

National Grid Cable Tunnel Replacement Project

Environmental Statement Volume III

Chapter 8: Landscape and Visual - Tilbury

December 2023



Quality information

Prepared by		Checked by		Verified by		Approved by
BM Consultant Landscape Architect		RM Associate Director – Landscape		RM Associate Director – Landscape		HT Principal EIA Consultant

Prepared for:

National Grid Electricity Transmission

Prepared by:

AECOM Limited
Aldgate Tower, 2 Leman Street
London, E1 8FA
United Kingdom

T: +44 20 7061 7000
aecom.com

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8 Landscape and Visual

8.1 Introduction

- 8.1.1 This chapter of the Environmental Statement (ES) assesses the likely effects of the Tilbury to Grain and Tilbury to Kingsnorth (TKRE) Cable Tunnel Replacement Project (“the Proposed Development”) on landscape and visual. It considers the likely effects on landscape and visual receptors during the construction, and operational phases.
- 8.1.2 This chapter also identifies any additional mitigation measures to prevent, minimise or control likely adverse effects on landscape or visual receptors arising from the Proposed Development.
- 8.1.3 This chapter should be read together with the introductory chapters of this Environmental Statement (ES) Volume II (Chapters 1 – 6). Historic features and ecological designations can have an influence on the perception and value of the landscape character or view.
- 8.1.4 Potential effects on ecological assets are provided in ES Volume III Chapter 7: Biodiversity - Tilbury and potential effects on the cultural or heritage value of historic sites are provided in Chapter 9: Historic Environment – Tilbury.
- 8.1.5 This chapter is supported by the following appendices (ES Volume VI) and figures:
- Appendix 8.1: Landscape Character Assessment Tables;
 - Appendix 8.2: Visual Assessment Tables;
 - Figure 8.1: Site Location Plan;
 - Figure 8.2: LVIA Study Area – Tilbury;
 - Figure 8.3: National Landscape Character Areas – Tilbury;
 - Figure 8.4: Local Landscape Character Areas – Tilbury;
 - Figure 8.5: Landscape Relevant Designations and Recreational Routes – Tilbury;
 - Figure 8.6: Zone of Theoretical Visibility – Tilbury;
 - Figure 8.7: Representative Viewpoint and Visual Receptor Locations – Tilbury; and
 - Figure 8.8: Photomontages.

8.2 Relevant Legislation, Policy, and Guidance

Introduction

- 8.2.1 The section of this chapter provides an overview of the relevant legislation, planning policy and technical guidance relevant to the landscape and visual assessment.

Legislation

- 8.2.2 The European Landscape Convention (ELC) (Ref 8-1) was signed by the UK Government in 2006 and came into effect in March 2007. The ELC recognises landscape in law. It focuses specifically on landscape issues and highlights the importance of integration of landscape into areas of policy, to promote protection, management and planning of all landscapes including the assessment of landscape and analysis of landscape change.
- 8.2.3 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”*. The ELC considers landscape as a whole (land or marine), from urban to rural areas, and whether special or degraded.

National Policy

- 8.2.4 National Planning Policy relevant to this landscape and visual assessment are detailed in Table 8-1.

Table 8-1: National Planning Policy

Policy Reference	Policy Context
National Planning Policy Framework (NPPF) (Ref 8-2)	The NPPF sets out the Government’s planning policies for England and provides a framework within which local planning authorities formulate their development plans. The NPPF acknowledges the importance of: - Development which is sympathetic to the local character and history. - Reflecting local design policies and government guidance on design. - High levels of sustainability. - Protecting and enhancing valued landscapes. - Recognising the intrinsic character and beauty of the countryside. - Providing net gains for biodiversity. Paragraphs of particular relevance include Paragraphs 130, 134, 174 and 185. The requirements of the NPPF have been accounted for in the assessment, with particular emphasis placed on establishing the character and value of landscapes, avoiding, or minimising the extent and duration of, potential landscape and visual effects.
National Policy Statement (NPS) for Overarching Energy (EN-1) (2011) (Ref 8-3) and National Policy Statement for Overarching Energy (EN-1) (2023) – policy comes into force in “early 2024” (Ref 8-4)	The NPS for Overarching Energy (EN-1) discusses the importance of landscape considerations as part of the design process. It states <i>“Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape”</i>. When discussing the importance of landscape and visual assessment the new 2023 NPS states: <i>“The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.”</i>

Policy Reference	Policy Context
National Policy Statement for Electricity Networks (EN-5) (2011) (Ref 8-5) and National Policy Statement for Electricity Networks (EN-5) (2023) – policy comes into force in “early 2024” (Ref 8-6)	The National Policy Statement for Electricity Networks (EN-5) acknowledges that new overhead lines, substations and sealing end compounds “ <i>may also give rise to adverse landscape and visual impacts.</i> ”. The NPS reiterates the importance of good design and the adherence to the Holford and Horlock Rules. When discussing the placement of electricity lines, the new 2023 NPS states that “ <i>it is the government’s position that overhead lines should be the strong starting presumption for electricity networks developments in general</i> ” unless located in a designated landscape (National Park, The Broads, or Areas of Outstanding Natural Beauty [now renamed as National Landscapes])
Planning Practice Guidance (PPG) for the Natural Environment (Ref 8-7)	PPG provides context to the NPPF and supports the conservation and enhancement of landscapes with particular reference to the use of landscape character assessment.
Environment Act 2021 (Ref 8-8)	The Environment Act 2021 Chapter 3 Part 6 provides guidance on environmental protection. The most relevant parts to a study of landscape and visual matters are as follows: a. Part 1: Environmental governance. b. Part 6: Nature and biodiversity (noting that the protection of biodiversity is set out within ES Volume III Chapter 7 Ecology – Tilbury

Local Planning Policy

8.2.5 Local Planning Policies relevant to this landscape and visual assessment are detailed in Table 8-2.

Table 8-2: Local Planning Policy

Policy Reference	Policy Context
Tilbury	
Thurrock Local Development Framework. Core Strategy and Policies for Management of Development (Ref 8-9)	The core strategy includes Strategic Spatial Objectives. These are essential to achieve the Spatial Vision for the Borough. SSO12 highlights the importance of landscape character: <i>“Protect and enhance the natural, historic and built environment including biodiversity, landscape character, Conservation Areas, Listed Buildings, Scheduled Monuments and other heritage assets and open space through positive improvement.”</i> Core Strategic Thematic Policies CSSP4 - Sustainable greenbelt also states that the council’s planning approach will promote <i>“opportunities that strengthen local landscape features”</i>. The council will seek to <i>“secure structural landscape enhancements in accordance with Landscape Character Assessments and they will be delivered by developers as part of an overall contribution package linked to development schemes”</i>
A Landscape Strategy for Thurrock 2002-2017 (cited in Ref 8-9)	As part of Thurrock’s plans and strategies this <i>“confirms the Council’s commitment to conserving and enhancing the landscape character of the Borough”</i>
The Thurrock Landscape Capacity Study (2005) (Ref 8-10)	This sets out the landscape character areas for Thurrock and is used to inform <i>the policy which aims to ensure that:</i> - <i>The landscape character types which give Thurrock its sense of place are identified and valued;</i> - <i>Key characteristics which contribute to each character type and create local distinctiveness are recognised; and</i> - <i>Key landscape qualities desirable to safeguard are identified.</i>
Thurrock Design Guide – Design Strategy Supplementary Planning Document (Ref 8-11)	The Thurrock Design Guide states that: <i>“An appraisal will need to cover many aspects of a site and its physical context. In Thurrock the diverse nature of settlements and landscapes mean that the need for a robust appraisal is critical to the success of a scheme’s design.”</i> It also discusses that development in the setting of a heritage asset may require <i>“a robust landscape assessment ... to establish existing conditions and assess the potential effects on the wider setting.”</i>
Thurrock Borough Local Plan (Ref 8-12)	The Borough Local Plan was adopted by the Council in September 1997. By law, although the end date of the Borough Local Plan has passed, its policies have been saved automatically.
Thurrock draft Local Plan (anticipated adoption Summer 2026) (Ref 8-13)	In February 2014, Thurrock Council decided to start work on a new Local Plan. The new Local Plan will set out the amount of development for Thurrock and its distribution across the borough.
Tilbury Development Framework 2017 (Ref 8-14)	When considering the visual amenity, the framework discusses <i>“the tall dock and power grid infrastructure”</i> as being a pronounced landscape. The framework also considers the panorama views across to Gravesend to be <i>“One of most unexploited visual assets for Tilbury Waterfront”</i>

Guidance

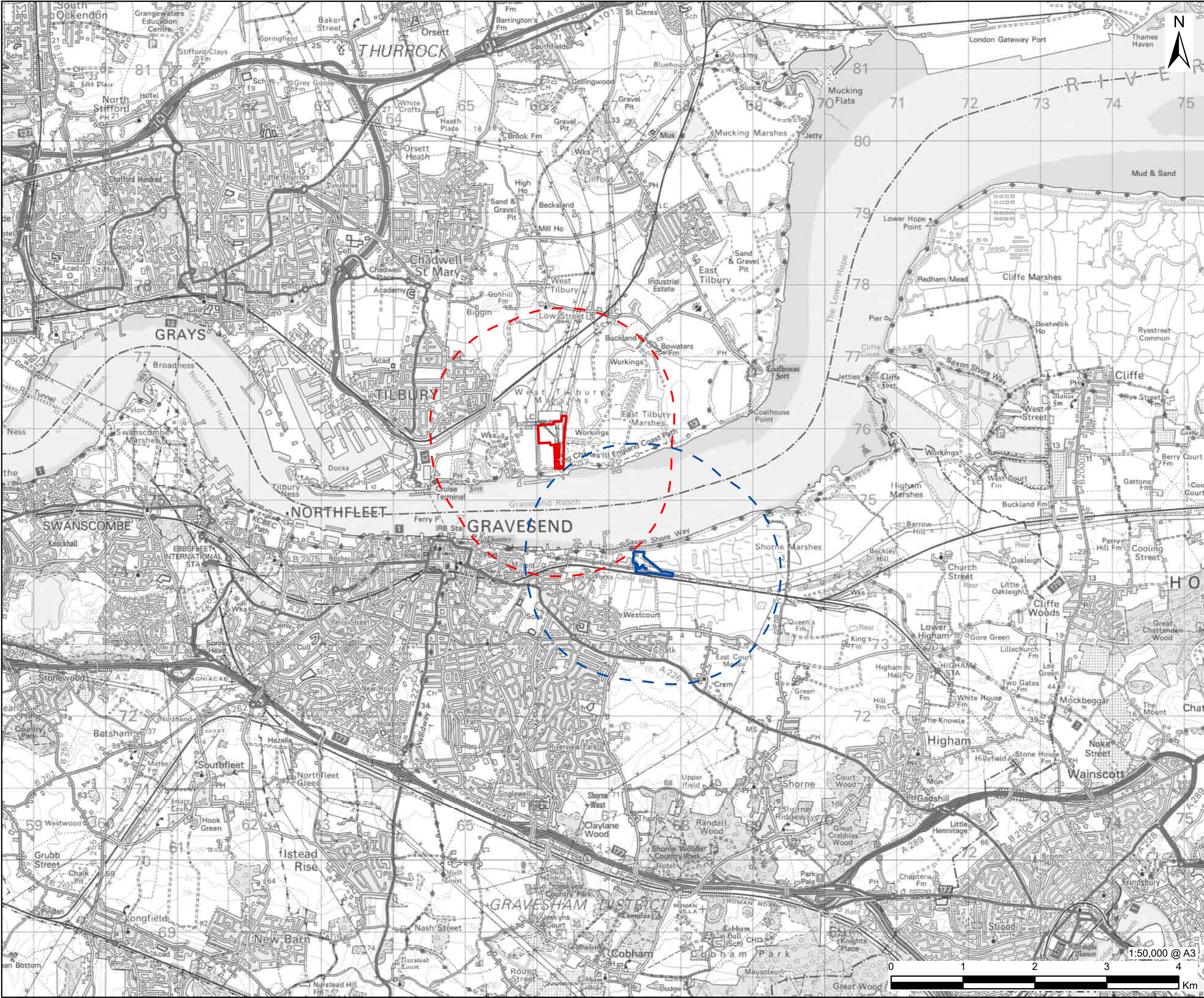
- 8.2.6 The landscape and visual assessment has been carried out in accordance with the following good practice guidance documents:
- Guidelines for Landscape and Visual Impact Assessment: Third Edition' (Landscape Institute and Institute of Environmental Management and Assessment, 2013) (GLVIA) (Ref 8-16);
 - Visual Representation of Development Proposals Technical Guidance Note 06/19 (Landscape Institute TGN 06/19) (Ref 8-17);
 - Assessing Landscape Value Outside National Designations. Technical Guidance Note 02/21 (Landscape Institute TGN02/21) (Ref 8-18);
 - Design Principles for National Infrastructure (Ref 8-19);
 - Infrastructure – Technical Guidance Note 04/20 (Ref 8-20); and
 - Tranquillity - An overview – Technical Information Note 01/17 (Ref 8-21).

8.3 Scope and Methodology

- 8.3.1 The scope of this landscape and visual assessment comprises an assessment of effects on landscape character and visual amenity during construction and also at operation. The scope and methodology of the LVIA has been agreed with consultees during the EIA screening process and subsequent consultation as identified in Table 8-9.
- 8.3.2 Landscape and visual effects are related but distinct topics so have been considered and assessed separately. Landscape and visual effects can differ from one stage of the development to the next and change over time as mitigation planting establishes and matures. Residual effects as a result of the proposals on landscape character and visual amenity could include:
- Construction: temporary effects from the movement of construction plant, vehicle haul routes, excavations, temporary construction compounds, material stockpiles and the removal of vegetation
 - Operational Year 1 (winter): including consideration of potential medium to longer term effects associated with the Proposed Development following completion of the construction phase and associated reinstatement. This stage is intended to represent the potential worst-case operational effects prior to establishment of mitigation planting.
 - Operation Year 15 (summer): including consideration of potential longer-term effects of the Proposed Development 15 years after becoming operational. This stage is intended to help demonstrate how proposed mitigation planting will influence effects once established. study area.

Study Area

- 8.3.3 For landscape and visual effects, the study area has been determined either by specific development type guidance or by professional judgment based on the anticipated Zone of Theoretical Visibility (ZTV) mapping, informed by digital terrain modelling. ZTVs present theoretical visibility of the Proposed Development based on a bare earth topographical model which does not account for intervening built form and vegetation and therefore tend to overstate actual visibility. Guidelines for Landscape and Visual Impact Assessment Third Edition (Ref 8-16) suggests that the study area should be proportionate to the Proposed Development itself and may include refinement by professional judgement. In the case of the Proposed Development, the study area has been defined by a combination of the ZTV, on-site appraisal and professional judgement. The combination of these factors has resulted in a study area which encompasses land within a 1.5km radius of the site (see Figure 8-1). Beyond this distance it is anticipated that the Proposed Development would be unlikely to give rise to significant landscape or visual effects.



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PROJECT

TKRE National Grid

CLIENT

National Grid

CONSULTANT

AECOM Limited
100 Embankment
Cathedral Approach
Manchester, M3 7FB
www.aecom.com

LEGEND

- Tilbury Red Line Boundary
- Gravesend Red Line Boundary
- - - Tilbury 1.5km Buffer
- - - Gravesend 1.5km Buffer

NOTES

For the purposes of LVIA the haul routes and tunnel have been removed from the Proposed Development Boundary. Reproduced from Ordnance Survey digital map data © Crown copyright 2023. All rights reserved. Licence number 0100031673.

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

60677311

FIGURE TITLE

Site Location Plan

FIGURE NUMBER

Figure 8.1

Landscape Character

- 8.3.4 Landscape receptors are described as components of the landscape that are likely to be affected by the Proposed Development. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Proposed Development and these landscape receptors which has potential to result in landscape impacts and effects (both adverse and beneficial).
- 8.3.5 The sensitivity of the landscape receptor has been derived by combining of the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed.
- 8.3.6 Landscape value is frequently addressed by reference to international, national, regional, and local designations. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource.
- 8.3.7 The evaluation of landscape value has been informed by Technical Guidance Note 02/21 (Ref 8-18) and undertaken considering the following factors and classified as very high, high, medium, low or negligible with evidence provided as to the basis of the evaluation:
- **Natural heritage** – Landscape with clear evidence of ecological, geological, geomorphological or physio-graphic interest which contribute positively to the landscape.
 - **Cultural heritage** – Landscape with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape.
 - **Landscape condition** – Landscape which is in a good physical state both with regard to individual elements and overall landscape structure.
 - **Associations** – Landscape which is connected with notable people, events and the arts.
 - **Distinctiveness** – Landscape that has a strong sense of identity.
 - **Recreational** – Landscape offering recreational opportunities where experience of landscape is important.
 - **Perceptual (scenic)** – Landscape that appeals to the senses, primarily the visual sense.
 - **Perceptual (wildness and tranquillity)** – Landscape with a strong perceptual value notably wildness, tranquillity and/or dark skies.
 - **Functional** - Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape.
- 8.3.8 Landscape susceptibility relates to the ability of a particular landscape to accommodate the Proposed Development. It is assessed through consideration of the baseline characteristics and attributes of the landscape, and in particular, the scale or complexity of a given landscape. Attributes relate to topography and landform, landcover, pattern, scale, complexity, perceptual aspects, and it is the combination of these which make one landscape more susceptible to the type of development proposed compared with another. For example, a small scale, complex wooded landscape is going to be more susceptible to the introduction of the Proposed Development than one which is larger scale, simple with fewer vegetated features.
- 8.3.9 Landscape susceptibility to change is a measure of the ability of a landscape to 'accommodate the proposed development without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies' (GLVIA, para 5.40) (Ref 8-16). The evaluation of landscape susceptibility is defined as very high, high, medium, low and negligible and is supported by a clear explanation based upon the analysis of the landscape receptor and the extent to which it is able to accommodate the changes that would result from the Proposed Development.
- 8.3.10 The overall sensitivity assessment of the landscape receptor has been made by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall sensitivity has been rated as very high, high, medium, low and negligible. Table 8-3:

Sensitivity of Landscape Receptors below outlines indicators that inform landscape value, susceptibility, and sensitivity. The basis of the assessment is made clear in the evaluation of each landscape receptor.

Table 8-3: Sensitivity of Landscape Receptors

Criteria	Higher Sensitivity	Lower Sensitivity
Value	A designated landscape (National Park, Area of Outstanding Natural Beauty, National Scenic Area, World Heritage Site) or a landscape in very good condition, exceptional scenic quality and high recreational opportunities or a high degree of rarity.	Landscapes containing few if any notable elements / features, of poor condition or containing several detracting features and limited aesthetic qualities. Landscapes which are not formally designated.
Susceptibility	Attributes that make up the character of the landscape which offer very limited opportunities to accommodate change of the type proposed without fundamentally altering key characteristics.	Attributes that make up the character of the landscape which are tolerant of a large degree of the type of change proposed without fundamentally altering the key characteristics.

Magnitude of Landscape Impacts

8.3.11 Magnitude of landscape impact refers to the extent to which the Proposed Development would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:

- The extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
- The extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by addition of new ones;
- Whether the change alters the key characteristics of the landscape, which are integral to its distinctive character;
- The geographic area over which the change will be felt (within the application boundary itself, the immediate setting, at the scale of the landscape character area, on a larger scale influencing several landscape character areas); and,
- The duration of the change (i.e., short-term, medium term, or long term), and its reversibility (i.e., whether it is permanent, temporary, or partially reversible).

8.3.12 Landscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual aspects of character and how it is experienced.

8.3.13 Magnitude of landscape impact has been evaluated with reference to the scale and criteria outlined in Table 8-4: Landscape Magnitude Criteria, below, combined with judgement on the likely duration and reversibility of change. As a general rule, long term and permanent change is likely to indicate a higher magnitude of impact than temporary or short-term change.

Table 8-4: Landscape Magnitude Criteria

Classification	Description
Very Large	Substantial alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Large	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term, permanent or reversible.

Classification	Description
Small	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term, permanent or reversible.
Negligible	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short-term, permanent or reversible.
None	No change to the landscape receptor.

Significance of Landscape Effect

- 8.3.14 Determination of the significance of landscape effects has been undertaken by employing professional judgement and experience to combine and analyse the identified classification of the landscape magnitude of impact with the identified sensitivity of the receptor. Sensitivity to change is evaluated as a combination of the identified value and susceptibility of the landscape receptor. The assessment takes account of direct and indirect change on existing landscape elements, features and key characteristics and evaluates the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character.
- 8.3.15 The significance of landscape effects is described with reference to the scale set out in Table 8-5: Significance of Landscape Effect, below.

Table 8-5: Significance of Landscape Effect

Classification	Description
Major Beneficial	Alterations that result in a considerable improvement of the existing landscape resource. Valued characteristic features would be restored or reintroduced.
Moderate Beneficial	Alterations that result in a partial improvement of the existing landscape resource. Valued characteristic features would be largely restored or reintroduced.
Minor Beneficial	Alterations that result in a slight improvement of the existing landscape resource. Characteristic features would be partially restored.
Negligible Beneficial	Alterations that result in a very slight improvement to the existing landscape resource, not uncharacteristic within the receiving landscape.
Neutral	No alteration to any of the components that contribute to the existing landscape resource.
Negligible Adverse	Alterations that result in a very slight deterioration to the existing landscape resource, not uncharacteristic within the receiving landscape.
Minor Adverse	Alterations that result in a slight deterioration of the existing landscape resource. Characteristic features would be partially lost.
Moderate Adverse	Alterations that result in a partial deterioration of the existing landscape resource. Valued characteristic features would be largely lost.
Major Adverse	Alterations that result in a considerable deterioration of the existing landscape resource. Valued characteristic features would be wholly lost.

- 9.1.1. For the purpose of this assessment effects of moderate or greater are considered to be significant.

Visual Amenity

Visual sensitivity

- 8.3.16 Sensitivity of visual receptors has been defined through appraisal of the viewing expectation, or value placed on the view as identified in the baseline study, and its susceptibility to change.
- 8.3.17 Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature and art, or identified in policy. Value can also be indicated by the provision of parking or services and signage and

interpretation. The nature and composition of the view and its scenic quality is also an indicator. The value of the view has been classified as very high, high, medium, low and negligible and is supported by evidenced, professional judgements.

- 8.3.18 The susceptibility of visual receptors to change has been established as a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest is focussed on the view and the visual amenity they experience. For example, walkers whose interest may tend to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience, indicate a higher level of susceptibility.
- 8.3.19 Conversely receptors engaged in outdoor sport where views are not important or receptors at their place of work are considered less susceptible to change.
- 8.3.20 Judgements about the susceptibility of visual receptors have been ascribed using very high, high, medium, low or negligible ratings using consistent and reasoned judgements.
- 8.3.21 The overall sensitivity assessment of the visual receptor has been determined by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall visual sensitivity has been rated as very high, high, medium, low and negligible. Table 8-6: Sensitivity of Visual Receptors below outlines indicators that inform value of the view, susceptibility, and sensitivity of visual receptors. The basis of the assessment is made clear in the evaluation of each visual receptor.

Table 8-6: Sensitivity of Visual Receptors

Criteria	Higher Sensitivity	Lower Sensitivity
Value	Views protected by designation, or nationally recognised, or recorded on maps / guidebooks or with cultural associations. Views which may be associated with internationally or nationally designated landscapes. Views that have high scenic qualities relating to the content and composition of the view.	Views which are not documented or protected with minimal or no cultural associations. Views that exhibit low scenic qualities relating to the content and composition of the view.
Susceptibility	Viewers whose attention or interest is focused on their surroundings, including: - residential properties and settlements where views contribute to the landscape setting enjoyed by residents; and; - people engaged in outdoor recreation including users of cycle routes, long distance paths, PRoW and visitors to heritage assets where views of the surroundings are an important contributor to experience.	People whose attention or interest is not focused on their surroundings and where the view is incidental to their enjoyment including: - people travelling more rapidly on major roads, rail or transport routes not recognised as scenic routes; - people engaged in outdoor recreation which does not involve or depend upon appreciation of views of the landscape; and - people at their place of work whose attention is not on their surroundings.

Magnitude of Visual Impacts

- 8.3.22 Magnitude of visual impact relates to the extent to which the Proposed Development would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:
- The scale of the change in the view with respect to the loss or addition of features, changes in composition, and the proportion of the view occupied by the Proposed Development;
 - The degree of contrast or integration of any new features or changes in the form, scale, composition and focus of the view;

- The angle of view in relation to the main activity of the receptor and the distance from the Proposed Development;
- The amount of time over which it will be experienced and whether views will be full, partial or glimpsed; and
- the duration of the change (i.e., short-term, medium term, or long-term), and its reversibility (i.e., whether it is permanent, temporary, or partially reversible).

8.3.23 Magnitude of visual impact has been evaluated with reference to the scale and criteria outlined in Table 8-7, below, combined with judgement of the likely duration and reversibility of change.

Table 8-7: Visual Magnitude Criteria

Classification	Description
Very Large	A substantial change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Large	A pronounced change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Medium	A noticeable change to the composition of the view or change that may be viewed in the middle ground or indirectly. May be medium term, permanent or reversible.
Small	An unobtrusive change in the composition of the view or change that may be viewed in the background or obliquely. May be short to medium term, permanent or reversible.
Negligible	A barely perceptible change in the composition of the view or change that may be viewed in the background and/or very obliquely. May be short-term, permanent or reversible.
None	No change to the view.

Significance of Visual Effect

8.3.24 Determination of the significance of visual effects has been undertaken by employing professional judgement and experience to combine and analyse the magnitude of impact against the sensitivity of the receptor. Sensitivity to change is evaluated as a combination of the identified value and susceptibility of the visual receptor. The assessment takes into account likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure or focus of the existing view.

8.3.25 The significance of visual effects is described with reference to the scale set out in Table 8-8: Significance of Visual Effect, below.

Table 8-8: Significance of Visual Effect

Classification	Description
Major Beneficial	Alterations that typically result in a pronounced improvement in the existing view.
Moderate Beneficial	Alterations that typically result in a noticeable improvement in the existing view.
Minor Beneficial	Alterations that typically result in a limited improvement in the existing view.
Negligible Beneficial	Alterations that typically result in a barely perceptible improvement in the existing view.
Neutral	No change to the existing view.
Negligible Adverse	Alterations that typically result in a barely perceptible deterioration in the existing view.

Classification	Description
Minor Adverse	Alterations that typically result in a limited deterioration in the existing view.
Major Beneficial	Alterations that typically result in a noticeable deterioration in the existing view.

8.3.26 For the purpose of this assessment, effects of moderate or greater are considered to be significant.

Limitations

8.3.27 The construction assessment is based on the construction information that is currently available. As with all construction assessments, the exact details of construction activities would not be fully known before a specific contractor is appointed to complete the works who would determine their exact construction methods and programme during the detailed design stage. The assessment of construction effects on landscape and visual receptors is based on the available outline phased construction programme, as detailed in ES Volume II Chapter 3: Project Description. The locations and size of construction compounds

8.3.28 Zone of Theoretical Visibility (ZTV) maps have been used as a tool to inform the assessments. ZTVs present theoretical visibility of the Proposed Development based largely on a bare earth topographical model and although areas of woodland and buildings have been included, the ZTV tends to overstate actual visibility. The use and limitations of ZTVs is explained further in Paragraphs 8.5.26 to 8.5.30.

8.3.29 The visual assessment is based on a series of representative viewpoints related to key receptor groups. The on-site evaluation of magnitude of impact and significance of effects has been undertaken from the nearest publicly accessible location, and as such, assumptions as to the orientation of the main views from receptor locations have been made. For all locations the evaluation is based on an assumed worst-case location within each receptor group and as such the significance of effects on individual receptors may differ locally from that stated.

8.3.30 The assessment of potential effects on receptors at these locations is made based on a worst-case approach of a clear bright day in winter as per best practice and to be consistent with the approach for other receptors in this assessment. The assessment of residual effects on these and all other receptors is based on summer at year 15 of operation. This approach is consistent with best practice and allows proposed mitigation planting to be taken into consideration in the assessment of long-term residual impacts.

Desk Study

8.3.31 The following sources of data were reviewed to inform the landscape baseline:

- *National Character Areas*, as published by Natural England in 2014 and 2015 (Ref 8-23, Ref 8-24);
- *The Thurrock Landscape Capacity Study* (Thurrock Council, 2005) (Ref 8-10);

8.3.32 Reference was also made to the prevailing policy framework including local plans to identify any designated landscapes or features of value and their relationship to the Proposed Development.

8.3.33 Other information sources referenced as part of the baseline review included 1:25,000 and 1:10,000 scale Ordnance Survey (OS) mapping, 3-dimensional topographical data site photographs and aerial photography.

Viewpoint Survey

8.3.34 Fieldwork surveys were undertaken by qualified and experienced landscape architects in summer 2023. The purpose of this fieldwork was to inform understanding of the landscape and visual baseline as defined in the published landscape character assessments. GLVIA3 (Ref 8-16) guidance suggests that consideration be given to seasonal variation in effects where appropriate but acknowledges that the timing of the appraisal may mean that this is not practical. In this LVIA potentially important differences between seasonal views have been indicated in the appraisal and

taken into consideration in reaching conclusions. Summer viewpoint surveys were also considered proportionate due to the minimal vegetation within the study area that is characteristic of the NCA.

- 8.3.35 Attributes experienced as part of the fieldwork surveys included features and elements associated with the built environment, historic landscape, and areas of managed landscape. Potential impacts on cultural heritage assets are assessed separately in ES Volume III Chapter 9: Historic Environment - Tilbury.
- 8.3.36 Perceptual qualities of the landscape, such as background noise and tranquillity were also observed.
- 8.3.37 Fieldwork surveys were also used to identify visual receptors and representative viewpoints and to clarify the likely extent of views, taking account of the effect of existing intervening features such as buildings and vegetation.
- 8.3.38 A desk study of ecological data has been carried out as part of the ecology assessment as reported in ES Volume III Chapter 7: Biodiversity - Tilbury. Information from these surveys has been used, where relevant, to inform the identification of baseline landscape conditions.

8.4 Consultation and Stakeholder Engagement

- 8.4.1 Consultation in relation to landscape and visual amenity has been undertaken with stakeholders. Table 8-9 below provides an overview of consultation responses and the actions taken to address these within the assessment. A full summary of all consultation is provided in Volume II Chapter 5 - Consultation.

Table 8-9: Consultation and Stakeholder Engagement Log

Consultee	Summary of comments	How we addressed this
Planning Officer, Thurrock Council	<i>"I have looked at the proposed viewpoints and agree with these. Although would it be possible to include a viewpoint from West Tilbury Marshes to the north east of the application site. Land levels are slightly higher here and there is a small village nearby. Would be good to know how the development would impact this vista."</i>	An additional representative viewpoint was added for viewpoint photography and assessment. This was located at PRoW 68 (footpath) near West Tilbury and is representative of recreational receptors in the vicinity of Gun Hill and residential receptors at the southern extents of West Tilbury with views to both the Tilbury and Gravesend Sites. Agreement of this location was confirmed with Thurrock Council by email.
Gravesham Borough Council	<i>No comments received</i>	No action

8.5 Landscape and Visual Baseline

- 8.5.1 The following section provides a baseline description of the existing conditions of each of the landscape and visual receptors identified within the study area (Figure 8-2).

Landscape Character Overview

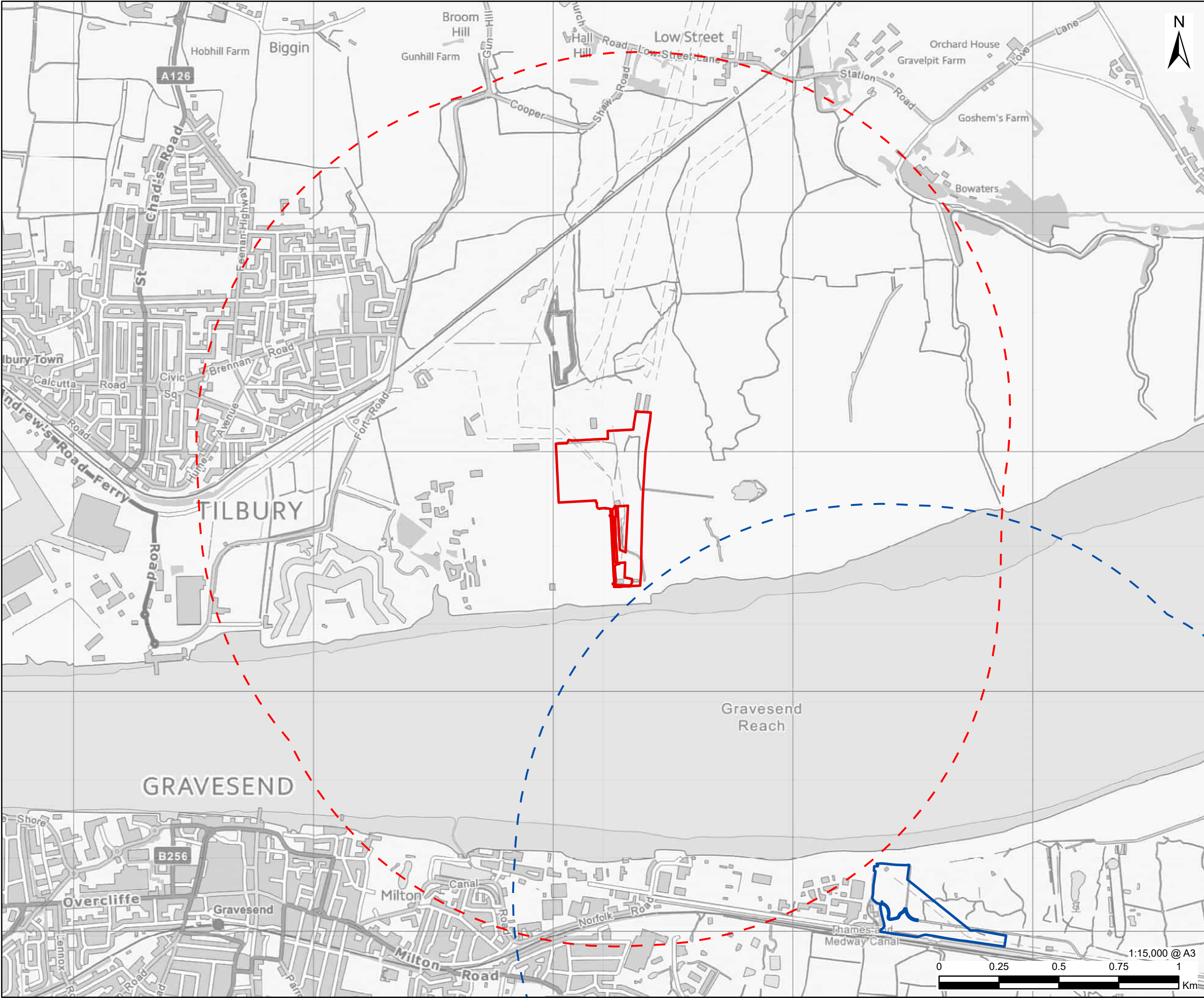
- 8.5.2 Landscape character is a composite of physical, cultural, perceptual and aesthetic elements. Landform, hydrology, vegetation, land cover, land use pattern, cultural and historic features and associations combine to create a common 'sense of place' and identity which can be used to categorise the landscape into definable types and areas. The level of detail and size of the types and areas can be varied to reflect the scale of definition required. It can be applied at a national, regional, and local level.
- 8.5.3 The landscape baseline across the study area is summarised in section 0 and includes descriptions under a series of headings, based upon features and elements within the landscape. It also details the combination of elements, which make a particular contribution to distinctive character and includes a summary of published landscape character assessment work at the national, county, and local levels. These are used by local planning authorities as part of their planning policy evidence base and often provide specific guidance or recommendations on managing landscape change.
- 8.5.4 GLVIA3 (Ref 8-16 paragraphs 5.12 – 5.18) indicates that broad-scale character assessments, such as those produced at the national level, can be used to set the scene and indicate the key characteristics that may be apparent in the study area. It also suggests that local authority assessments provide more detail and that these can be mapped to show how the scheme relates to them.
- 8.5.5 The site is not subject to any locally, nationally or internationally important landscape designations. The Proposed Development has been designed to respect the character of the landscape as far as practicable.

Landform and Hydrology

- 8.5.6 The landform of the site is flat and low-lying at approximately 0-20m Above Ordnance Datum (AOD). The landform of the Tilbury study area is flat with no notable change in elevation.
- 8.5.7 The River Thames passes from west to east through the study area and is the dominant hydrological feature. There are also a series of linear field drains within the surrounding marshland as the moat surrounding Tilbury Fort which is a notable water feature.

Settlement and Vegetation Patterns

- 8.5.8 The Tilbury site is located to the southeast of Tilbury with residential properties alongside the northwestern side of the railway line lying approximately 1.3km from the site at the closest point. Large infrastructure is particularly prevalent to the west of the study area. This includes the existing Overhead Line (OHL) infrastructure to the north of the site, Tilbury Sewage Treatment Works to the west along with the extensive area occupied by Tilbury Docks. Tilbury Fort is a recreational site to the west of the site. The remainder of the study area is rural with scattered farmsteads and isolated properties to the northeast at Buckland.
- 8.5.9 There is a marked contrast between the industrial areas of the Tilbury study area and the skyline of Gravesend to the south with the low-lying marshland landscape that makes up the remainder of the study area. The flat, open marshland landscape largely comprises grazing pasture and riparian vegetation lining the drainage ditches with very few trees.



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LEGEND

- Tilbury Red Line Boundary
- Gravesend Red Line Boundary
- Tilbury 1.5km Buffer
- Gravesend 1.5km Buffer

NOTES

For the purposes of LVIA the haul routes and tunnel have been removed from the Proposed Development Boundary. Reproduced from Ordnance Survey digital map data © Crown copyright 2023. All rights reserved. Licence number 0100031673.

ISSUE PURPOSE

Environmental Statement

PROJECT NUMBER

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FIGURE TITLE

LVIA Study Area - Tilbury

FIGURE NUMBER

Figure 8.2

Public Rights of Way and Access

- 8.5.10 There are no Public Rights of Way (PRoW) across the Tilbury site. The nearest PRoW (Footpath 146) is located approximately 30m to the south of the site. Much of this footpath also comprises part of the England Coast Path promoted recreational route and the National Cycle Network (NCN) Route 13 from Tower Bridge to Dereham at approximately 200m to the south of the site. Footpath 144 and Byway 98 to the west of the site, and Footpath 200 to the northeast of the site are the only other PRoWs in the study area (see Figure 8.6).
- 8.5.11 West Tilbury Commons located approximately 700m north of the site, The Green, Hall Hill Common, Fort Road Common, Par Thurrock approximately 900m to the west of the site are areas of accessible Countryside and Rights of Way (CRoW) Act land in the study area.

National Landscape Character

- 8.5.12 The Tilbury Site lies within the National Character Area (NCA) 81 (Ref 8-23) (see Figure 8.4). Greater Thames Estuary and exhibits some of the key characteristics of the NCA:
- *Predominantly flat, low-lying coastal landscape;*
 - *Extensive open spaces ...dominated by the sky;*
 - *The pervasive presence of water;*
 - *Open grazing pastures patterned by a network of ancient and modern reed-fringed drainage ditches; and*
 - *Highly urbanised areas ... on marsh edges subject to chaotic activity of various major developments.*
- 8.5.13 A small part of the northern extents of the Tilbury study area also lie within NCA 111 Northern Thames Basin (Ref 8-24) with “*mixed farming, with arable land*” typical of the NCA.
- 8.5.14 The Tilbury study area also lies within the Marine Character Area (MCA) 18: Thames and Medway Estuaries defined in the Seascape Character Assessment for the South East Inshore marine plan area (Ref 8-15) and exhibits some of the key characteristics of the MCA:
- *Marked contrast of industrial ports and urban area with the wild and remote isolated low-lying marshy coastal landscape;*
 - *Entrance to the River Thames heavily used by commercial shipping traffic; and*
 - *A busy industrial environment with dense residential and large scale industrial developments.*
- 8.5.15 The Proposed Development would not have significant effects on Landscape character at the NCA or MCA scale.

Local Landscape Character

- 8.5.16 At the Unitary authority level, the Tilbury site and study area incorporates Landscape Character Areas (LCA) C5 Tilbury Marshes, and E5 Tilbury and Docks Urban Area. A smaller part of the outer extents of the study area also lies at the transitional edge of the D6 Chadwell Escarpment Urban Fringe and D7 West Tilbury Urban Fringe defined in the Thurrock Landscape Capacity Study 2005 (Ref 8-10). These are shown on Figure 8.5.
- 8.5.17 LCA C5 Tilbury Marshes is characterised by:
- *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.*

8.5.18 E5 Tilbury and Docks Urban Area is characterised by:

- *Tilbury nucleated settlement, predominantly post-war with some tower blocks and flat-roofed housing;*
- *The docks, part of the Port of London, containing large commercial warehouses and distinctive vertical cranes;*
- *A large industrial and commercial area of large warehouses; and*
- *Several areas of publicly accessible greenspace distributed within housing areas.*

8.5.19 D6 Chadwell Escarpment Urban Fringe Area is characterised by:

- *Irregular fields of rough grassland and pasture.*

8.5.20 D7 West Tilbury Urban Fringe Area is characterised by:

- *Large, open fields; and*
- *Absence of hedgerows and woodland cover.*

Landscape Designations

8.5.21 Neither the Tilbury site or its respective study area are covered by any statutory landscape designations. The nearest National Landscape¹ is the Kent Downs located 5km south of the Tilbury site.

8.5.22 Whilst there are no landscape designations, there are a number of ecological and cultural heritage designations within the study area and these can inform landscape value and are of importance in terms of visitor destinations and visual amenity for the area. These include the Scheduled Monument of Tilbury Fort within the Tilbury study area, and listed buildings. In addition to these cultural heritage designations, there are ecological designations including the South Thames Estuary and Marshes SSSI, Ramsar site, and SPA approximately 200m south, and 700m to the west of the Gravesend site. Further details can be found in ES Volume III Chapter 7: Biodiversity – Tilbury; and Chapter 9: Historic Environment – Tilbury.

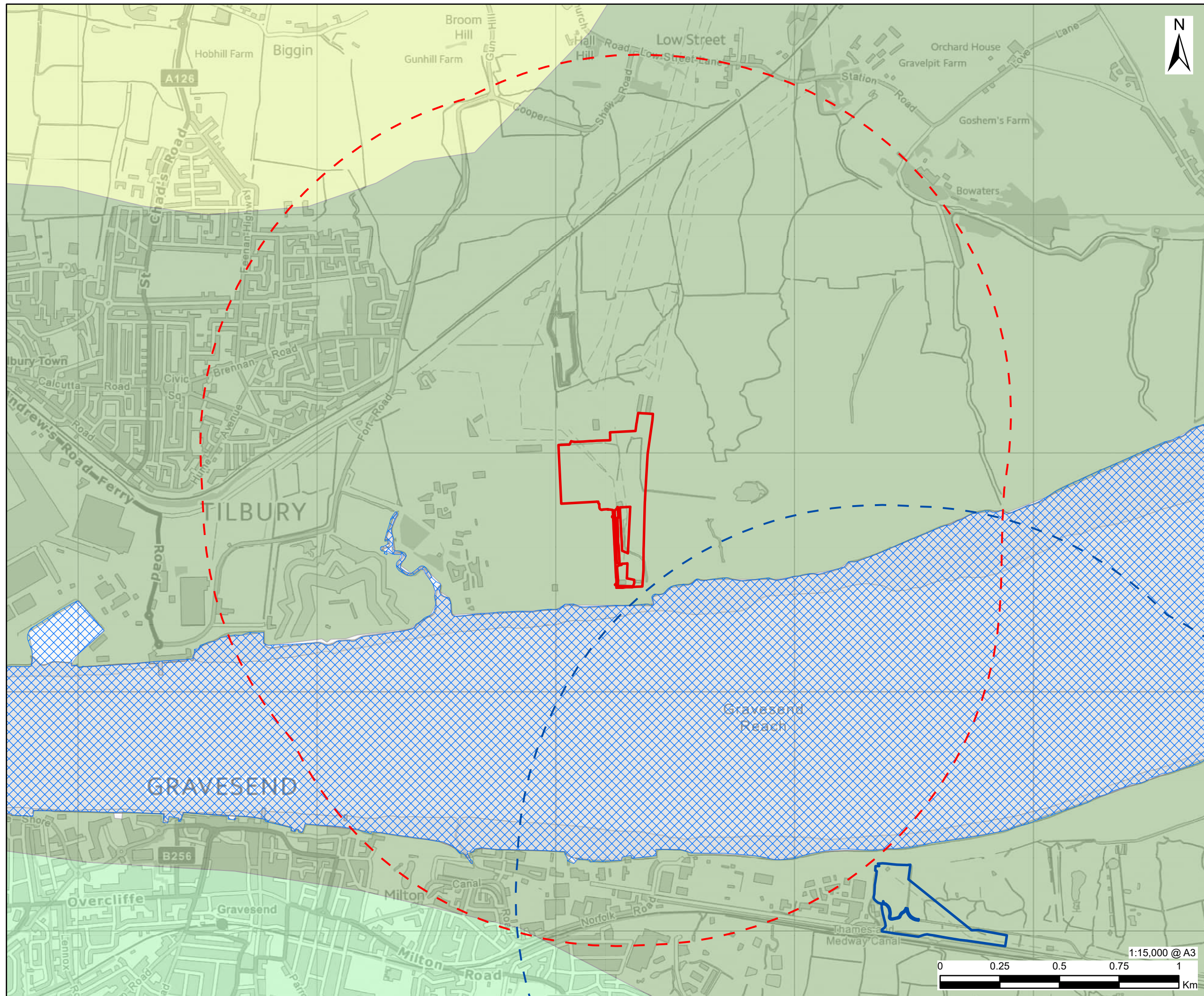
8.5.23 The Tilbury Site and its respective study area sit within the London Area Green Belt (LAGB) within the Thurrock B LAGB. The radius of the study area also encompasses the LAGB at Gravesend. This indicates landscape value as a result of openness, rather than intrinsic quality.

Visual Resource

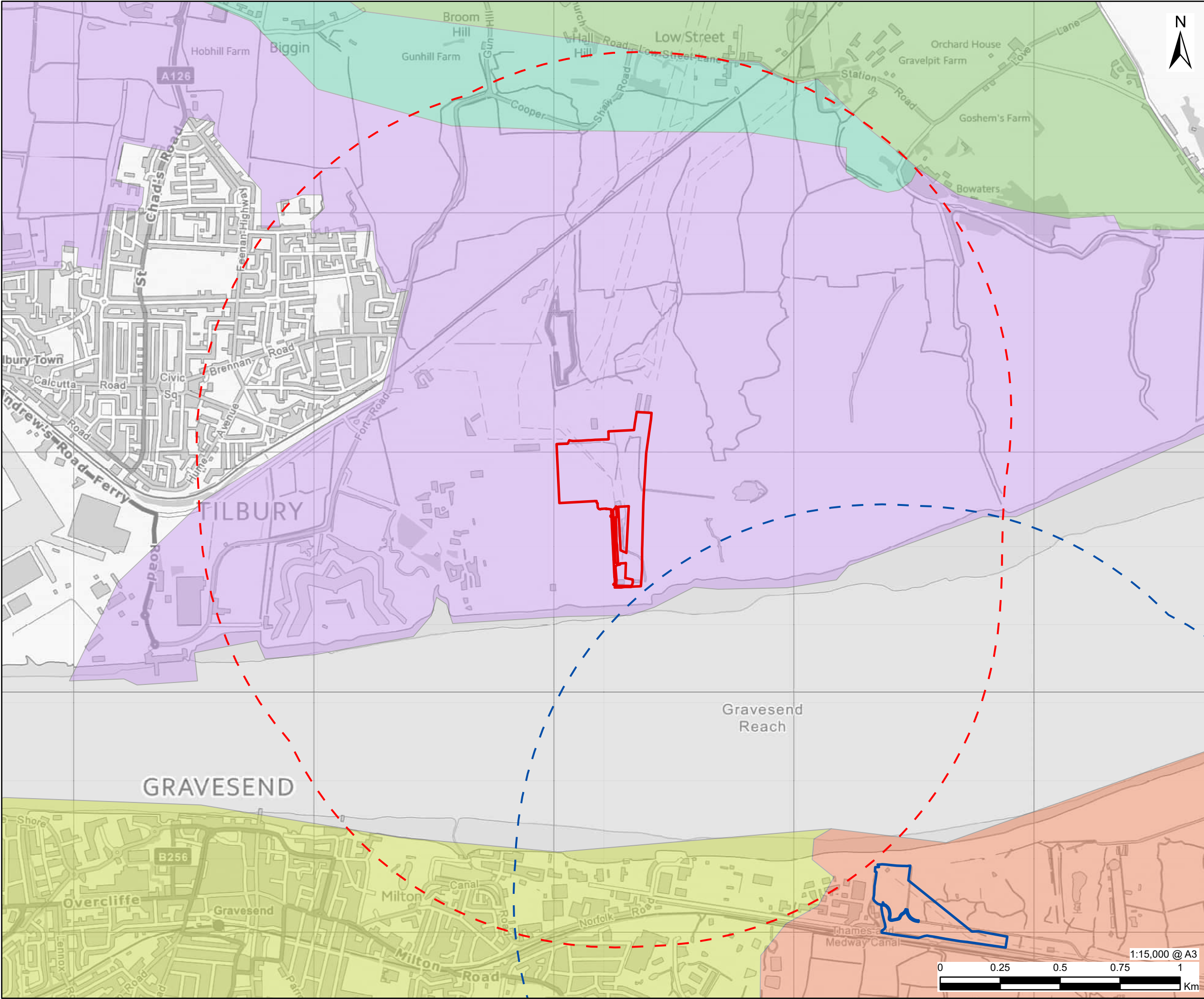
8.5.24 Visual impacts are defined in GLVIA3 (Ref 8-16 Para 2.21) as “*specific views and on the general visual amenity experienced by people*”. This means people with the potential for views of either the construction or operation of the Proposed Development.

8.5.25 The identification of visual receptors is a two-staged process, beginning with interrogation of baseline mapping and the preliminary ZTVs and then moving onto fieldwork to refine and ascertain the actual inter-visibility between the Proposed Development and potential visual receptors.

¹ National Landscape is the new name for areas designated as Areas of Outstanding Natural Beauty (AONB)
December 2023



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LEGEND

Tilbury Red Line Boundary

Gravesend Red Line Boundary

Tilbury 1.5km Buffer

Gravesend 1.5km Buffer

Landscape Character Areas

Chadwell Escarpment Urban Fringe

Eastern Thames Marshes

Gravesend Townscape Urban Character Area

Tilbury Marshes

West Tilbury Urban Fringe

NOTES

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ISSUE PURPOSE

Environmental Statement

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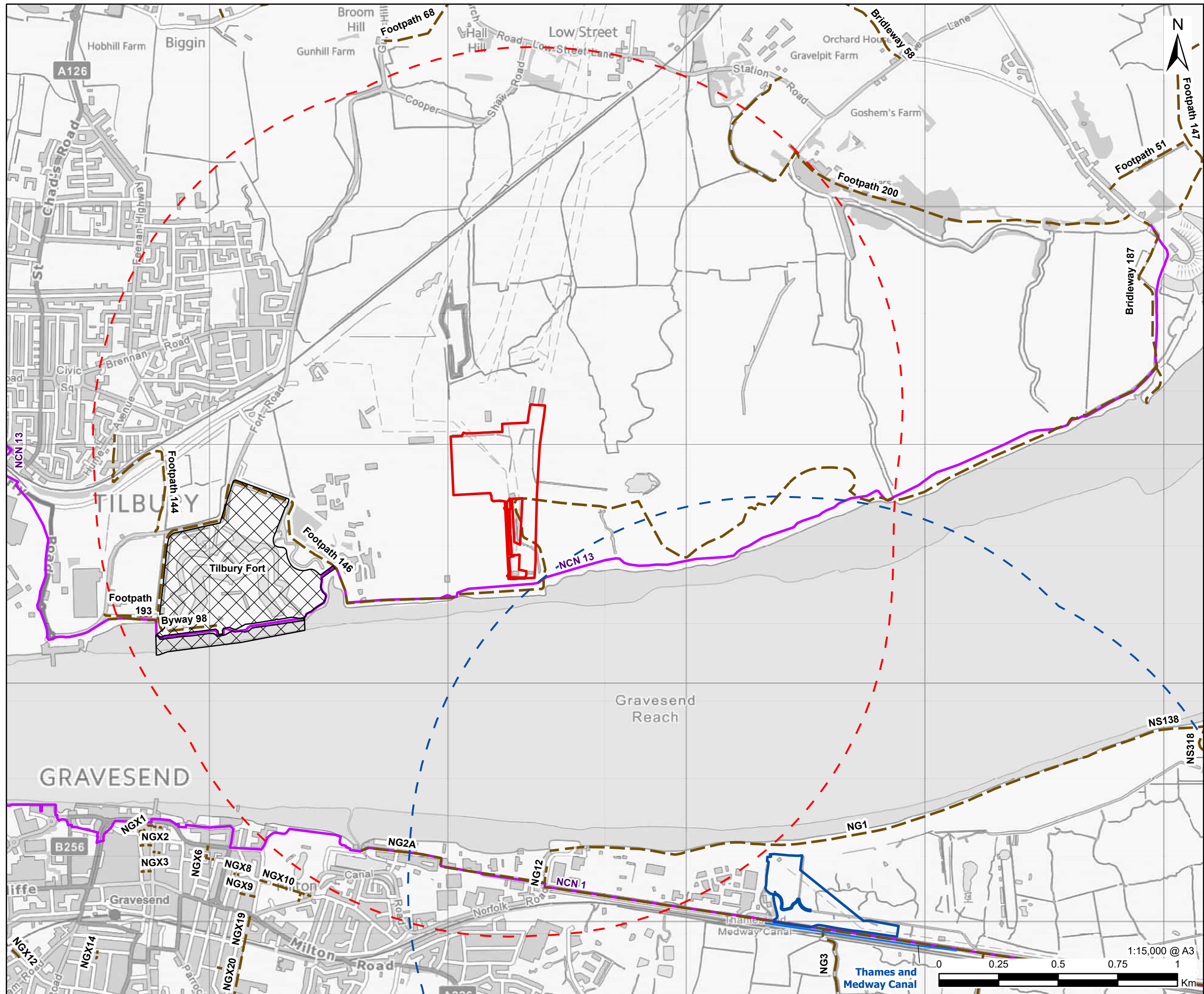
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FIGURE TITLE

Local Landscape Character Areas - Tilbury

FIGURE NUMBER

Figure 8.4



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Zone of Theoretical Visibility Analysis

- 8.5.26 A computer generated ZTV was run for the Proposed Development generated using 5m Digital Terrain Model (DTM) from OS MasterMap incorporating screening from vegetation based on woodland from the National Forestry Inventory (NFI) using an assumed height of 10m and screening from existing buildings from OS Open Map Local with an assumed height of 7.5m. The ZTV is based upon a series of points around the sealing end compound terminal pylons with a height of 13 m, a grid of points 2 m apart within the headhouse building at a height of 10 m, and an observer eye height of 1.6 m. All heights are above ground level. Individual ZTVs have been generated for the Tilbury study area and is shown on Figure 8-6.
- 8.5.27 The ZTV indicates areas from where it may be possible to view part of or the entire Proposed Development, however, the use of the ZTV needs to be qualified by the following considerations:
- The ZTV is limited by the detail of the digital terrain model data used and does not take account of local topographic variations;
 - Some areas of theoretical visibility may comprise woodland (not accounted for in the NFI) or agricultural land, where there is effectively no public access and the likelihood of views being experienced is consequently low; and
 - The ZTV does not take account of the likely orientation of a viewer, such as the direction of travel and there is no allowance for reduction of visibility with distance, weather, or light.
- 8.5.28 These limitations mean that the ZTV tends to overestimate the extent of visibility, both in terms of the areas from which the Proposed Development is visible and the extent of the particular site which is visible. Consequently, the ZTV should be considered as a tool to identify areas of potential visibility for further targeted survey and assessment, and not a measure of the visual effect.
- 8.5.29 The receptors identified have been selected on the basis that they fall within the ZTV (Figure 8.3). As illustrated by the ZTV, the pattern of theoretical visibility is mostly concentrated around the undeveloped marshland around the Tilbury site where the riverine topography is flat. There are pockets of potential more distant visibility to the south and southeast of the Tilbury study area where the landform starts to rise. Visibility from the urban areas of Tilbury are limited to the settlement edge.
- 8.5.30 Visual receptors within the study area where there is theoretical visibility include, but are not limited to, the following: settlements and residential receptors; users of National Cycle Routes and promoted recreational routes; and those using local rights of way; people using major transport routes (major roads and rail); and people using the local road network.

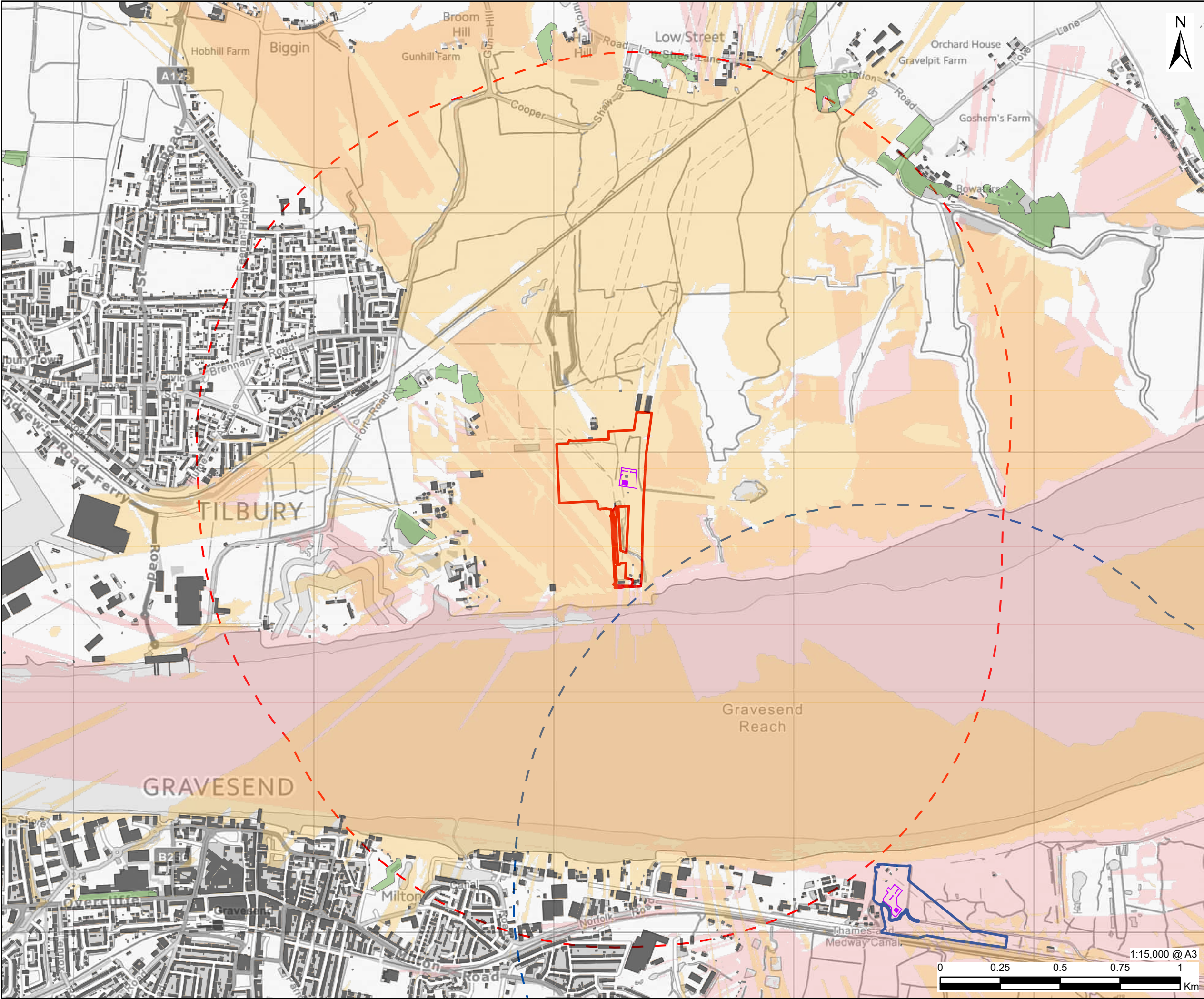
Key Receptors

- 8.5.31 The types of visual receptor and receptor groups within each study area who have the potential to experience views of the Proposed Development at Tilbury are listed below and grouped into the following categories:
- Views from residential settlements;
 - Views from recreational routes and places of interest;
 - Views from roads and rail;
 - Views from places of work; and
 - Views for those engaged in outdoor sport or recreation.

Views from residential settlements

- 8.5.32 Residential settlement within the Tilbury study area is limited to the eastern settlement edge of Tilbury approximately 1.3km northwest. Views of the proposed Tilbury site would be screened by the intervening railway line and the industrial area including the cement works and the maritime container storage and transportation site. Any resulting change in views would be barely perceptible.

8.5.33 There are several scattered farmsteads and isolated properties approximately 1.4km to the northeast at Buckland, and approximately 1.5km north northeast on the outskirts of Low Street. Whilst views across the intervening marshland are flat with sparse vegetation, the Proposed Development will be perceived as part of, and an extension to, the existing industrial landscape. The isolated properties at Low Street also have views of the line of existing overhead power lines receding into the distance.



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LEGEND

- Tilbury Red Line Boundary
- Gravesend Red Line Boundary
- Tilbury 1.5km Buffer
- Gravesend 1.5km Buffer
- Existing OS Open Building - 7.5m
- National Forest Inventory - Woodland - 10m
- Modelled Footprint
- Zone of Theoretical Visibility - Gravesend
- Zone of Theoretical Visibility - Tilbury

NOTES

For the purposes of LVIA the haul routes and tunnel have been removed from the Proposed Development Boundary.

Zone of Theoretical Visibility (ZTV) has been generated using Ordnance Survey Terrain 5 digital terrain model which does not take into account the screening effects of vegetation, buildings or other structures. Existing Buildings have been incorporated into the DTM using OS Open Map Local with an assumed height of 7.5m. Woodland from the National Forest Inventory was also incorporated into the DTM with an assumed height of 10m. ZTV is based upon a series of points around the overhead line gantry structures with a height of 13m, a grid of points 1m apart within the headhouse building at a height of 10m for Tilbury and 8m for Gravesend, and a grid of points 1m apart around the perimeter palisade and electric pulse fence at a height of 3.4m and an observer eye height of 1.6m. All heights mentioned above are above ground level (AGL).

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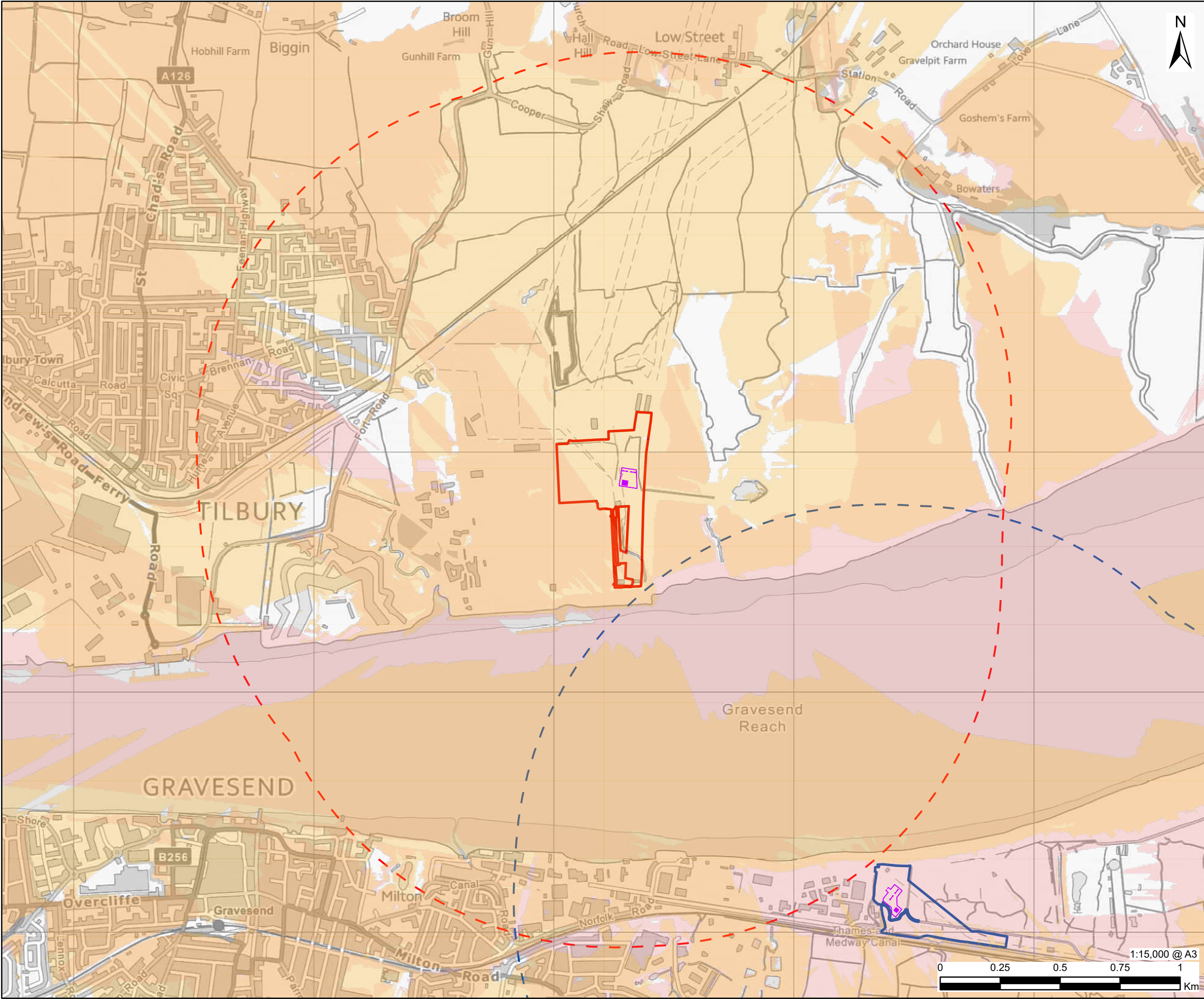
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FIGURE TITLE

Screened Zone of Theoretical Visibility - Tilbury

FIGURE NUMBER

Figure 8.6a



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LEGEND

- Tilbury Red Line Boundary
- Gravesend Red Line Boundary
- Tilbury 1.5km Buffer
- Gravesend 1.5km Buffer
- Modelled Footprint
- Zone of Theoretical Visibility - Tilbury
- Zone of Theoretical Visibility - Gravesend

NOTES

For the purposes of LVIA the haul routes and tunnel have been removed from the Proposed Development Boundary.

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FIGURE TITLE

Bare Earth Zone of Theoretical Visibility - Tilbury

FIGURE NUMBER

Figure 8.6b

Views from recreational routes and places of interest

- 8.5.34 Recreational routes are shown on Figure 8.6. The English Coast Path promoted recreational route and NCN Route 13 pass to the south of the site. Whilst the Proposed Development will be noticeable within the view it will be perceived as part of, and an extension to, the existing industrial landscape. The local part of PRow 146 passes closest to the site and the Proposed Development would therefore become a dominant part of the view localised in this area.
- 8.5.35 Views for recreational visitors to the heritage asset of Tilbury Fort are likely to be screened by the intervening maritime transport site and industrial works. The proposed site is likely to be barely perceptible and viewed in the existing context of the industrial landscape and overhead line.
- 8.5.36 Recreational users of this section of the River Thames are likely to view the site within the wider industrial context of the area.

Views from roads, river and rail

- 8.5.37 With the exception of the Tilbury Loop railway line, transport infrastructure is largely absent from the Tilbury study area. Fort Road to the west of the site is approximately 1.2km to the northwest of the Proposed Development and provides access to the industrial sites within the area. Views from this road are screened by the intervening maritime transport site and industrial works. Other minor roads in the study area are generally screened by roadside vegetation.
- 8.5.38 Views of the Proposed Development from the Tilbury loop railway line are likely to be localised and perceived as part of, and an extension to, the existing industrial landscape.
- 8.5.39 This section of the River Thames in the vicinity of Tilbury Docks is largely of industrial use rather than as a public transport corridor.

Views from places of work

- 8.5.40 People at their place of work within the study area are primarily located to the west of the Proposed Development. These include the maritime shipping container terminal, Tilbury sewage treatment works, a concrete plant and the existing National Grid operational land. Whilst the nature of the work involves the opportunity to be outdoors, it is primarily of a heavy industrial nature and contributes to the setting and the local landscape context. The works within this area are likely to provide screening although some localised views might be possible.
- 8.5.41 There are retail and commercial places of work located within the residential area of Tilbury to the northwest of the Proposed Development. These are screened by intervening buildings with the proposed development resulting in no change to visual amenity for these receptors.
- 8.5.42 Areas of agricultural land to the east of the study area would have views of the Proposed Development site but it would be set against the existing industrial landscape and would therefore be barely perceptible.

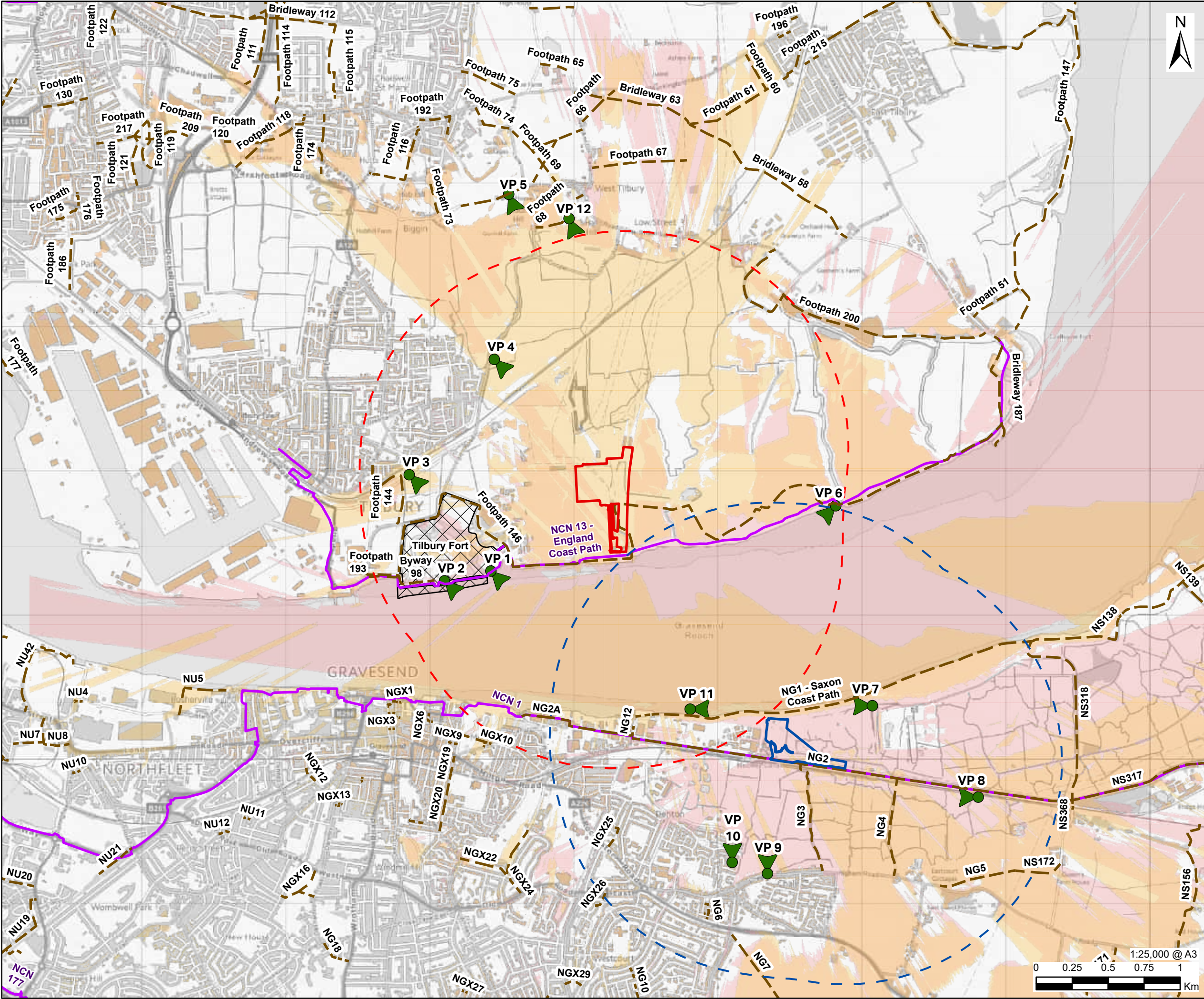
Views for those engaged in outdoor sport or recreation

- 8.5.43 Whilst there are sport pitches located to the southwest of the study area, these are likely to be screened by intervening residential and commercial buildings resulting in no change to visual amenity for these receptors.
- 8.5.44 It is noted that for most visual receptors, the Proposed Development at the Tilbury site will be perceived as part of, and an extension to, the existing industrial landscape to both sides of the river.

Representative Viewpoints

- 8.5.45 A series of twelve representative viewpoint locations were selected to form the basis of the visual assessment. These have been identified to provide a representative cross section of visual receptors within the study area and were selected in consultation with relevant local authorities as described in Section 8.3.34. Representative viewpoints have been included in the assessment with visual receptors covered by a representative viewpoint.

- 8.5.46 The locations of the viewpoints are provided on Figure 8-7 'Representative Viewpoint and Visual Receptor Locations' and details of each, including a description of the baseline view and its value are provided in Appendix 8.2. A summary of effects is provided in section 8.10 of Appendix 8.2.
- 8.5.47 Figure 8-8 'Photomontages' provides panoramic photography of the baseline view from each of the viewpoint locations. Table 8-10 provides a list of the viewpoint locations and the receptors they have been selected to represent.



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LEGEND

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- Gravesend Red Line Boundary
- Tilbury 1.5km Buffer
- Gravesend 1.5km Buffer
- Representative Viewpoint and Visual Receptor Locations
- National Cycle Network
- Public Right of Way
- Tilbury Fort
- Zone of Theoretical Visibility - Tilbury
- Zone of Theoretical Visibility - Gravesend

NOTES

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FIGURE TITLE

Representative Viewpoint and Visual Receptor Locations - Tilbury

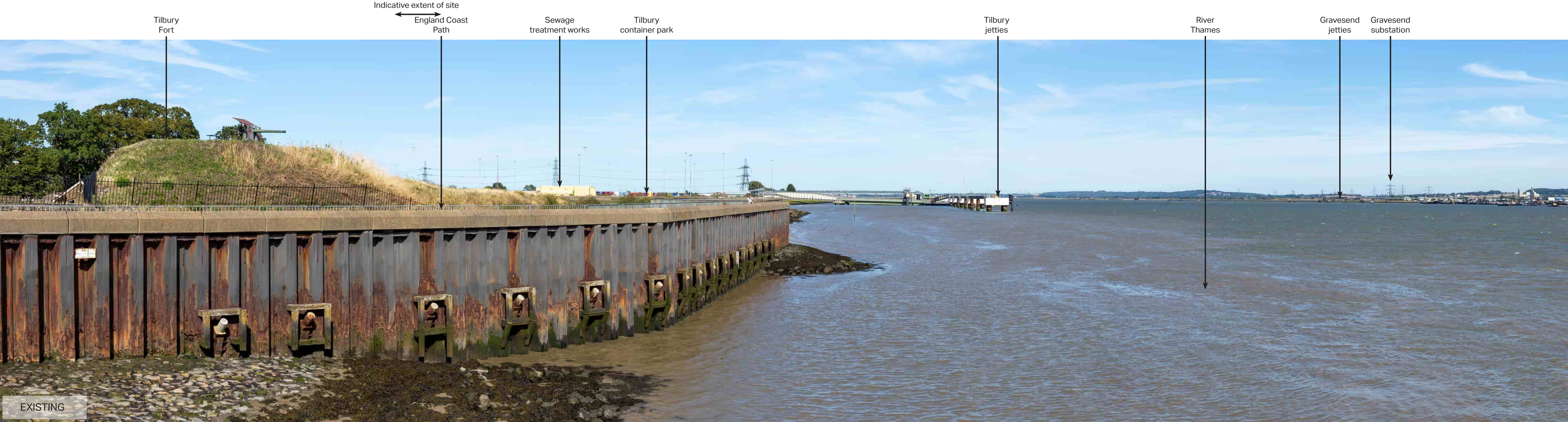
FIGURE NUMBER

Figure 8.7





AECOM Delivering a better world	Visualisation Type:	1	Camera:	Canon EOS 6D	Northings:	565387	Note: Images to be viewed at a comfortable arm's length.	PROJECT NAME: TKRE Cable Tunnel Replacement Project
	Projection:	Cylindrical	Lens:	Canon EF50mm f/1.8 STM	Eastings:	175268		
	Enlargement Factor:	96%	Horizontal Field of View:	90°	Altitude:	9.6m AOD		
	Paper Size:	A1	Direction of View:	East	Height of Camera:	1.6m		
	Date / Time:	16Aug2023 14:47	Location:	Tilbury				



EXISTING



Visualisation Type: 1
Projection: Cylindrical
Enlargement Factor: 96%
Paper Size: A1
Date / Time: 16Aug2023 14:57

Camera: Canon EOS 6D
Lens: Canon EF50mm f/1.8 STM
Horizontal Field of View: 90°
Direction of View: East
Location: Tilbury

Northings: 565065
Eastings: 175200
Altitude: 7.4m AOD
Height of Camera: 1.6m

Note:
Images to be viewed at a comfortable arm's length.

PROJECT NAME: TKRE Cable Tunnel Replacement Project
Figure 8.8: Viewpoint number 2 - English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort



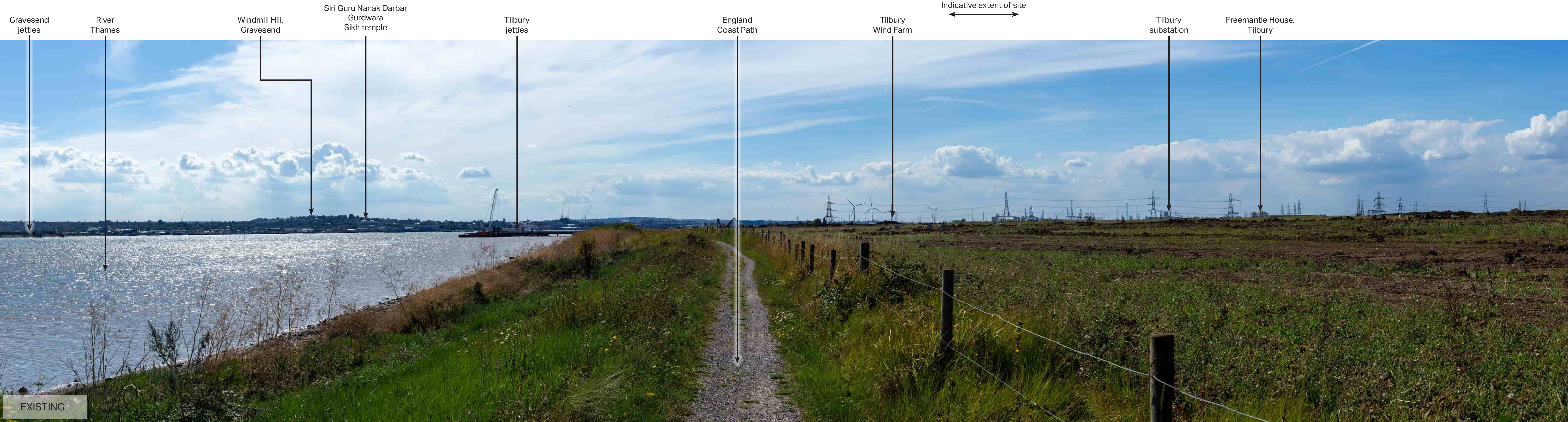
AECOM Delivering a better world	Visualisation Type:	1	Camera:	Canon EOS 6D	Northings:	564820	Note: Images to be viewed at a comfortable arm's length.	PROJECT NAME: TKRE Cable Tunnel Replacement Project
	Projection:	Cylindrical	Lens:	Canon EF50mm f/1.8 STM	Eastings:	175937		
	Enlargement Factor:	96%	Horizontal Field of View:	90°	Altitude:	5.6m AOD		
	Paper Size:	A1	Direction of View:	Southeast	Height of Camera:	1.6m		
	Date / Time:	16Aug2023 15:29	Location:	Tilbury				



AECOM Delivering a better world	Visualisation Type:	1	Camera:	Canon EOS 6D	Northings:	565411	Note: Images to be viewed at a comfortable arm's length.	PROJECT NAME: TKRE Cable Tunnel Replacement Project
	Projection:	Cylindrical	Lens:	Canon EF50mm f/1.8 STM	Eastings:	176738		
	Enlargement Factor:	96%	Horizontal Field of View:	90°	Altitude:	-2.4m AOD		
	Paper Size:	A1	Direction of View:	Southeast	Height of Camera:	1.6m		
	Date / Time:	17Aug2023 13:05	Location:	Tilbury				



AECOM Delivering a better world	Visualisation Type:	1	Camera:	Canon EOS 6D	Northings:	565500	Note: Images to be viewed at a comfortable arm's length.	PROJECT NAME: TKRE Cable Tunnel Replacement Project
	Projection:	Cylindrical	Lens:	Canon EF50mm f/1.8 STM	Eastings:	177902		
	Enlargement Factor:	96%	Horizontal Field of View:	90°	Altitude:	23.4m AOD		
	Paper Size:	A1	Direction of View:	South-southeast	Height of Camera:	1.6m		
	Date / Time:	17Aug2023 13:38	Location:	Chadwell St. Mary, Tilbury				



AECOM Delivering a better world	Visualisation Type:	1	Camera:	Canon EOS 6D	Northings:	567783	Note: Images to be viewed at a comfortable arm's length.	PROJECT NAME: TKRE Cable Tunnel Replacement Project
	Projection:	Cylindrical	Lens:	Canon EF50mm f/1.8 STM	Eastings:	175796		
	Enlargement Factor:	96%	Horizontal Field of View:	90°	Altitude:	1.8m AOD		
	Paper Size:	A1	Direction of View:	West	Height of Camera:	1.6m		
	Date / Time:	16Aug2023 13:59	Location:	Tilbury				



Visualisation Type: 1
Projection: Cylindrical
Enlargement Factor: 96%
Paper Size: A1
Date / Time: 17Aug2023 09:13

Camera: Canon EOS 6D
Lens: Canon EF50mm f/1.8 STM
Horizontal Field of View: 90°
Direction of View: Northwest
Location: Gravesend

Northings: 568075
Eastings: 174423
Altitude: ~1.5m AOD
Height of Camera: 1.6m

Note:
Images to be viewed at a comfortable arm's length.

PROJECT NAME: TKRE Cable Tunnel Replacement Project
Figure 8.8: Viewpoint number 7 - Saxon Shore Way (PRoW NG 1) to the east of the Gravesend substation

Table 8-10: Viewpoints and Visual Receptors (see Figure 8-7)

Viewpoint	Location Description	Grid Reference	Visual Receptors
1	English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	565387, 175268	Representative of views for recreational and cultural receptors with views to both the Tilbury and Gravesend Sites. Viewpoint located within the proposed Site of Special Scientific Interest (SSSI)
2	English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	565065, 175200	Representative of views for recreational and cultural receptors with views to both the Tilbury and Gravesend Sites. Viewpoint located within the proposed SSSI
3	PRoW 144 (footpath)	564820, 175937	Representative of recreational receptors in the vicinity of Tilbury and residential receptors at the southern extents of Tilbury with views to both the Tilbury and Gravesend Sites. Viewpoint located within the proposed SSSI
4	Fort Road, adjacent to the rear of properties at Pepys Close, Tilbury	565411, 176738	Representative of residential receptors at the eastern extents of Tilbury with views to both the Tilbury and Gravesend Sites. The viewpoint is also representative of road users along the section of Fort Road within the study area, and rail users on the section of the Tilbury loop railway line between East Tilbury and Tilbury Town stations within the study area, with views to both the Tilbury and Gravesend Sites.
5	PRoW 72 (footpath)	565500, 177902	Representative of recreational receptors in the vicinity of Gun Hill and residential receptors at the southern extents of Chadwell St Mary with views to both the Tilbury and Gravesend Sites. Viewpoint located within the proposed SSSI
6	English Coast Path (PRoW 146) and NCN Route 13 to the east of the Tilbury Site.	567783, 175796	Representative of middle-distance views for recreational and cultural receptors with views to both the Tilbury and Gravesend Sites. Viewpoint located within the proposed SSSI.
7	Saxon Shore Way (PRoW NG 1) to the east of the Gravesend Site.	568075, 174423	Representative of views for recreational receptors and located within the RAMSAR, SSSI and Special Protection Area (SPA) designated area (South Thames Estuary and Marshes) with views to both the Tilbury and Gravesend Sites.
8	PRoW NG 2 (footpath) and NCN route 1	568810, 173788	Representative of views for recreational receptors and located on the disused Thames and Meadway Canal within the RAMSAR, SSSI and SPA designated area (South Thames Estuary and Marshes) with views to both the Tilbury and Gravesend Sites.
9	Lower Higham Road, Chalk	567399, 173204	Representative of residential receptors at the northern extents of Chalk with views to both the Tilbury and Gravesend Sites.
10	Malthouse Field, Denton	567154, 173282	Representative of residential receptors at the northern extents of Denton with views to both the Tilbury and Gravesend Sites.

Viewpoint	Location Description	Grid Reference	Visual Receptors
11	Saxon Shore Way (PRoW NG 1) to the west of the Gravesend Site.	566809, 174293	Representative of views for recreational and work receptors (at nearby industrial and commercial buildings) with views to both the Tilbury and Gravesend Sites.
12	PRoW 68 (footpath) near West Tilbury	565919, 177733	Representative of recreational receptors in the vicinity of Gun Hill and residential receptors at the southern extents of West Tilbury with views to both the Tilbury and Gravesend Sites. Viewpoint located within the proposed SSSI.

8.6 Key Parameters for Assessment

8.6.1 A detailed description of the Proposed Development is provided in Volume II Chapter 3 - Project Description. The following aspects of the Proposed Development relevant to this chapter comprise:

- The site preparation and construction works, especially:
 - Vegetation clearance;
 - Removal of top soil;
 - Areas for plant maintenance, site offices and compound areas;
 - Three 50m tall exhaust stacks (worst case height parameters) on large generators to power the tunnel boring machine, should connection into the grid not be possible. If required these would be located within the construction compound for a 25 week duration;
 - Storage areas for construction and for excavated materials;
 - The construction of new access routes – temporary and permanent
 - The movement of construction workers and plant within the site;
 - The movement of materials and plant within the vicinity of the site;
 - Acoustic disturbance from construction activities; and
 - Lighting during preparation and construction – particularly noting the 24 hour tunnel construction upon the completion of shaft construction.
- Land uses within the operational Proposed Development in particular:
 - New Sealing End Compound including headhouse;
 - New access roads and utilities;
 - Removal, replacement and additional OHLs;
 - New drainage; and
 - Lighting.

8.7 Mitigation

Embedded Mitigation

- 8.7.1 The primary aims of the landscape design are to reduce the visual prominence of the Proposed Development and assimilate it into the landscape context, while providing an enhancement to the provision for biodiversity through embedded mitigation measures. The proposed landscape design would consider the existing conditions to apply development specific design principles to address the positioning and alignment, scale, height and massing and materials and finishes of elements, which contribute to visual appearance. The landscape design would also incorporate any pre-application planning comments.
- 8.7.2 The following embedded mitigation has been taken into consideration when assessing the landscape and visual impacts of the Proposed Development:
- Proposed Development extents have been minimised as far as possible to reduce land take and allow greater retention of existing vegetation including scrub and other landscape features;
 - Incorporate new and additional planting such scrub, and landform elements including ditches and creeks to help tie the Proposed Development into the existing landscape character and provide localised screening.
 - Optimising zones within construction compounds to minimise their temporary impact on the landscape and views, including at night;
 - Returning and reinstating land used temporarily to its former condition and profiles, where appropriate;
 - Confining lighting on new and improved sections of the compound / road within the Proposed Development site to locations where safety is a priority to minimise the potential for light spill in night-time views;
 - Designing permanent structures, such as the sealing end compound and security fencing, in a way that minimises their visual impact and achieves good visual appearance. This may include selection of a muted colour palette that appears recessive within views;
 - Construction programme to be kept to the minimum practicable time to reduce the duration of any landscape and visual impacts and areas will be cleared for construction as close as possible to works commencing and top-soiling, reseeding and planting shall be undertaken as soon as practicable after sections of work are complete; and
 - Due to the openness of the site and surrounding marshland landscape, careful consideration has been given to landscape planting such that these are considered in keeping with the existing character of the open landscape.
- 8.7.3 All design-based measures, including those indicated on the Outline Landscape and Ecology Plan – Tilbury, refer to Appendix A of the Outline Landscape and Ecology Management Plan (oLEMP)) and construction best practice mitigation have been embedded in the design of the Proposed Development.
- 8.7.4 The Outline Construction Environmental Management Plan (CEMP) (ES Volume VI Appendix 3.1) sets out the additional mitigation measures identified. This section summarises the types of mitigation measures that will be considered to mitigate against the effects on landscape and visual receptors where required. These measures will be adopted during the construction phase.
- A Landscape and Ecological Management Plan (LEMP) is to be produced prior to construction based on the Outline LEMP submitted with the planning application.
 - A suitably experienced Environmental Manager will be appointed for the duration of the construction phase. In addition, a qualified and experienced Environmental Clerk of Works (ECoW) will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the CEMP. The ECoW will monitor that the works proceed in accordance with relevant environmental requirements and adhere to

the required good practice and mitigation measures. The ECoW will be supported as necessary by appropriate specialists, including ecologists and arboriculturists;

- Land used temporarily will be reinstated where practicable to its pre-construction condition and use, unless agreed otherwise;
- Earthworks and stockpiled soil will be protected by covering, seeding or using water suppression where appropriate;
- Working areas will be appropriately fenced. The type of fencing installed may also serve to provide acoustic and visual screening of the work sites and reduce the potential for disturbance of users in the surrounding areas. Fencing will be regularly inspected and maintained and removed as part of the demobilisation unless otherwise specified;
- The contractor will retain vegetation where practicable. Where vegetation is lost and cannot be replaced due to restrictions associated with underground services or wayleaves, reinstatement in accordance with the outline LEMP and outline Landscape Design shall be followed;
- The contractor will apply the relevant protective principles set out in British Standard (BS) 5837:2012: Trees in relation to design, demolition and construction. This will be applied to trees within the Red Line Boundary which will be preserved through the construction phase, and to trees outside where such measures do not hinder or prevent the use of the relevant working width for construction;
- A five-year aftercare period will be established for all reinstatement and mitigation planting;
- Separation and storage of subsoil and topsoil to ensure no degradation in quality and reinstatement undertaken as soon as possible after completion of construction of each section/area of works;
- Temporary and separate placement of topsoil and subsoil will be stored with the additional height of the subsoil storage used on whichever side of the Site requires greater screening benefit, where practicable; and
- To control the spread of invasive weeds in accordance with the Wildlife and Countryside Act 1981, any plant or machinery that has been used in areas infested with invasive species (both terrestrial and aquatic), such as Japanese knotweed and Russian olive, will be thoroughly cleaned. Water used to clean vehicles will be controlled to prevent the spread of the plant (through seeds, rhizomes, fragments, etc.). The area will be cordoned off to prevent any inadvertent spreading.

8.8 Potential Impacts

Introduction

- 8.8.1 The following sections sets out a brief summary of the elements of the Proposed Development which may result in landscape and visual effects during the construction and operational phases.

General Overview

- 8.8.2 Permanent above-ground infrastructure including a cable sealing end compound, headhouse and overhead line modifications would be required at both ends of the new tunnel at the Tilbury and Gravesend sites. Site construction compounds would also have exterior fencing with the potential requirement for protection / screening panels.

Potential Construction Phase Effects

- 8.8.3 The Proposed Development would introduce a number of new elements into the landscape during the construction phase for a temporary period of time, creating the potential for landscape or visual effects. Potential construction phase effects may arise at either or both sites from the following activities:
- **Site clearance of vegetation:** to include tree and scrub removal, soil stripping and mounding and erection of temporary security fencing;
 - **Utility diversions:** to include any temporary or permanent diversion of overhead lines for safe working, or underground services crossing the site;
 - **Temporary compounds:** to be used for storage of large plant and equipment, office accommodation and welfare facilities, parking facilities, material storage, spoil handling and spoil storage;
 - **Construction activity:** including approximately 200 staff on site during the tunnelling phase. Movement of materials including HGVs accessing the site for spoil removal;
 - **Temporary access tracks:** to facilitate safe and efficient construction and reduce the impact of works upon the local area;
 - **Temporary diversion of PROWs:** including local and nationally promoted recreational routes;
 - **Drive shaft construction site:** to include the working area for the shaft and its required construction plant (including cranes sat adjacent to the shaft, piling equipment), materials storage and spoil handling and processing areas and three 50m exhaust stacks on large generators;
 - **Construction of new cable tunnel:** to include the 24 hour working area for the construction plant including temporary safety lighting, materials storage and spoil handling and processing areas; and
 - **Construction of new cable tunnel infrastructure:** to include new headhouses, cable sealing end compounds and overhead line modifications and any additional associated new pylons.

Potential Operational Phase Effects

- 8.8.4 The Proposed Development would introduce a number of new elements into the landscape, creating the potential for landscape or visual effects. These may include:
- **New cable tunnel infrastructure:** to include new headhouses, cable sealing end compounds, security fencing and protection / screening panels, exterior compound lighting and overhead line modifications and any additional associated new pylons; and

- **New planting:** this may include planting to mitigate the visual impact of the new headhouses and cable sealing end compounds.

8.8.5 The potential effects on the landscape and visual amenity during decommissioning would be equivalent to or less than those assessed during the construction and operational phases of works.

8.9 Assessment of Effects

- 8.9.1 This assessment of landscape and visual effects has been undertaken after the implementation of embedded mitigation. A detailed assessment of potential impacts on each of the identified landscape and visual receptors is provided in ES Volume VI Appendix 8.1: Landscape Character Assessment Tables and Appendix 8.2: Visual Assessment Tables. A summary of the results of the assessment are provided below, including further details of those which are anticipated to receive moderate or greater, and therefore significant, effects.

Landscape Character

- 8.9.2 Construction activity would be short-term and would temporarily influence a localised part of the Tilbury Marshes LLCA. This would occur within an industrialised context and in close proximity to the existing site where the scale of change and geographical extent of construction activity would be limited. Whilst the presence of the 50m exhaust stacks along with cranes and piling equipment would be apparent from the wider landscape, the effects would be temporary and of short term duration (25 weeks). No landscape elements of value would be lost and the effects on the setting and perceptual characteristics of the adjacent landscape character areas would be limited. Construction effects on landscape character would be minor adverse for the Tilbury Marshes LLCA and neutral for remaining LLCAs during construction and not significant.
- 8.9.3 At operation, the Proposed Development would locally extend the influence of electrical infrastructure within the Tilbury Marshes LCA where the presence of both electrical infrastructure and industrial elements are already key characteristics of the landscape. Effects on the landscape character would be negligible adverse or neutral. Once established the network of drainage channels, marshland habitat improvements and scrub planting would provide increased landscape connectivity and habitat improvement to the local landscape character with negligible beneficial effects.

Visual Amenity

- 8.9.4 Construction activity associated with the Proposed Development at Tilbury whilst potentially visible from viewpoint locations in Kent to the south of the River Thames would not result in a discernible change in the composition of the view with neutral effects resulting.
- 8.9.5 Representative viewpoints in Essex would experience varying extents of visibility of construction plant and activity depending on their proximity to the Tilbury site. The assessment identified that for the majority of receptors represented by the viewpoints, there would be a barely perceptible change in the view with negligible adverse effects resulting. Visual receptors in the vicinity of the Tilbury site using recreational routes may experience minor adverse effects but these would be localised and temporary. The presence of construction plant including the cranes, piling equipment and stacks would be largely concentrated in these views for a short duration. These temporary changes seen within the existing industrial baseline context would result in minor adverse and not significant effects at construction.
- 8.9.6 Once operational the Proposed Development would be barely discernible in views from most locations with neutral effects during operation. Visual receptors in the vicinity of the Tilbury site, primarily along the promoted recreational route, may experience negligible adverse effects but these would be localised with the key features and focus of the views remaining largely unchanged. Some of the visual receptors within Kent may experience a negligible beneficial effect due to the removal of two OHLs within distant and expansive views towards the Essex coastline.

8.10 Residual Effects

The residual effects on landscape character and visual amenity resulting from the Proposed Development would remain unchanged from those reported in Section 8.9 above as all mitigation is embedded in the design of the Proposed Development including the Outline Landscape and Ecology Plan (Appendix A of the OLEMP), Table 8-11, Table 8-12, and Table 8-13 provide summaries of construction and operational stage residual effects.

Table 8-11: Summary of Residual Landscape and Visual Effects during Construction

Receptor	Sensitivity	Magnitude of Effect	Significance of Effect	Additional Mitigation	Magnitude of effect	Residual Effect
Tilbury Marshes LLCA	Low	Small	Minor Adverse	All mitigation is embedded into the design of the Proposed Development and construction good practice identified in the CEMP, refer to section 8.7.	Small	Minor Adverse Not Significant
Tilbury and Docks Urban Area; Chadwell Escarpment Urban Fringe Area; and West Tilbury Urban Fringe Area LLCAs	Negligible	Negligible	Neutral		Negligible	Neutral Not Significant
Viewpoint 1: English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	Medium	Small	Minor Adverse		Small	Minor Adverse Not Significant
Viewpoint 2: English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	Medium	Small	Minor Adverse		Small	Minor Adverse Not Significant
Viewpoint 3: PRoW 144 (footpath)	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 4: Fort Road, adjacent to the rear of properties at Pepys Close, Tilbury	Residential – Medium Road and rail users - Low	Small	Minor Adverse		Small	Minor Adverse Not Significant
Viewpoint 5: PRoW 72 (footpath)	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 6: English Coast Path (PRoW 146) and NCN Route 13 to the east of the Tilbury Site	Medium	Small	Minor Adverse		Small	Minor Adverse Not Significant

Receptor	Sensitivity	Magnitude of Effect	Significance of Effect	Additional Mitigation	Magnitude of effect	Residual Effect
Viewpoint 7: Saxon Shore Way (PRoW NG 1) to the east of the Gravesend Site	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 8: PRoW NG 2 (footpath) and NCN route 1	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 9: Lower Higham Road, Chalk	Medium	No change	Neutral		No change	Neutral Not Significant
Viewpoint 10: Malthouse Field, Denton	Medium	No change	Neutral		No change	Neutral Not Significant
Viewpoint 11: Saxon Shore Way (PRoW NG 1) to the west of the Gravesend Site	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 12: PRoW 68 (footpath) near West Tilbury	Medium	No change	Neutral		No change	Neutral Not Significant

Table 8-12: Summary of Residual Landscape and Visual Effects during Operation Year 1 (winter)

Receptor	Sensitivity	Magnitude of Effect	Significance of Effect	Additional Mitigation	Magnitude of effect	Residual Effect
Tilbury Marshes LLCA	Low	Negligible	Negligible Adverse	All mitigation is embedded into the design of the Proposed Development, refer to Section 8.7.	Negligible	Negligible Adverse Not Significant
Tilbury and Docks Urban Area; Chadwell Escarpment Urban Fringe Area; and West Tilbury Urban Fringe Area LLCAs	Negligible	Negligible	Negligible Beneficial		Negligible	Negligible Beneficial Not Significant
Viewpoint 1: English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 2: English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 3: PRoW 144 (footpath)	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 4: Fort Road, adjacent to the rear of properties at Pepys Close, Tilbury	Residential – Medium Road and rail users - Low	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 5: PRoW 72 (footpath)	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 6: English Coast Path (PRoW 146) and NCN Route 13 to the east of the Tilbury Site	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant

Receptor	Sensitivity	Magnitude of Effect	Significance of Effect	Additional Mitigation	Magnitude of effect	Residual Effect
Viewpoint 7: Saxon Shore Way (PRoW NG 1) to the east of the Gravesend Site	Medium	Negligible	Negligible Beneficial		Negligible	Negligible Beneficial Not Significant
Viewpoint 8: PRoW NG 2 (footpath) and NCN route 1	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 9: Lower Higham Road, Chalk	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 10: Malthouse Field, Denton	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 11: Saxon Shore Way (PRoW NG 1) to the west of the Gravesend Site	Medium	Negligible	Negligible Beneficial		Negligible	Negligible Beneficial Not Significant
Viewpoint 12: PRoW 68 (footpath) near West Tilbury	Medium	No Change	Neutral		No Change	Neutral Not Significant

Table 8-13: Summary of Residual Landscape and Visual Effects during Operation Year 15 (summer)

Receptor	Sensitivity	Magnitude of Effect	Significance of Effect	Additional Mitigation	Magnitude of effect	Residual Effect
Tilbury Marshes LLCA	Low	Negligible	Negligible Adverse	All mitigation is embedded into the design of the Proposed Development, refer to Section 8.7	Negligible	Negligible Adverse Not Significant
Tilbury and Docks Urban Area; Chadwell Escarpment Urban Fringe Area; and West Tilbury Urban Fringe Area LLCAs	Negligible	Negligible	Negligible Beneficial		Negligible	Negligible Beneficial Not Significant
Viewpoint 1: English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 2: English Coast Path (PRoW 146) and NCN Route 13 near Tilbury Fort	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 3: PRoW 144 (footpath)	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 4: Fort Road, adjacent to the rear of properties at Pepys Close, Tilbury	Residential – Medium Road and rail users - Low	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant
Viewpoint 5: PRoW 72 (footpath)	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 6: English Coast Path (PRoW 146) and NCN Route 13 to the east of the Tilbury Site	Medium	Negligible	Negligible Adverse		Negligible	Negligible Adverse Not Significant

Receptor	Sensitivity	Magnitude of Effect	Significance of Effect	Additional Mitigation	Magnitude of effect	Residual Effect
Viewpoint 7: Saxon Shore Way (PRoW NG 1) to the east of the Gravesend Site	Medium	Negligible	Negligible Beneficial		Negligible	Negligible Beneficial Not Significant
Viewpoint 8: PRoW NG 2 (footpath) and NCN route 1	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 9: Lower Higham Road, Chalk	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 10: Malthouse Field, Denton	Medium	No Change	Neutral		No Change	Neutral Not Significant
Viewpoint 11: Saxon Shore Way (PRoW NG 1) to the west of the Gravesend Site	Medium	Negligible	Negligible Beneficial		Negligible	Negligible Beneficial Not Significant
Viewpoint 12: PRoW 68 (footpath) near West Tilbury	Medium	No Change	Neutral		No Change	Neutral Not Significant

8.11 Summary

- 8.11.1 The Proposed Development is situated in the immediate context of the existing TKRE 400 kV infrastructure. It is also situated within the industrial landscape of this area of the River Thames and the associated heavy industrial sites at Tilbury. The Proposed Development site at Tilbury is adjacent to industrial areas and is therefore likely to be perceived as part of, and an extension to, this existing industrial landscape.
- 8.11.2 Construction would be short-term, reversible and occur in a wholly industrialised context. No landscape elements of value would be lost as a result of the construction, with effects being temporary and of minor adverse or neutral effects.
- 8.11.3 Construction of above ground infrastructure/overhead cables would result in a minor to negligible effect in the view for the majority of potential viewers, including the most sensitive groups of residents in Tilbury/Gravesend, and recreational receptors. Viewers in proximity to the site at Tilbury would be limited in number and experience the additional infrastructure in the context of more prominent industrial elements, limiting the magnitude of change and resulting effect.
- 8.11.4 Receptor groups using this section of the River Thames are likely to view the site within the wider industrial context of the area.
- 8.11.5 Similarly, in operation the effects on landscape character would be negligible. Any change in character would be small scale and with a localised geographical extent of influence. It would involve no loss of landscape elements of value and occur within the existing context. The net loss of two OHLs and reinstatement of priority habitat type would be negligible beneficial.
- 8.11.6 Once operational the Proposed Development including headhouses and OHL infrastructure would result in a barely perceptible change in the view for the majority of potential viewers and would be perceived as part of, and an extension to, this existing industrial landscape. Residual effects on visual amenity would be negligible adverse or neutral. Once established the network of drainage channels, marshland habitat improvements and scrub planting would provide increased landscape connectivity and habitat improvement to the local landscape character and visual amenity.
- 8.11.7 In summary, there would be no likely significant landscape or visual effects during either the construction or operational phases of the Proposed Development.

8.12 References

Ref 8-1 Council of Europe (2022). Council of Europe Landscape Convention [Online]. Available at <https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176>

Ref 8-2 Ministry of Housing, Communities & Local Government (2023). National Planning Policy Framework [Online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1182995/NPPF_Sept_23.pdf

Ref 8-3 Department of Energy & Climate Change (2011). Overarching National Policy Statement for Energy (EN-1) [Online]. Available at: <https://www.gov.uk/government/publications/national-policy-statements-for-energy-infrastructure>

Ref 8-4 Department for Energy Security & Net Zero (2023). Overarching National Policy Statement for Energy (EN-1) [Online]. Available at: <https://assets.publishing.service.gov.uk/media/655dc190d03a8d001207fe33/overarching-nps-for-energy-en1.pdf>

Ref 8-5 Department of Energy & Climate Change (2011). National Policy Statement for Electricity Networks Infrastructure (EN-5) [Online]. Available at: <https://assets.publishing.service.gov.uk/media/5a74877840f0b61938c7e2d9/1942-national-policy-statement-electricity-networks.pdf>

Ref 8-6 Department for Energy Security and Net Zero (2023). National Policy Statement for Electricity Networks Infrastructure (EN-5) [Online]. Available at: <https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5>

Ref 8-7 Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government (2019). Planning Practice Guidance for the Natural Environment [Online]. Available at: <https://www.gov.uk/guidance/natural-environment>

Ref 8-8 Environment Act 2021, Part 1 Chapter 1, and Part 6. Available at: <https://www.legislation.gov.uk/ukpga/2021/30/enacted>

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8.13 Abbreviations

Abbreviation	Meaning
AOD	Above Ordnance Datum
BS	British Standard
CEMP	Construction Environmental Management Plan
CRoW	Countryside and Rights of Way
DTM	Digital Terrain Model
ECoW	Environmental Clerk of Works
ELC	European Landscape Convention
ES	Environmental Statement
GLVIA	Guidelines for Landscape and Visual Impact Assessment
LAGB	London Area Green Belt
LLCA	Local Landscape Character Areas
LEMP	Landscape and Ecology Management Plan
MCA	Marine Character Area
NCA	National Character Area
NCN	National Cycle Network
NFI	National Forestry Inventory
NPPF	National Planning Policy Framework
NPS	National Policy Statement
OHL	Overhead Line
oLEMP	Outline Landscape and Ecology Management Plan
OS	Ordnance Survey
PPG	Planning Practice Guidance
PRoW	Public Rights of Way
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
TKRE	Tilbury to Grain and Tilbury to Kingsnorth
ZTV	Zone of Theoretical Visibility

