the urban fringe of Purfleet, and a caravan site also detract from visual amenity. Rough grassland, with remnant hedges is predominant on the more open valley sides. There is some sense of seclusion within the east of the character area, however tranquillity is disturbed in proximity to the major roads and settlements.

Evaluation

Sensitivity to very large-scale urban development – **High**
The Mar Dyke River Valley LCA has along its length many countryside management initiatives and is the focus of nature conservation and recreational activities. It is also a relatively small character area. It is therefore assessed as highly sensitive to very large-scale development.

Sensitivity to substantial-scale urban developments – **High**
Development of this scale would cause extensive degradation to those features of value and characteristics that distinguish the LCA.

Sensitivity to small-scale urban developments – **Moderate**
Small scale urban development would cause some degradation of landscape character. However there may be scope to integrate the development within the landscape.

Key Qualities Desirable to Safeguard:

- Areas of wet grazing within the floodplain.
- Ancient woodland on valley sides (Brannett's wood, Millard's Green & Brick Barn Wood).
- Distinctive built heritage features – Victorian brick-built viaduct/Edwardian Stifford pumping station.
- Small areas of self-regenerating scrub/woodland and individual pollarded trees.
- Local nature conservation designation (Mar Dyke River Corridor).
- Extensive County Wildlife Site.

Key Landscape Conditions and Options for Sustainable Development:

- It is unlikely that development of the scales listed in section 3.2.5 would be able to be accommodated successfully whilst safeguarding those attributes that contribute to the distinctiveness of the Mar Dyke River Valley Urban Fringe LCA. However, small scale development could potentially be accommodated given the provision of extensive new green infrastructure.

D3 - North Stifford Corridor Urban Fringe

Key Characteristics

- Relatively flat land.
- Visual clutter of pylons and infrastructure.
- Mixed urban fringe land uses.
- Extensive road network.

Overall Character

The character area is delineated on all sides by major roads (A13 to the north, M25 to the west and A1036 to the south). Located to the north of Chafford Hundred and Lakeside Retail Park and to the

south of the Mar Dyke river valley, the area is predominantly flat with some landform screening mounds and small patches of woodland close to the roads. Localised steeper slopes and cliff faces provide visual interest. The area has a fragmented character, arising from mixed urban fringe-related land-use, including farmland, areas of past mineral extraction, Thurrock motorway services, lake, Motor Sports Complex and Coach Park. Pylons and other infrastructure dominate the visual amenity in the south of the character area.

Evaluation

Sensitivity to very large-scale urban development – **High**
Due to its small size the character area would not be able to accommodate development of this scale.

Sensitivity to substantial-scale urban developments – **High**
Due to its small size the character area would not be able to accommodate development of this scale. Purfleet Chalk Pits SSSI in the west of the LCA is of geological significance. Its presence reduces the overall developable area of the LCA.

Sensitivity to small-scale urban developments – **Low**
Urban fringe is the dominant characteristic of this LCA. The introduction of small scale development could be beneficial.

Key Qualities Desirable to Safeguard:

- Small patches of woodland.
- Purfleet Chalk Pits SSSI.
- Vegetation along transport corridors.

Key Landscape Conditions and Options for Sustainable Development:

- It is unlikely that development of the scales listed in section 3.2.5 would be able to be accommodated successfully within the North Stifford Corridor LCA. However, small scale development could potentially be accommodated given the provision of new green infrastructure.

D4 – White Crofts/Orsett Heath Urban Fringe

Key Characteristics

- Gently undulating encapsulated urban fringe farmland.
- Large fields with weak enclosure pattern.
- Abrupt urban edges.
- Noise and visual intrusion from roads.
- Visual intrusion form pylons and power lines.
- Remnant hedgerow lined lanes.

Overall Character

The character area is located to the north of Grays and east of Chadwell St Mary. The area consists predominantly of gently undulating urban fringe farmland strongly influenced by the presence of transport corridors and utilities infrastructure. The centre of the area, in the vicinity of White Crofts, consists of a bowl shaped farmland landscape. The hedgerow lined Hornsby Lane, connecting the A1013 with Orsett Heath, crosses this landform and gives a sense of the rural farmland landscape that has since been encapsulated by roads and settlement and crossed by pylons and power lines. Settlement pattern consists of farm steadings adjacent to the numerous minor roads and lanes that cross the character area. Other than the tiny hamlet of Orsett Heath, the only other settlement is the village of Southfields in the north east of the character area. Southfields is linear in shape with a sprawling suburban eastern fringe. The harsh northern urban edge of Chadwell St Mary is dominated by three residential tower blocks that contrast with the open undulating farmland immediately adjacent to them. Western parts of the character area are dominated by the large junction on the A13 south of Baker Street. The north and north-eastern urban edge of Grays is abrupt, delineated by built form. However, some vegetation has been retained adjacent to distributor roads on the northern edges of Grays, providing some screening to the A13. Pylons and power lines are visually intrusive features within this character area.

Evaluation

Sensitivity to very large-scale urban development – **High**
Development of this scale would mask the remnant farmland landscape within this urban fringe landscape changing it to a predominantly urban area. The character of rural lanes would be lost.

Sensitivity to substantial-scale urban developments – **Low**
Development of this scale would leave some areas of farmland untouched and a sense of openness would be retained. There would be some visual intrusion to receptors on the fringes of the existing settlements.

Sensitivity to small-scale urban developments – **Low**
Development of this scale would not degrade the character of the landscape which is strongly influenced by adjacent urban areas.

Key Qualities Desirable to Safeguard:

- Remnant hedgerow lined lanes.
- County Wildlife Site.
- Local Nature Conservation Sites.
- Narrow lanes.
- The character of the hamlet of Orsett Heath.

Key Landscape Conditions and Options for Sustainable Development:

- Ensure that development is not sited at prominent skyline locations.
- Create a more 'permeable' urban fringe by promoting recreational use
- Utilise existing areas of open space within the urban fringe to create 'green wedges' through which access opportunities to countryside to the north of the A13 could be facilitated.
- Ensure that small lanes are integrated into appropriate development.

D5 – Linford/Buckingham Hill Urban Fringe

Key Characteristics

- Elevated, broad rounded ridge.
- Urban/rural fringe character.
- Multiple land uses including mineral extraction and industrial land uses.
- Extensive views to the south.
- Concentration of woodland around the Durox site.
- Rough pasture on the crest of the ridge.
- Dispersed settlement pattern of farmsteads.

Overall Character

This character area is a distinctive area of mostly elevated landform forming a high point extending from Stanford-le-Hope in the north-east to Hoford Road in the south-west. It is bounded to the north by lower lying land of the Sticking Hill LCA, to the south by undulating farmland of West Tilbury LCA and to the east by Mucking Marshes LCA. A visually prominent, broad, flat to undulating topped ridge is the principal unifying feature within this area. This relief is in marked contrast to adjacent character areas, particularly Mucking Marshes LCA. There is a diverse range of land uses within the area including, rough grazing on the ridge top, mineral extraction, Durox Industrial Plant, landfill, recreation and agriculture. Despite the elevated landform and the sense of separation from settlement edges there is an urban fringe character to the area to which the busy Buckingham Hill Road, pylons and power lines contribute. There is a concentration of woodland around the Durox site and extensive woodland and thick hedgerows on the south-western part of the hill. Settlement pattern consists of dispersed farm buildings, the village of Linford being the only settlement within the area. From the ridge there are extensive views towards the Thames Estuary, Kent Hills and the Sticking Hill and Langdon Hills LCAs to the north. There is a sense of elevation and separation between industrial/urban areas.

Evaluation

Sensitivity to very large-scale urban development – **High**
Development of this scale would mask the visually prominent ridge which is the unifying feature within this character area. There are small areas of nature conservation importance within the area.

Sensitivity to substantial-scale urban developments – **High**
Development of this scale would mask the visually prominent ridge which is the unifying feature within this character area. There are small areas of nature conservation importance within the area.

Sensitivity to small-scale urban developments – **Low**
Development of this scale could potentially be achieved whilst retaining the integrity of the character of visually prominent ridge and its valuable landscape features.

Key Qualities Desirable to Safeguard:

- Extensive views to the south.
- Concentration of woodland around the Durox site.

Key Landscape Conditions and Options for Sustainable Development:

- Introduction of new small-scale development should avoid the prominent broad flat to undulating topped ridge.
- Extensive open views to the south should be maintained.
- Within this landscape character area, there is also the potential for the creation of new escarpment woodlands and hedgerows.

D6 – Chadwell Escarpment Urban Fringe

Key Characteristics

- Steep-sided, south facing sand and gravel escarpment.
- Irregular fields of rough grassland and pasture.
- Small copses and areas of scrub.
- Series of narrow lanes enclosed by hedgerows.
- Series of individual historic farmsteads.

Overall Character

The character area encompasses a steep sided, south facing sand and gravel escarpment, which marks the edge of the lowest part of the Thames Terraces. Relatively low in height, the escarpment provides a marked contrast to the flat, drained alluvial farmland of Tilbury marshes to the south. A few small dry valleys also indent the east to west aligned escarpment. Small copses and areas of scrub (comprised of hawthorn, blackthorn, field maple, elm, oak and ash) frame small-scale, irregular fields of rough grassland and pasture. The escarpment is accessible via a series of narrow, winding lanes, enclosed by hedgerows. The church tower within the small settlement of West Tilbury is a focal point on the skyline. Other than west Tilbury, settlement patterns consist of a series of individual historic farmsteads. Power lines dominate the visual amenity to the west of the character area, and there is adverse impact from major roads around Chadwell, together with localised intrusion from urban edge housing, industrial and mineral sites.

Evaluation

Sensitivity to very large-scale urban development – **High**
Chadwell LCA is a small scale intimate landscape that would be masked by development of this scale.

Sensitivity to substantial-scale urban developments – **High**
Chadwell LCA is a small scale intimate landscape that would be masked by development of this scale.

Sensitivity to small-scale urban developments – **High**
Intrinsic to the character of this area is its steep topography that contrasts with the adjacent low lying areas. The land use pattern on these slopes consists of a mosaic of small fields and paddocks and wildlife sites. The intrinsic character of the area would be degraded by small scale development.

Key Qualities Desirable to Safeguard:

- Small copses and areas of scrub (comprised of hawthorn, blackthorn, field maple, elm, oak and ash).
- Series of narrow lanes enclosed by hedgerows.
- Series of individual historic farmsteads.
- County Wildlife Sites, e.g. Broom Hill.

Key Landscape Conditions and Options for Sustainable Development:

- It is unlikely that development of the scales listed in section 3.2.5 would be able to be accommodated successfully whilst safeguarding those attributes that contribute to the landscape character of the Chadwell Escarpment.

D7 – West Tilbury Urban Fringe

Key Characteristics

- Gently undulating farmland.
- Large, open fields.
- Absence of hedgerows and woodland cover.
- Harsh urban edges.
- Visual intrusion of pylons and power lines.
- Concentration of settlement in the east of the area.
- Dispersed farmsteads.
- Network of minor roads and lanes.
- County Wildlife Sites, e.g. Broom Hill.

Overall Character

This character area forms a broad swathe of farmland between Chadwell St Mary and East Tilbury. Its northern boundary is clearly defined by the Linford/Buckingham Hill LCA Escarpment, and its south-western boundary by Chadwell St Mary and the West Tilbury Escarpment. The urban edges of Chadwell St Mary, Linford and the western edge of East Tilbury are abrupt with very little softening of the urban edge by vegetation or landform. Parts of the eastern edge to Chadwell St Mary are poorly defined by open space and agricultural land that appears unmanaged having the appearance of derelict land. To the south and east of the area are the low-lying character areas of Mucking Marshes and Tilbury Marshes. The area is generally open in character with landcover consisting mostly of large arable fields. There is a remnant historic field pattern in the south east of the area. Tree cover is limited, primarily due to the loss of hedgerow elm trees. Where hedgerows have not been lost they frequently occur along historic lanes and tracks. Localised small copses consisting of hawthorn, elm, field maple and ash, and areas of scrub, are found around West Tilbury, Low Street, and east of Princess Margaret Road around Coalhouse Battery. Settlement is concentrated towards the eastern boundary with the pattern throughout the area being predominantly scattered farm buildings. The character area is crossed by a network of minor roads and lanes that carry some heavy traffic associated with local mineral works within the Linford/Buckingham Hill LCA. A railway line dissects the eastern half of the area. Pylons and power lines are a dominant feature traversing north to south across the middle of the character area.

Evaluation

Sensitivity to very large-scale urban development – **High**
The dispersed settlement pattern of this area would change to predominantly urban with the introduction of development of this scale. This type of development would also be visually intrusive as the topography of the area rises to the south and the scarp edge of Chadwell Escarpment Urban Fringe LCA.

Sensitivity to substantial-scale urban developments – **Moderate**
Development of this scale could potentially be mitigated.

Sensitivity to small-scale urban developments – **Low**
A small urban extension would not represent degradation of this character area which is strongly influenced by adjacent urban areas.

Key Qualities Desirable to Safeguard:

- Remnant historic field pattern in the south east.
- Historic lanes and tracks, sometimes lined with hedgerows.

Key Landscape Conditions and Options for Sustainable Development:

- Development should respect and retain the remnant historic field pattern in the southeast of the area.
- Introduction of very large-scale development into the area would change the sense of openness within the large arable fields of the character area. The essentially open, rural character of the landscape would be lost.
- There is potential that well-mitigated urban extensions at the western edge of East Tilbury could soften the current abrupt urban edge.
- There are possibilities for small to medium-scale development on the eastern edge of Chadwell St. Mary.

E1 - Aveley Urban Area

Key Characteristics

- Linear settlement contained by, and overlooking the Mardyke River Valley to the south.
- Layout of the settlement is dissected to the north and south by B1335 road corridor.
- Development within the small town is formed of a mixture of 1950's, 1960's and 1970's style housing, with some more recent housing development at the edges of the settlement.
- Limited distribution of publicly accessible greenspace within the settlement, with open space mainly consisting of school playing fields. Although not within the Urban Area, there is large area of greenspace consisting of sports fields and a golf course at Belhus Park to the north east of the settlement.

E2 – South Ockendon Urban Area

Key Characteristics

- Settlement is nucleated in the northeast around an old historic core, which focuses on St. Nicholas' church with a round flint (13th century) tower and adjacent green. Development also spreads to the south in a linear form along the B186 and main railway line.

- Settlement expanded to the west into a large 1960's/1970's suburban housing area containing a library, sports centre and two schools. A 1960's/1970's shopping precinct and flats are also located adjacent to the historic core, with some modern flats also included within the current urban fabric. There is also a large factory site, containing Ford warehouses and other large vacant factory units to the west of the Station.
- Within the large housing area, there are two significant areas of publicly accessible greenspace (Dike's Park and Bonnygate Wood). There is also access to the Mardyke River Valley to the south and Oak and Ash woods to the north east of the settlement. In comparison with Aveley Urban Area, there is a high proportion of greenspace within the settlement.

E3 – West Thurrock and Purfleet Urban Area

Key Characteristics

- West Thurrock, to the east of the Urban Area is a small linear settlement with a block-shaped form. Purfleet, is nucleated around an older settlement core (abutting the River Thames to the south) and is contained to the east by the railway line.
- Settlement layout has developed in relation to several major road and railway corridors such as A282 and A1306, which dissect the area in north south and east west directions. The older core of Purfleet, now surrounded by modern housing to the north, developed in the 18th Century around the military gunpowder magazine. West Thurrock church is isolated amongst large modern factory buildings and West Thurrock is bordered to the north by the large retail and commercial Lakeside Development.
- Around West Thurrock, a range of large commercial buildings and warehouses dominate the area. Closer to the River Thames, heavy industrial buildings associated with the Purfleet Thames Terminal (e.g. Esso) combine with the strong influence of associated utilities infrastructure.
- Other than the Lake within Lakeside retail development, there is lack of public amenity greenspace within the Urban Area. There are, however, pockets of sports fields and recreation areas at the edges of Purfleet and West Thurrock.
- The area supports a number of sites of significance for nature conservation (geological and wildlife sites), such as Purfleet Chalk Pits SSSI, West Thurrock Lagoon and Marshes SSSI, county wildlife sites and important sites for biodiversity (eg. anchor fields and St.Clements churchyard).

E4 – Grays/Chadwell St Mary Urban Area

Key Characteristics

- Grays and Chadwell St Mary are both nucleated settlements, which are divided from each other by the A1089 road corridor and settled within a network of arterial and local roads. 1970's housing.
- Settlement layout of Chadwell St Mary is concentrated on the crossroads of Brentwood Road and Linford Road, with the church as a focal point at this location. Grays spreads from the A13 corridor (in the north) to the shores of the River Thames (in the south) and contains several suburban housing areas ranging from the 1950's to modern style. There are also pockets of Victorian housing and the large new housing development at Chafford Hundred is also located to the north of the Urban Area.
- The town centre is focused around a central High Street and 1950's shopping precinct containing shops, civic offices the museum.
- There are several areas of greenspace within Grays, some of which are comprised of disused pits and workings.
- There are several areas of greenspace within Grays including Hangmans Wood and Deneholes SSSI and disused pits, (including Lion Pit SSSI, Grays Chalks Pit SSSI and the county wildlife sites Warren Gorge and Sand Martin Cliff), that support both geological and wildlife interest.

E5 – Tilbury and Docks Urban Area

Key Characteristics

- Tilbury is a nucleated settlement, which, although located in close proximity to the docks, is separated from the main waterfront industry by a main railway line.
- The docks, part of the Port of London, were built in the 1880's and contain large commercial warehouses and distinctive vertical cranes. From within the docks, there are substantial cross-river views. Housing development within Tilbury is predominantly post-war and includes some tower blocks and flat-roofed housing blocks.
- Adjacent to the docks, a large industrial and commercial area serves Tilbury and contains large warehouses and ASDA supermarket.
- There are several areas of publicly accessible greenspace within Tilbury, distributed within housing areas and to the northeast of the settlement (Karting Stadium).
- The southern boundary is adjacent to Vange and Fobbing Marshes SSSI.

Annex EDP 5
Zone of Theoretical Visibility (Based on the Project Site in its current form) (edp5988_d031e 23 July 2020 OK/FM)

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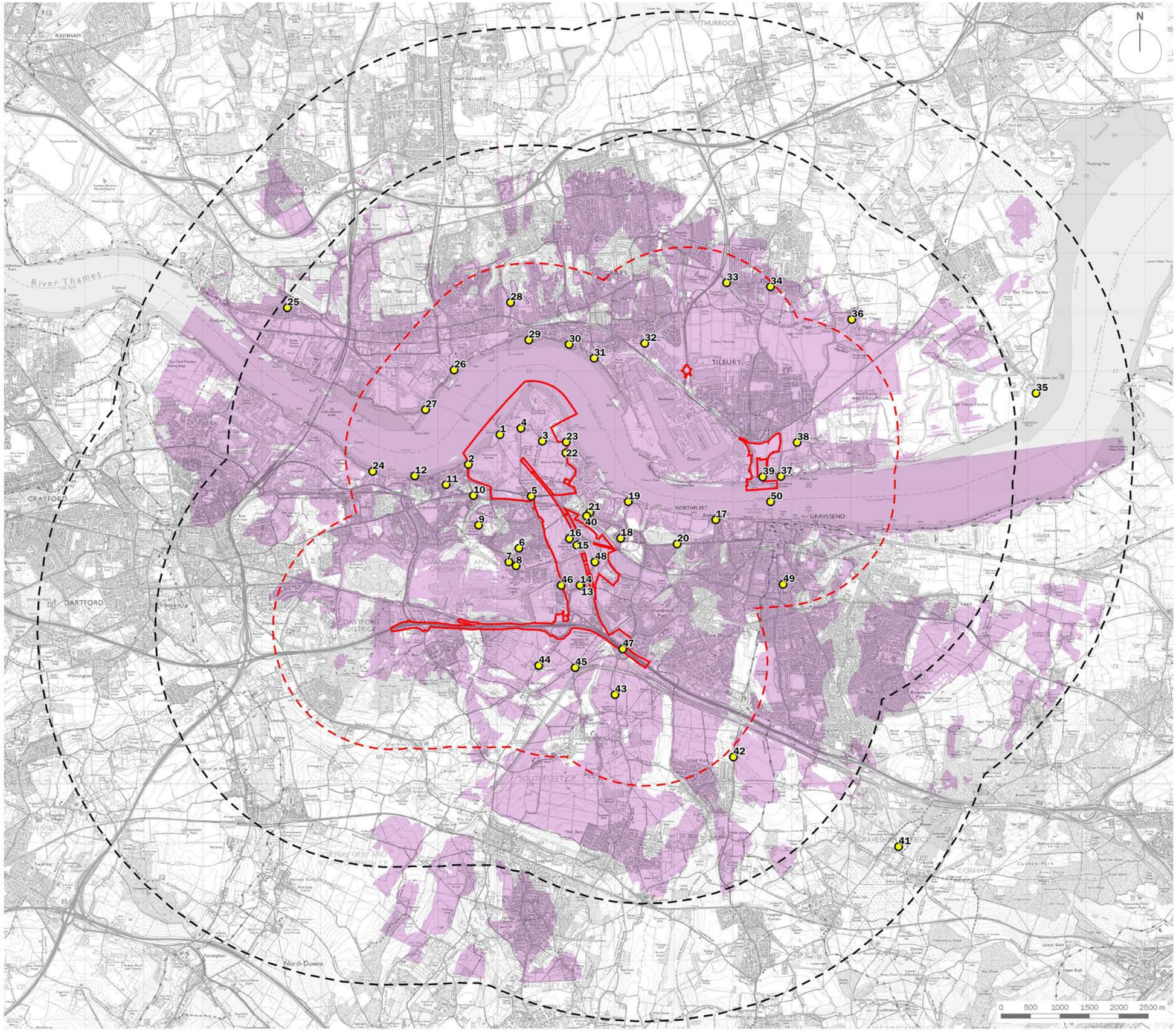

DCO Boundary

Range Rings (at 2km intervals)

2km Detailed Study Area

Potential Viewpoint Locations

Zone of Theoretical Visibility (ZTV)
Based upon the Project Site in its current form

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client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Figure 11.5: Zone of Theoretical Visibility (Based on the Project Site in its current form)

date	**23 JULY 2020**	drawn by	**OK**
drawing number	**edp5988_d031e**	checked	**FM**
scale	**Refer to scale bar @ A3**	QA	**GY**

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Annex EDP 6
Zone of Theoretical Visibility (Based on broad parameters) (edp5988_d033d 23 July 2020 OK/FM)

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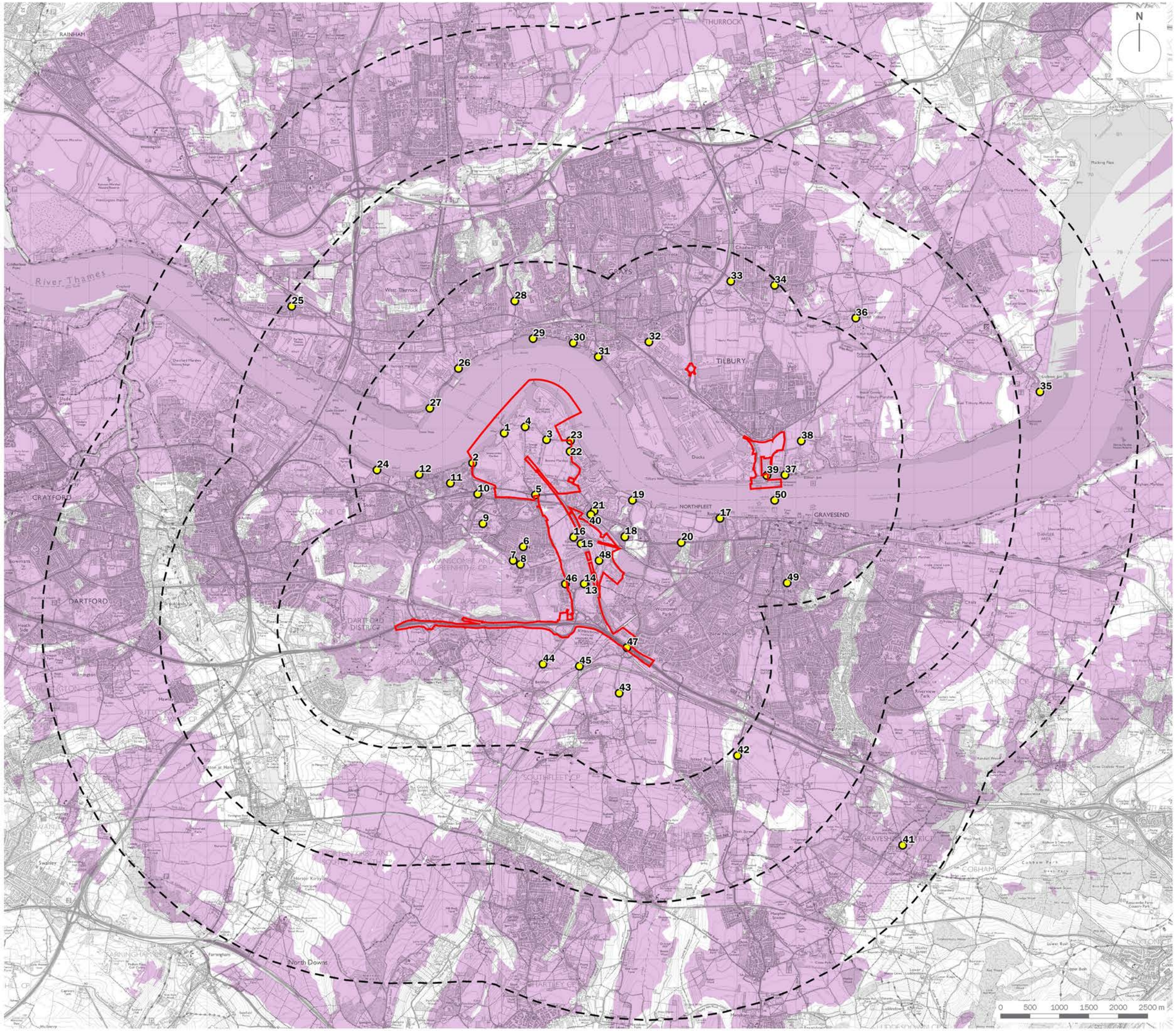

Site Boundary

Range Rings (at 2km intervals)

Viewpoint Locations

Zone of Theoretical Visibility (ZTV)

Based upon rochdale parameters:

A2 and Transport Corridor: 10m

Gate 1 area: 40 – 100m

Gate 2 area: 35 – 60m

Plaza area: 19m

Hotel: 49 – 128m

Terminal Areas: 12 – 27m

Car Parks: 34 – 38m

Back of House areas: 25 – 50m

Staff Accommodation: 32 – 46m

Visitors Centre: 41 – 46m

E-Sports and Conferention Centre: 40 – 44m

Hotel and Market: 47m

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Figure 11.6: Zone of Theoretical Visibility (Based on draft Rochdale Parameters)

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Plans

Plan EDP 1 Site Location and Site Boundaries
(edp5988_d036c 23 July 2020 OK/FM)

Plan EDP 2 Landscape Designations and Other Considerations
(edp5988_d037c 23 July 2020 OK/FM)

Plan EDP 3 Other Environmental Considerations
(edp5988_d038c 23 July 2020 OK/FM)

Plan EDP 4 National Character Areas
(edp5988_d010c 23 July 2020 OK/FM)

Plan EDP 5 Published Landscape Character Areas
(edp5988_d039c 23 July 2020 OK/FM)

Plan EDP 6 EDP Character Assessment
(edp5988_d012c 23 July 2020 OK/FM)

Plan EDP 7 Topography
(edp5988_d042c 23 July 2020 OK/FM)

Plan EDP 8 Photoviewpoint Locations
(edp5988_d040c 23 July 2020 OK/FM)

Plan EDP 9 Night Photoviewpoint Locations
(edp5988_d043c 23 July 2020 OK/FM)

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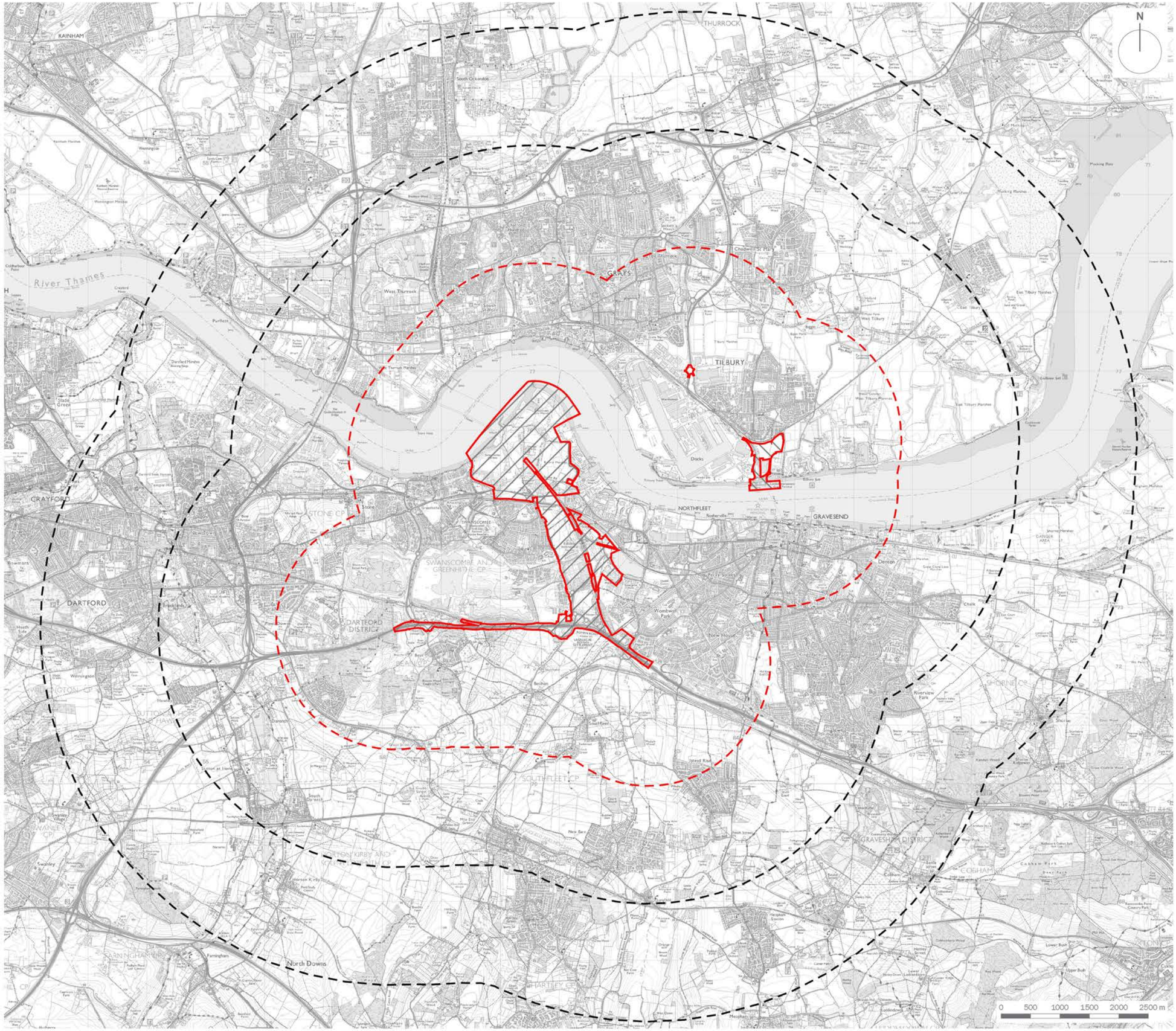

DCO Boundary

Kent Project Site

Essex Project Site

Range Rings (at 2km intervals)

2km Detailed Study Area

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 1: Site Location and Site Boundaries

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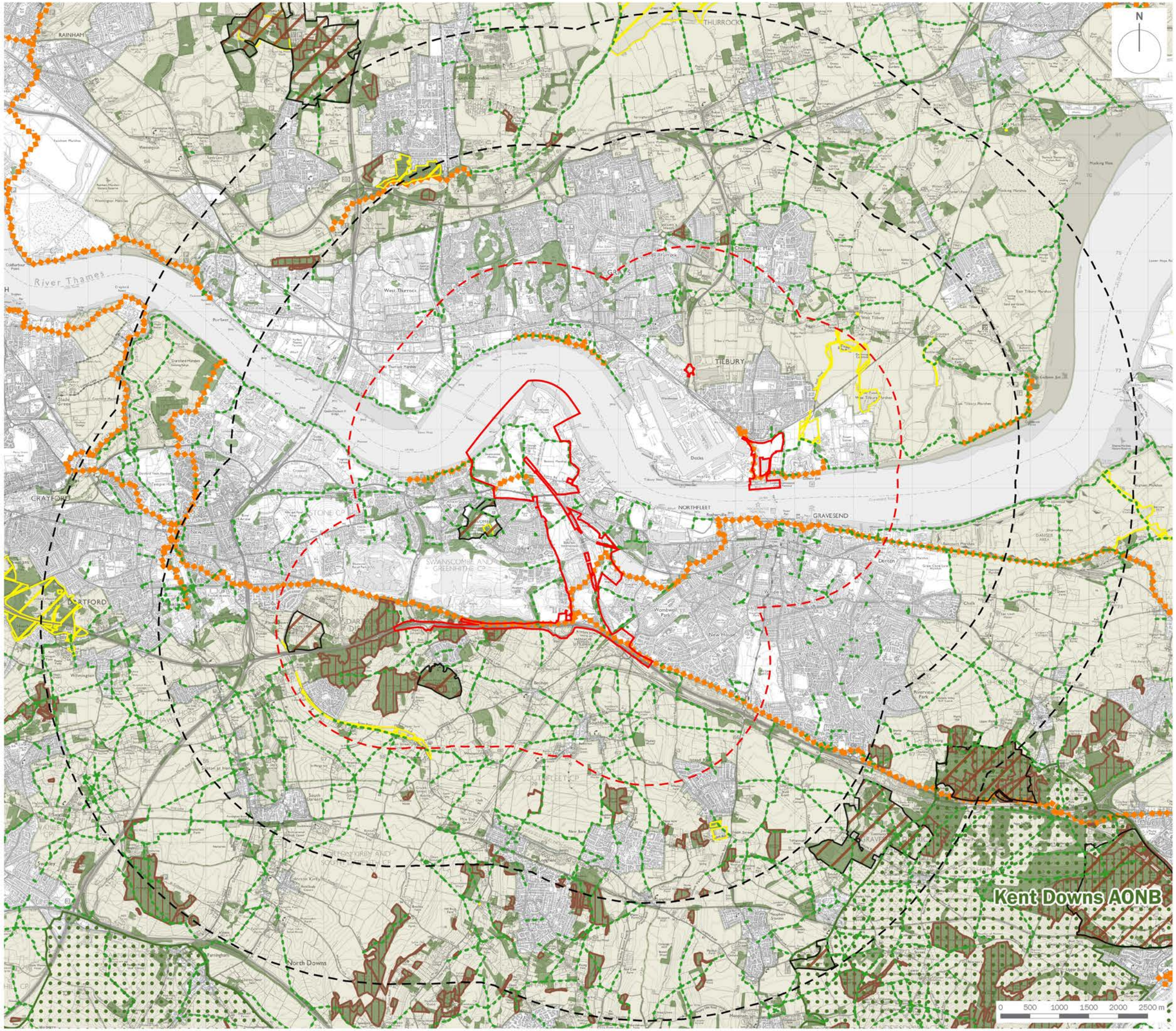

DCO Boundary

Range Rings (at 2km intervals)

2km Detailed Study Area

Landscape Designations

Kent Downs AONB

Other Relevant Considerations

Ancient Woodland

National Forest Inventory

Metropolitan Green Belt

Public Access

National Cycle Routes

Public Rights of Way

Open Access Land (CRoW Act 2000)

Country Parks

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 2: Landscape Designations and Other Considerations

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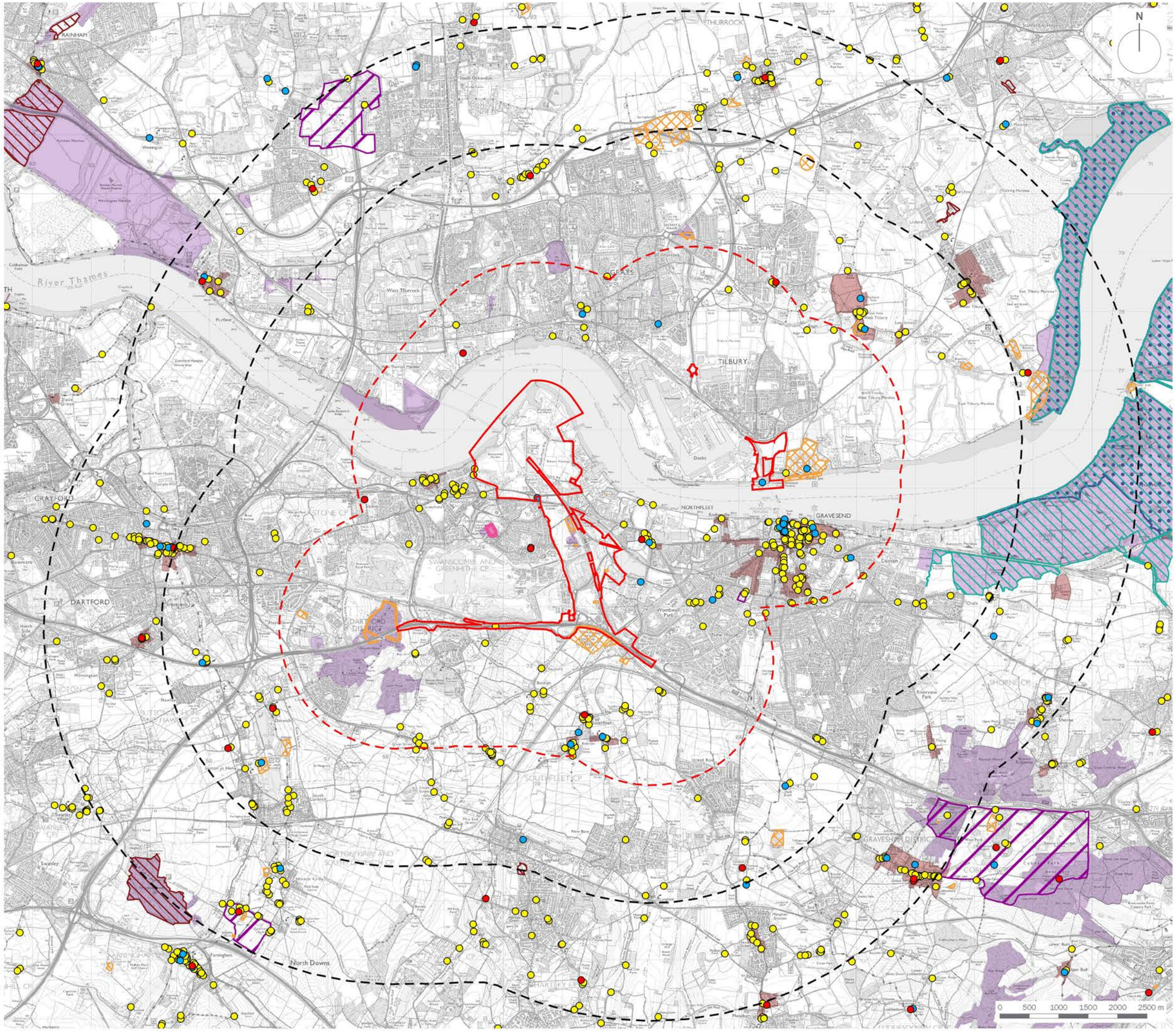

DCO Boundary

Range Rings (at 2km intervals)

2km Detailed Study Area

Heritage

Scheduled Monument (SM)

Registered Park and Garden (RPG)

Conservation Area (CA)

Grade I Listed Building

Grade II* Listed Building

Grade II Listed Building

Ecology

Site of Special Scientific Interest (SSSI)

Special Protection Area (SPA)

National Nature Reserve (NNR)

Local Nature Reserve (LNR)

RAMSAR Wetlands

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 3: Other Environmental Considerations

date	**23 JULY 2020**	drawn by	**OK**
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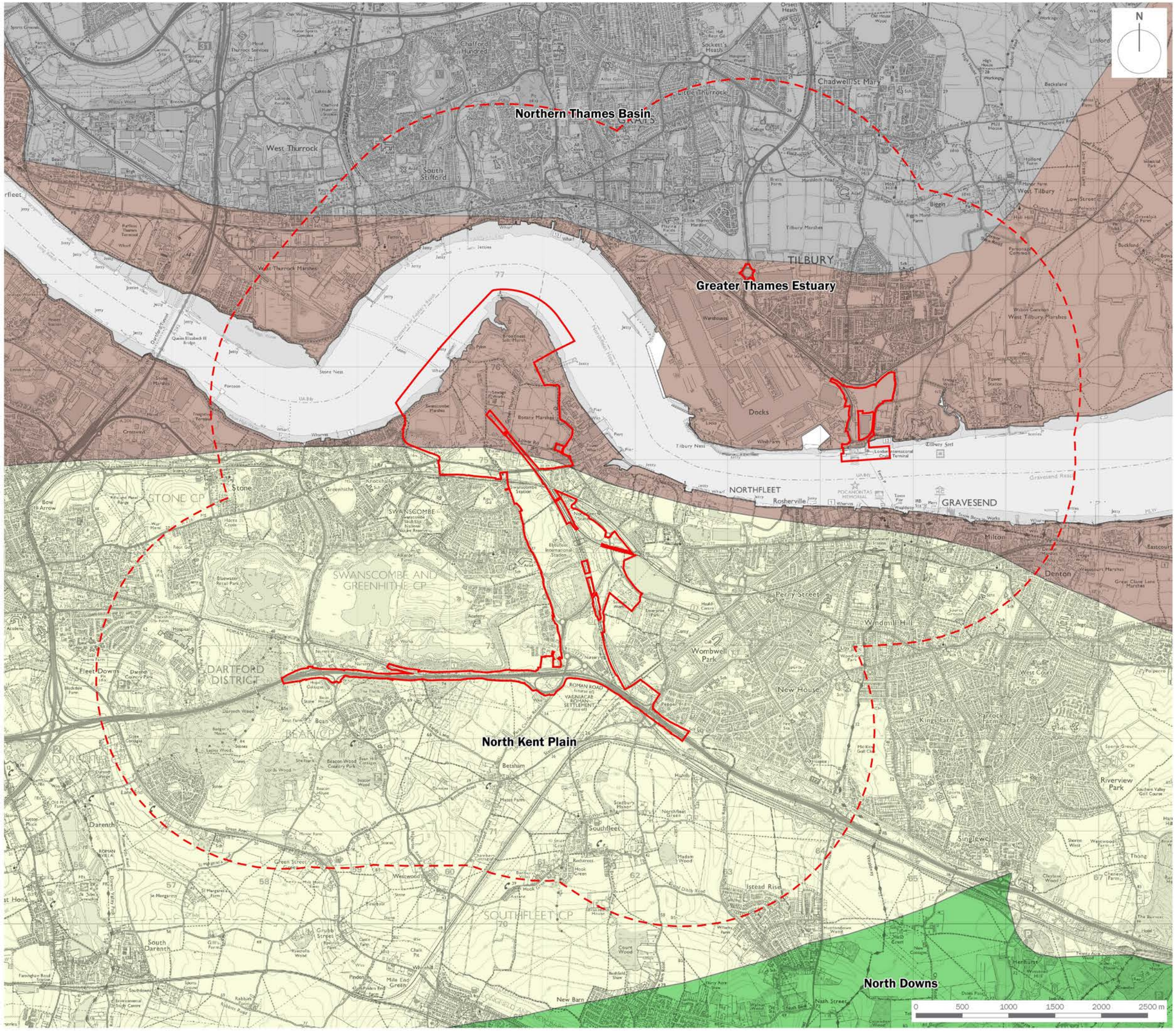

DCO Boundary

2km Detailed Study Area

National Character Areas

Greater Thames Estuary

North Downs

North Kent Plain

Northern Thames Basin

client

The London Resort Company Holdings Ltd

project title

London Resort

drawing title

Plan EDP 4: National Character Areas

date	**23 JULY 2020**	drawn by	**OK**
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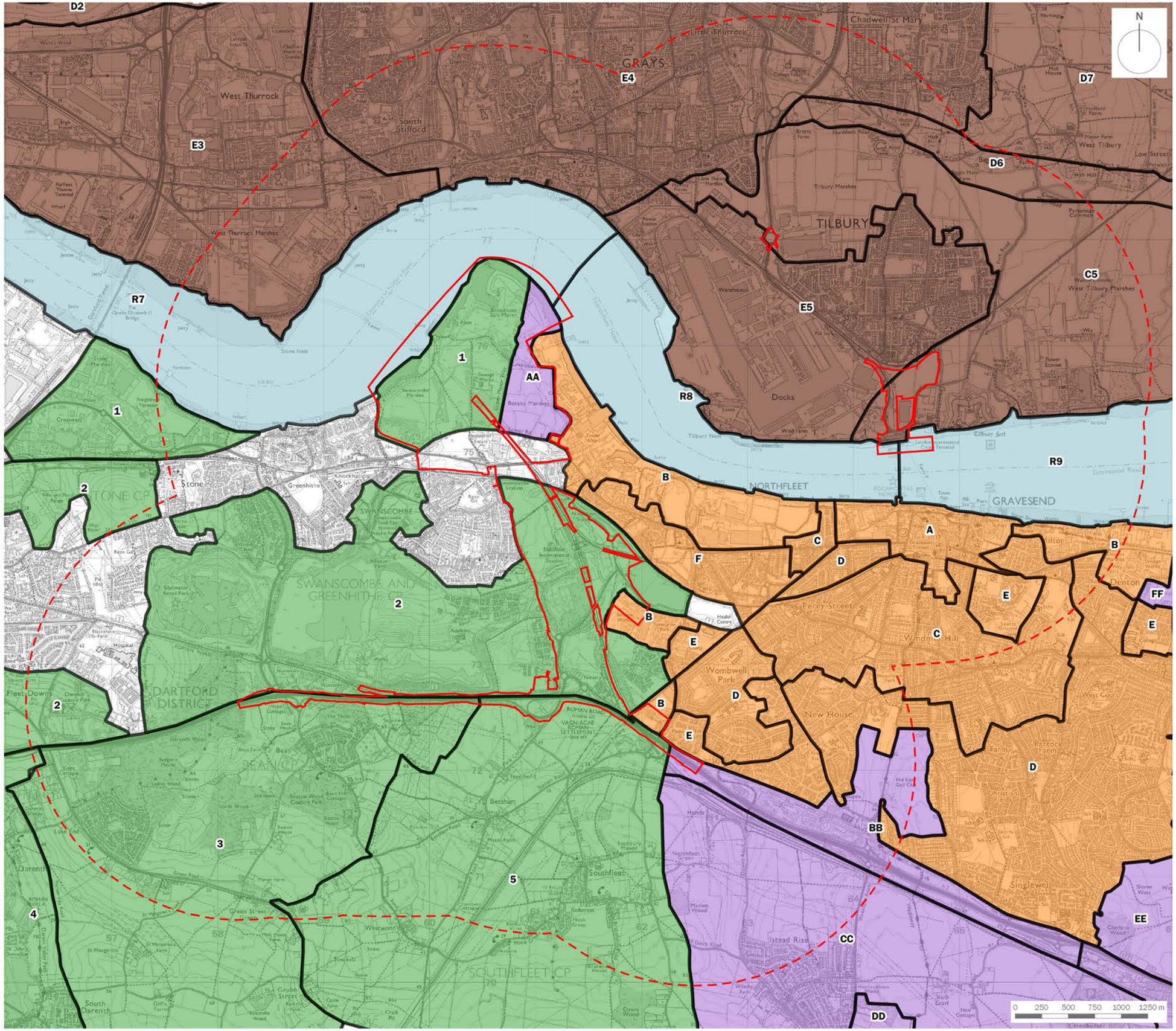

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 5: Published Landscape Character Areas

date	**23 JULY 2020**	drawn by	**OK**
drawing number	**edp5988_d039c**	checked	**FM**
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DCO Boundary

London Resort LCAs

- Chalk Pits
- Ebbsfleet
- Ingress Park
- International
- Marshland
- Northfleet
- Northfleet Industrial
- Springhead
- Swanscombe
- Tilbury Docks
- Bluewater
- Darenth Downs
- Swanscombe Heritage Park
- Southfleet and Istead Arable Lands
- Gravesend Southern Fringe
- Wombwell Park

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 6: EDP Character Assessment

date	**23 JULY 2020**	drawn by	**OK**
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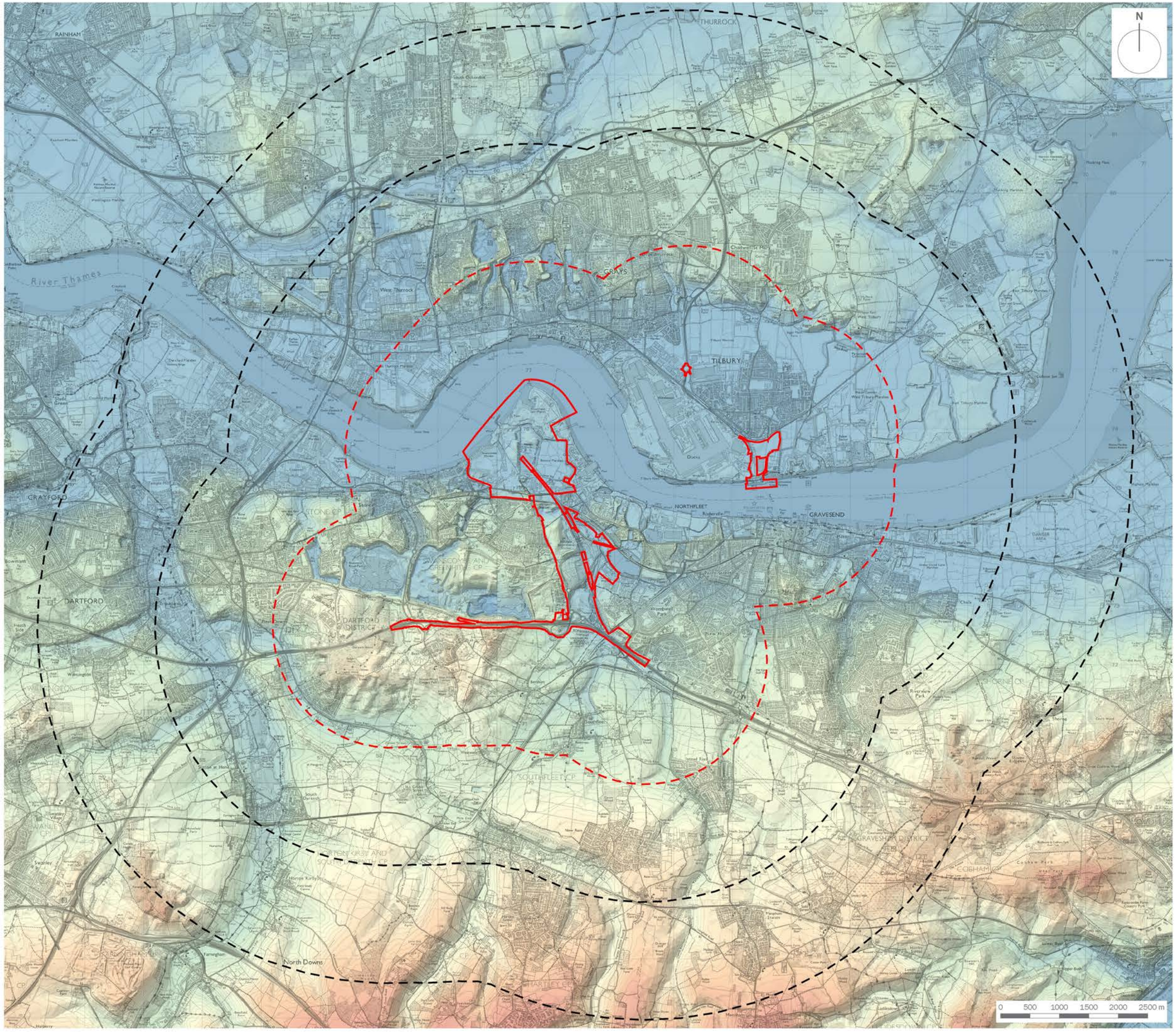

DCO Boundary

Range Rings (at 2km intervals)

2km Detailed Study Area

Elevation (Meters aOD)

-5
15
35
55
75
95
115
135
155

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 7: Topography

date	**23 JULY 2020**	drawn by	**OK**
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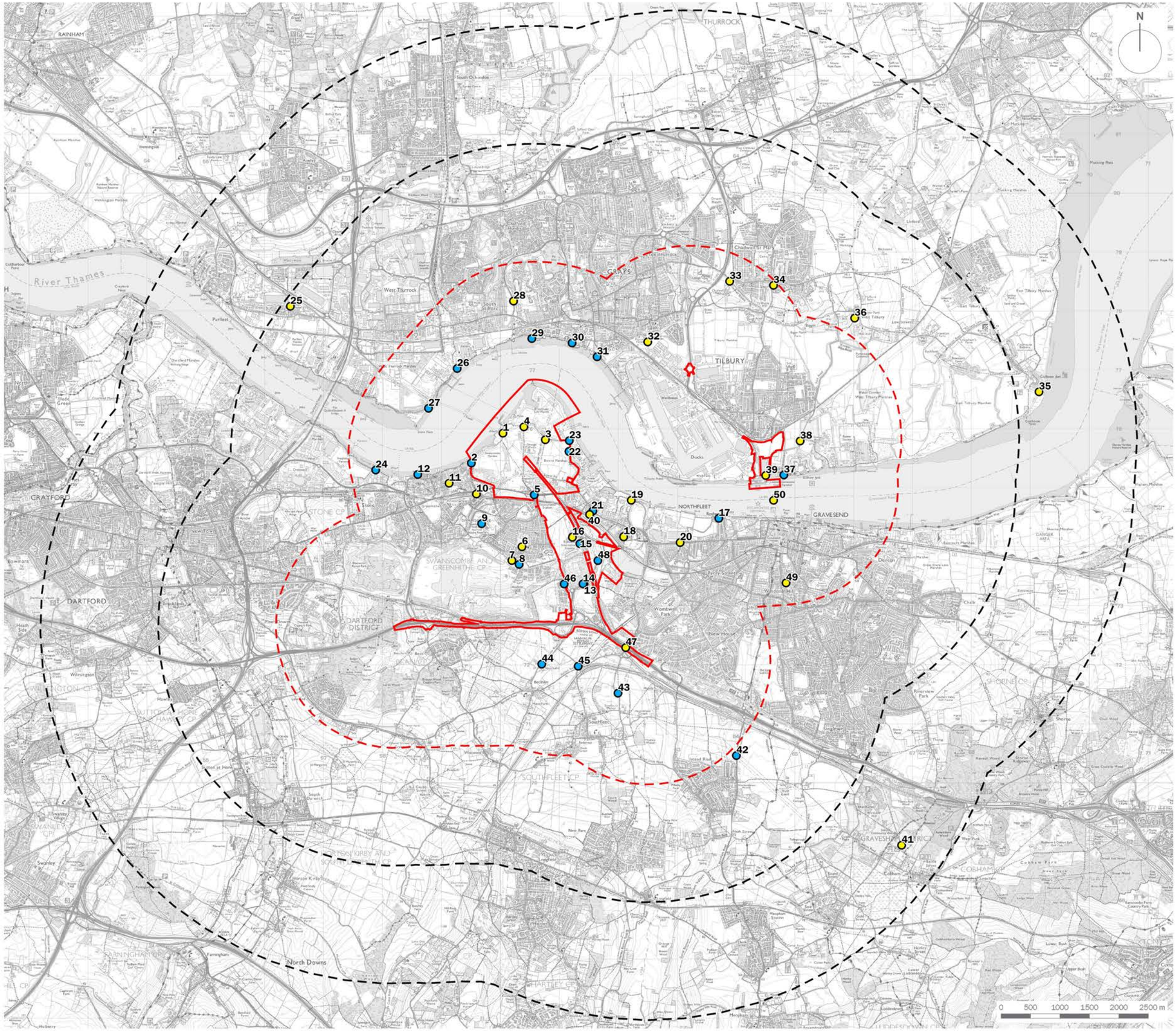

DCO Boundary

Range Rings (at 2km intervals)

2km Detailed Study Area

Potential Viewpoint Locations

Wireline photomontages

Photoviewpoints

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 8: Photoviewpoint Locations

date	**23 JULY 2020**	drawn by	**OK**
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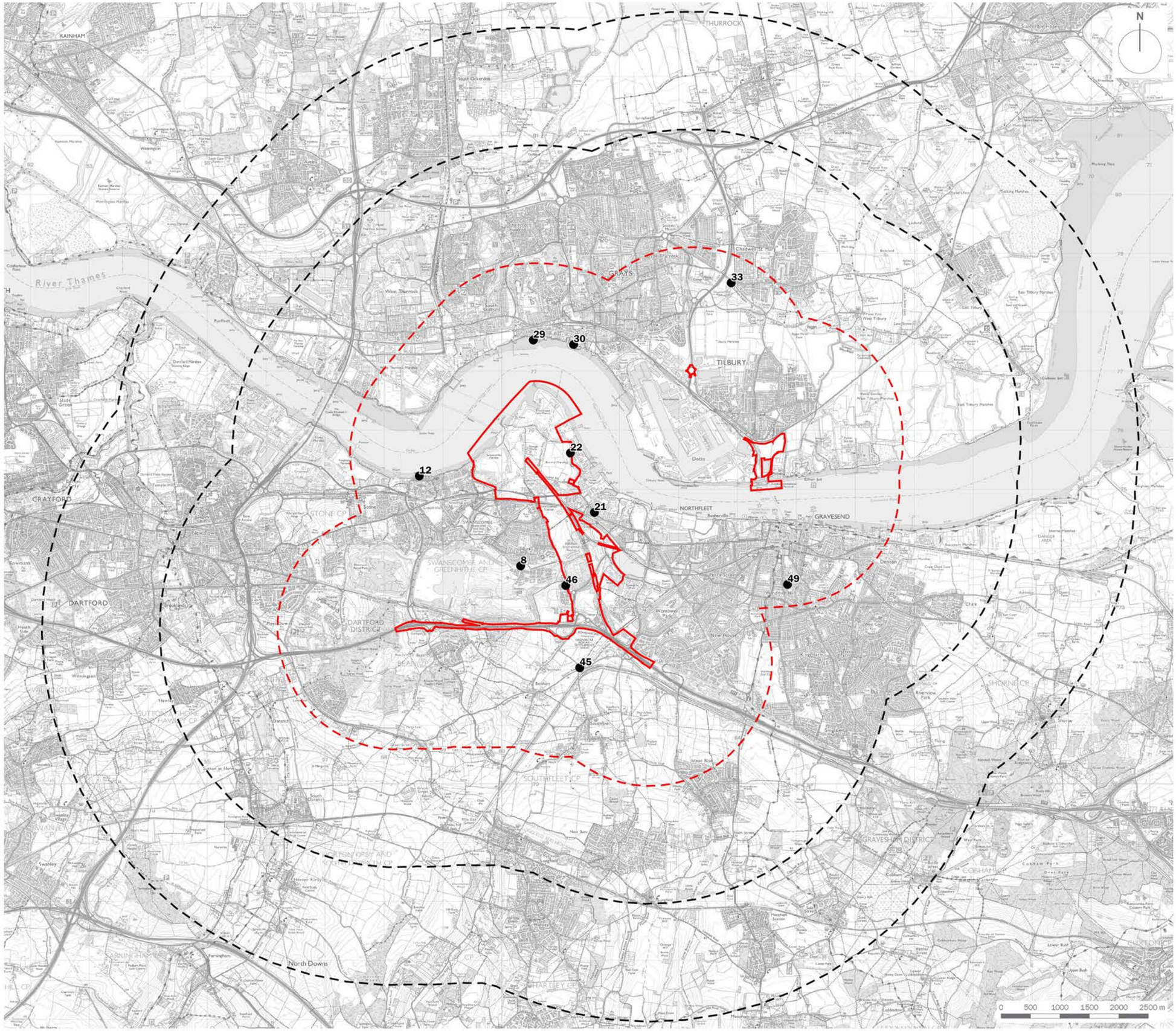

DCO Boundary

Range Rings (at 2km intervals)

2km Detailed Study Area

Night Photoviewpoint Locations

client

The London Resort Company Holdings Ltd

project title

The London Resort

drawing title

Plan EDP 9: Night Photoviewpoint Locations

date	**23 JULY 2020**	drawn by	**OK**
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Photoviewpoints

(edp5988_d041a 09 June 2020 JF/OK)
(available on request)

Photoviewpoint EDP 1 Footpath DS1 Swanscombe Peninsula

Photoviewpoint EDP 2 Footpath DS1, Black Duck Marsh

Photoviewpoint EDP 3 Footpath DS1 and NU1, Green Manor Way

Photoviewpoint EDP 4 Footpath DS2, Swanscombe Peninsula

Photoviewpoint EDP 5 Galley Hill Way/Pilgrim's Road

Photoviewpoint EDP 6 St Peter and St Paul Church Swanscombe

Photoviewpoint EDP 7 Leonard Avenue

Photoviewpoint EDP 8 Rear of Leonard Avenue

Photoviewpoint EDP 9 Swanscombe Heritage Park

Photoviewpoint EDP 10 Knockhall Road

Photoviewpoint EDP 11 Ingress Abbey

Photoviewpoint EDP 12 Greenhithe Riverfront, Sara Crescent

Photoviewpoint EDP 13 A2260 looking south

Photoviewpoint EDP 14 A2260 looking north

Photoviewpoint EDP 15 Bakers Hole SSSI and Scheduled Monument near Ebbsfleet International

Photoviewpoint EDP 16 Ebbsfleet International Car Park

Photoviewpoint EDP 17 Rosherville Quays, Gravesend Riverfront

Photoviewpoint EDP 18 North Kent Avenue

Photoviewpoint EDP 19 Northfleet Lighthouse/Bevan's War Memorial

Photoviewpoint EDP 20 Opposite Rosherville Primary School

Photoviewpoint EDP 21 Stonebridge Road B2175

Photoviewpoint EDP 22 Footpath NU1 Botany Marshes near Britannia Refined Metals Ltd

Photoviewpoint EDP 23 Footpath NU1, Botany Marshes near CEMEX

Photoviewpoint EDP 24 Thames Path Promoted Route near Charles Park

Photoviewpoint EDP 25 High House, Production Park, Purfleet

Photoviewpoint EDP 26 Footpath 170 south of Proctor and Gamble

Photoviewpoint EDP 27 Footpath 141 Stone Ness

Photoviewpoint EDP 28 Opposite Devonshire Place, Devonshire Road

Photoviewpoint EDP 29 The Promenade, Grays

Photoviewpoint EDP 30 Timber Court and Coal Court

Photoviewpoint EDP 31 Grays Beach Riverside Park

Photoviewpoint EDP 32 Footpath 186, Tilbury and Grays

Photoviewpoint EDP 33 Chadwell Bypass

Photoviewpoint EDP 34 St. Mary's Church, Chadwell St. Mary

Photoviewpoint EDP 35 Coalhouse Fort

Photoviewpoint EDP 36 Footpath 68, West Tilbury

Photoviewpoint EDP 37 Byway 98, Tilbury Fort

Photoviewpoint EDP 38 Footpath 146, Tilbury

Photoviewpoint EDP 39 London International Cruise Terminal

Photoviewpoint EDP 40 Railway Street, Northfleet

Photoviewpoint EDP 41 Footpath NS177, Cobham, Kent Downs AONB

Photoviewpoint EDP 42 A227 Wrotham Road

Photoviewpoint EDP 43 New Barn Road, Scadbury Manor

Photoviewpoint EDP 44 Footpath DR126, Park Corner Road, Northend

Photoviewpoint EDP 45 Restricted Byway DR129, near Springhead Roman Town Scheduled Monument

Photoviewpoint EDP 46 Candy Dene

Photoviewpoint EDP 47 Hall Road Bridge, B262

Photoviewpoint EDP 48 A2260, Ebbsfleet International

Photoviewpoint EDP 49 Windmill Hill Park

Photoviewpoint EDP 50 Gravesend to Tilbury Ferry

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