



Thurrock Flexible Generation Plant

**Environmental Statement Volume 3
Chapter 6: Landscape and Visual Resources**

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Environmental Impact Assessment

Environmental Statement

Volume 3

Chapter 6

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Summary

This chapter provides an assessment of the potential effects of the Thurrock Flexible Generation Plant development on Landscape and Visual Resources.

Qualifications

This document has been prepared by Corinna Demmar and Mark Wilson, both Chartered Landscape Architects, who both have over 30 years' experience of landscape architecture and landscape and visual impact assessment.

1. Introduction

1.1 Purpose of this chapter

1.1.1 This chapter describes and assesses the existing landscape and visual resources of the application site and in the vicinity of the application site. This includes identification of the character and features of the landscape and consideration of the changes that would result as a consequence of the proposed development. In addition, it considers the potential visual effects arising as a result of the proposed development. The chapter reports on studies, including a combination of field surveys and desktop research, to describe, classify and evaluate the existing resource.

1.1.2 The principal objectives of the assessment are:

- to describe, classify and evaluate the existing landscape likely to be affected by the proposed development during its construction and operational phases;
- to identify visual receptors with views of the proposed development;
- to identify the likely significant effects on landscape and views, taking into account measures proposed to reduce or avoid any effects identified.

1.1.3 This chapter of the Environmental Statement (ES) presents the findings of Environmental Impact Assessment (EIA) work undertaken to date concerning potential impacts of Thurrock Flexible Generation Plant on landscape and visual resources.

1.1.4 This ES chapter:

- presents the existing environmental baseline established from desk studies, surveys and consultation to date;
- presents the potential environmental effects on landscape and visual resources arising from Thurrock Flexible Generation Plant, based on the information gathered and the analysis and assessments undertaken;
- identifies any assumptions and limitations encountered in compiling the environmental information; and
- highlights any necessary monitoring and/or mitigation measures that could prevent, minimise, reduce or offset the possible environmental effects identified in the EIA process.

1.2 Planning policy context

1.2.1 Planning policy on this type of energy related Nationally Significant Infrastructure Project (NSIP), specifically in relation to landscape and visual resources, is contained in the Overarching National Policy Statement (NPS) for Energy (EN-1) (Department of Energy and Climate Change (DECC), 2011a) and the NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2) (DECC, 2011b).

1.2.2 NPS EN-1 and NPS EN-2 include guidance on what matters are to be considered in the assessment. These are summarised in Table 1.1, below.

Table 1.1: Summary of NPS EN-1 and NPS EN-2 provisions relevant to this chapter.

Summary of NPS EN-1 and NPS EN-2 provision	How and where considered in the ES
Summary of NPS EN-1 policy relevant to the assessment of effects on Landscape and Visual Resources	
The assessment should make reference to existing landscape character assessments and related studies (paragraph 5.9.5).	Published landscape character studies are referenced in paragraphs 3.3.1 to 3.3.434.
The assessment should make reference to relevant planning policies (paragraph 5.9.5).	Relevant planning policies are referred to in paragraphs 1.2.4 to 1.2.62.
The assessment should include the effects on landscape character and individual landscape elements during construction and operation (paragraph 5.9.6).	The effect on landscape character during construction is considered in paragraphs 4.1.12 to 4.1.6 and at the operational stage in paragraphs 4.2.1 to 4.2.56.
The assessment should include the effects on views and visual amenity during construction and operation, including light pollution effects (paragraph 5.9.7).	The effect on visual resources and receptors during construction are set out paragraphs 4.1.158 to 4.1.44 and at the operational stage at paragraphs 4.2.7 to 4.2.49. Night-time effects during construction are set out paragraphs 4.1.14 to 4.1.50 and at the operation stage at paragraphs 4.2.5 and 4.2.50
The assessment should minimise harm through reasonable and appropriate mitigation (paragraph 5.9.8).	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).
The proposal should not compromise the integrity of nationally designated areas (paragraph 5.9.12).	The Thurrock Flexible Generation Plant facility is not located within or adjacent to a designated landscape. The Kent Downs AONB lies approximately 6 km from Zone A, but the development does not affect its special qualities or compromise its integrity.
The proposal should provide reasonable visual mitigation where possible and appropriate (paragraphs 5.9.21, 5.9.22 and 5.9.23).	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).

Summary of NPS EN-1 and NPS EN-2 provision	How and where considered in the ES
The proposal should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal (paragraph 5.10.6).	Replacement Common Land and Access Land to replace that lost at Walton Common is provided as detailed in Volume 3, Chapter 8: Land Use Agriculture and Socio-economics.
The proposal should take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way (paragraph 5.10.24).	Mitigation of effects on Public Rights of Way is considered in Volume 3, Chapter 8: Land Use Agriculture and Socio-economics.
Summary of NPS EN-2 policy relevant to the assessment of effects on Landscape and Visual Resources	
The assessment should make reference to existing landscape character assessments and related studies (paragraph 2.6.3).	Published landscape character studies are referenced in paragraphs 3.2.19 to 3.2.34.
The assessment should consider the design of the plant, including the materials to be used, and the visual impact of the stack (paragraph 2.6.4).	Visual impact of the facility including 40m stacks during the operational phase is considered in paragraphs 4.2.7 to 4.2.51. Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).
As it is not possible to eliminate the visual impacts associated with a fossil fuel generating station, the proposal should take appropriate mitigation measures to reduce the visual intrusion of the buildings in the landscape and minimise impact on visual amenity as far as reasonably practicable (paragraph 2.6.5).	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).
The proposal should be designed with the aim of providing the best fit with the existing local landscape so as to reduce visual impacts (paragraph 2.6.6).	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). The effects of mitigation proposals are included as part of the assessment of effects in Section 4.
The proposal should consider reducing visual impacts by enclosing buildings at low level, or using earth bunds, mounds, and tree planting (paragraph 2.6.7).	Noted - Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). The effects of mitigation proposals are included as part of the assessment of effects in Section 4.
The proposal should take measures to minimise the effects of the fossil fuel generating station on landscape and visual amenity as far as reasonably practicable (paragraph 2.6.8).	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). The effects of mitigation proposals are included as part of the assessment of effects in Section 4.

1.2.3 NPS EN-1 and NPS EN-2 also highlight a number of factors relating to the determination of an application and in relation to mitigation. These are summarised in Table 1.2 below.

Table 1.2: Summary of NPS EN-1 and NPS EN-2 policy on decision making relevant to this chapter.

Summary of NPS EN-1 and NPS EN-2 policy on decision making (and mitigation)	How and where considered in the ES
Summary of NPS EN-1 policy on decision making and mitigation relevant to the assessment of effects on Landscape and Visual Resources	
Has the chapter considered the existing landscape character (paragraph 5.9.8)?	The landscape baseline is set out at Section 3.
Virtually all nationally significant energy infrastructure projects would have an effect on the landscape (paragraph 5.9.8)?	Noted
Having regard to siting, operational and other relevant constraints, does the project minimise harm to the landscape (paragraph 5.9.8)?	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). The effects of mitigation proposals are included as part of the assessment of effects in Section 4.
Does the project provide reasonable landscape mitigation where possible and appropriate (paragraph 5.9.8)?	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).
Does the proposal compromise the purpose of a nationally designated area (paragraph 5.9.12)?	The Thurrock Flexible Generation Plant facility is not located within or adjacent to a designated landscape. The Kent Downs AONB lies approximately 6 km from Zone A, but the development does not affect its special qualities or compromise its integrity.
The fact that a proposed project would be visible from within a designated area should not in itself be a reason for refusing consent (paragraph 5.9.13).	Noted – the landscape and visual effects on the Kent Downs AONB are assessed in paragraphs 4.7.1 to 4.7.6.
The scale of nationally significant infrastructure projects will mean that they would often be visible within many miles of the site of the proposed infrastructure. The decision maker should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project (paragraph 5.9.15).	Noted – the landscape and visual effects are assessed in Sections 4.1 onwards for the construction, operational and decommissioning phases.
In reaching a judgement, the decision maker should consider whether any adverse impact is temporary, such as during construction and /or whether any adverse impact on the landscape would be capable of being reversed in a timescale that the decision maker considers reasonable (paragraph 5.9.16).	Landscape impacts are considered at paragraphs 4.1.2 to 4.1.6 (at construction) paragraphs 4.2.1 to 4.2.6 (during operation) and paragraph 4.3.1 (at decommissioning).

Summary of NPS EN-1 and NPS EN-2 policy on decision making (and mitigation)	How and where considered in the ES
The decision maker would have to judge whether the visual effects on sensitive receptors, such as local residents and other receptors, such as visitors to the local areas, outweigh the benefits of the project (paragraph 5.9.18).	Visual impacts are considered at paragraphs 4.1.78 to 4.1.50 (at construction) paragraphs 4.2.7 onwards (during operation) and paragraph 4.3.2 (at decommissioning).
Examples of existing permitted infrastructure with a similar magnitude of impact on visual receptors may assist the decision maker in judging the weight it should give to assessed visual impacts of the proposed development (paragraph 5.9.19).	The Tilbury 2 project has recently been permission to the west of the proposed Thurrock FGP plant. The Tilbury electrical substation lies immediately to the south of the proposed development. Overhead lines and towers cross the landscape connecting to the substation. Tilbury B Power Station was located to the south of the proposed Thurrock FGP plant, it was demolished in 2019.
Does the project provide reasonable visual mitigation where possible and appropriate (paragraphs 5.9.21, 5.9.22 and 5.9.23)?	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). It is included in the landscape and visual impact assessment and summarised in Section 5.
The decision maker should not refuse to grant consent for a development solely on the ground of an adverse effect on the landscape/seascape or visual amenity if any alternative is not economically viable or the benefits of the scheme outweigh any harmful effects on sensitive receptors (paragraph 2.6.208).	Noted
The decision maker should make a judgement on potential adverse impacts, during construction and operation, taking into account the duration and reversibility of the proposal (paragraph 2.6.209).	Sections 4.1 to 4.3 consider the effects on landscape and visual resources and receptors during construction, operation and decommissioning.
Summary of NPS EN-2 policy on decision making and mitigation relevant to the assessment of effects on Landscape and Visual Resources	
It is not possible to eliminate the visual impacts associated with a fossil fuel generating station. Mitigation is to reduce the visual intrusion and impact on visual amenity, as far as reasonably practicable (paragraph 2.6.5). Does the project provide reasonable visual mitigation where possible and appropriate?	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). It is included in the landscape and visual impact assessment and summarised in Section 5.
Has the Applicant designed the fossil fuel generating station with the aim of providing the best fit in the landscape (including size, external finish and colour – as far as compliance with engineering and environmental requirements permit), so as to reduce visual impacts (paragraphs 2.6.6 and 2.6.7)?	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). It is included in the landscape and visual impact assessment and summarised in Section 5.

Summary of NPS EN-1 and NPS EN-2 policy on decision making (and mitigation)	How and where considered in the ES
Has the Applicant undertaken an appropriate landscape and visual impact assessment using recognised methodologies (paragraph 2.6.8)?	The landscape and visual assessment methodology is set out in Section 2.
Has the Applicant taken measures to minimise the effects of the fossil fuel generating station on the landscape and visual amenity as far as is reasonably practicable (paragraph 2.6.8)?	Proposed mitigation is outlined at Table 2.8, expanded at paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).
The decision maker should be aware of the statutory and technical requirements that inform plant design and may require the incorporation of certain design details, e.g. chimney stack height (paragraph 2.6.9).	Noted
If the decision maker is satisfied that the location is appropriate for the project, and that it is design sensitively (given siting, operational and other relevant constraints) to minimise harm to the landscape and visual amenity, the visibility of a fossil fuel generating station should be given limited weight (paragraph 2.6.10).	Noted

National Planning Policy Framework (2019)

National Policy Context

National Planning Policy Framework (NPPF)

1.2.4 The Ministry of Housing, Communities and Local Government (MHCLG) published an update to the ‘National Planning Policy Framework’ (NPPF) document in February 2019. The document consolidates a number of policy statements, circulars and related documents into a single document. It replaces all previous national planning policy in relation to landscape issues. Paragraph 170 of the NPPF states that “*Planning policies and decisions should contribute to and enhance the natural and local environment*” (Page 48).

1.2.5 The NPPF emphasises the importance of sustainable development. Paragraph 7 of the NPPF states, “*The purpose of the planning system is to contribute to the achievement of sustainable development*” (Page 5). Three objectives of sustainable development are highlighted by the NPPF which should be considered which includes (along with Economic and Social objectives) an “*Environmental Objective - to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change, including moving to a low carbon economy*” (paragraph 8 c). These objectives should not be considered in isolation as they are mutually dependant.

1.2.6 The NPPF (Department for Communities and Local Government, 2012) previously indicated that, “Within the overarching roles that the planning system ought to play, a set of core land-use planning principles should underpin both plan-making and decision-taking”. One of these 12 principles indicate the need to, “take account of the different roles and character of different areas, promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it”. This statement (and the core planning principles section) have been removed from the current NPPF (MHCLG, 2019) to avoid duplication with other chapters. However, its principles are enshrined in paragraph 127 of the current NPPF which also updates Section 7 of the NPPF (Requiring Good Design). Paragraph 127 of the NPPF states that:

“*Planning policies and decisions should ensure that developments:*

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

- b) *are visually attractive as a result of good architecture, layout and effective landscaping;*
- c) *respond to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);*
- d) *establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive and distinctive places to live, work and visit;*
- e) *optimize the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public spaces) and support local facilities and transport networks;*
- f) *create places that are safe, inclusive and accessible, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime do not undermine the quality of life or community cohesion and resilience.”* (Page 38-39).”

1.2.7 Section 15 of the NPPF is entitled ‘Conserving and enhancing the natural environment’. Paragraph 170 states that, “*The planning system should contribute to and enhance the natural and local environment by:*

- a) *protecting and enhancing valued landscapes, geological conservation interests and soils*
- b) *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*
- c) *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- e) *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*

- f) *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*" (Page 49).
- 1.2.8 Paragraph 172 within the NPPF re-affirms the importance of the Area of Outstanding Natural Beauty (AONB) and National Park designations stating that, *"Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:*
- a) *any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated"* (Page 49/50).
- 1.2.9 Paragraph 180 requires that new development is appropriate to its location, ensuring relatively undisturbed areas retain tranquillity and amenity value, and that the impact of light pollution from artificial light is limited on local amenity and within intrinsically dark landscapes.
- 1.2.10 Protecting Green Belts are discussed in Section 13 of the NPPF. A Statement of Case and Green Belt Statement can be found in application document A8.3.
- 1.2.11 Paragraphs 145 and 146 identify forms of development that are not inappropriate in the Green Belt. Relevant to this development proposal are the following:
- "The replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;*
- "Limited infilling or the partial or complete redevelopment of previously developed land, whether redundant or in continuing use (excluding temporary buildings), which would:*
- not have a greater impact on the openness of the Green Belt than the existing development; or*
 - not cause substantial harm to the openness of the Green Belt, where the development would re-use previously developed land and contribute to meeting an identified affordable housing need within the area of the local planning authority."*

National Planning Policy Guidance

- 1.2.12 The NPPG reiterates the core principles of the NPPF 2019, As such the guidance is not set out within this document.

Thurrock Local Development Framework

- 1.2.13 The Thurrock Local Development Framework (TLDF) was adopted in January 2015. The Thurrock Core Strategy and Policies for Management and Development contains policies and objectives relevant to this chapter. Core Strategic Spatial Policies (CSSPs) relevant to this chapter are set out in paragraphs 1.2.14 to 1.2.20, Core Strategic Thematic Policies (CSTPs) of relevance to this chapter are set out at paragraphs 1.2.21 to 1.2.24 and Policies for Management of Development (PMDs) are set out at paragraphs 1.2.35 to 1.2.43, below.

Policy CSSP4 – Sustainable Green Belt

- 1.2.14 This policy aims to maintain the purpose, function and open character of the Green Belt in Thurrock.
- 1.2.15 Part 4 of Policy CSSP4 is concerned with Enhancing the Green Belt. Point 4., I. concerns sustainable boundaries "The Council will seek to reinforce the Green Belt boundary through structural enhancement of the local landscape features. The Council will 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."
- 1.2.16 Policy CSSP4, Point 4., II. discusses public access, open space and biodiversity "The implementation of the Greengrid Strategy will form a critical component of the overall Green Belt strategy to retain open character, enhance public access and secure biodiversity in the Green Belt."

Policy CSSP5 – Sustainable Greengrid

- 1.2.17 Thurrock plans and strategies include *The Greengrid Strategy for Thurrock 2006 -2011* (Thurrock Borough Council, 2005), which is supported by other reports, including: *The Thurrock Open Space Strategy 2006-2011* (Thurrock Borough Council, 2006a); and, the *Green Infrastructure Plan for Thurrock 2006-2011* (Thurrock Borough Council, 2006b). The Greengrid strategy recognises that improved green access links between green assets is the key to maximising the benefits derived from green assets for residents, workers and visitors to the Borough. Policy CSSP5 is concerned with creating a sustainable Greengrid. Although not indicated as an Existing Open Space on Map 3 – Location of Greengrid in Thurrock, in the Thurrock Local Plan, Zone A is located on Walton Common and is Open Access Land as mapped by the Ordnance

Survey. It forms part of the network of accessible green spaces within the Borough. However, Zone A is separated from other Access Land to the north by the railway, with an ‘unprotected’ type crossing for pedestrians and farm vehicles. For the purposes of this report Walton and Parsonage Commons and the adjoining Access Land are considered to be green space assets, and therefore form part of the Greengrid.

- 1.2.18 Policy CSSP5, point 1., I. explains that it is the policy of the Council to “ensure that all development proposals take account of the objectives of the Greengrid network and where appropriate contribute to the management and enhancement of the Greengrid.”
- 1.2.19 Point 1., II. Notes that it is the policy of the Council to “deliver the area based Greengrid Improvement Zones to ensure that the location, planning, design and ongoing management of sites is appropriate, and that opportunities are sought to make best use of land and green infrastructure assets in delivering ecosystem services.”
- 1.2.20 Point 3. Sets out the Council’s strategy to develop, promote and protect local scale green assets, including, at point iii) registered commons.

Policy CSTP18 – Green Infrastructure

- 1.2.21 The *Thurrock Green Infrastructure Plan* is the key delivery document for the Borough’s Sustainable Community Strategy. The explanatory text notes that Green Infrastructure provides a number of different ‘ecosystem services’, including cultural services that include landscape values such as aesthetic experiences.
- 1.2.22 Paragraph 5.119 of the Core Strategy refers to a *Landscape Strategy for Thurrock 2002-2017*, which confirms the Council’s commitment to conserving and enhancing the landscape character of the Borough. It notes that the strategy “sets out specific features to be preserved and enhanced. Within this there are opportunities to improve the quality of the urban fringe through the provision of new woodland planting, hedgerow planting and other habitat improvements” and notes that “this may come through allowing appropriate uses in the countryside, such as informal recreation and access...”
- 1.2.23 Point 2., I. of the Policy explains that the Council “will require a net gain in Green Infrastructure. This will contribute to addressing the existing and developing deficiencies, ensuring connectivity and relieving pressure on designated biodiversity sites such as SSSI’s.”
- 1.2.24 Point 2., IV. States that “Green Infrastructure assets will be identified, enhanced and safeguarded through different means, including, ii. Not permitting development that compromises the integrity of green and historic assets and that of the overall Green Infrastructure network.”

Policy CSTP20 – Open Space

- 1.2.25 Point I. explains that the “Council will seek to ensure that a diverse range of accessible public open spaces, including natural and equipped play and recreational spaces is provided and maintained to meet the needs of the local community.”
- 1.2.26 Point II. Encourages new provision of public open space.

Policy CSTP22 – Thurrock Design

- 1.2.27 This policy primarily provides a policy framework for residential development. However, it does include references to other development as well.
- 1.2.28 Point I. states that “development proposals must demonstrate high quality design founded on a thorough understanding of, and positive response to, the local context.”
- 1.2.29 Point VII. Explains that “the Council will require that developments address the particular sensitivities and capacity of the places within which they occur, including how adverse impacts are mitigated.”

Policy CSTP23 – Thurrock Character and Distinctiveness

- 1.2.30 The Thurrock Local Plan recognises that protecting and promoting the best elements of the Borough’s character and strengthening its sense of place provides benefits for community cohesion, the quality of life and economic growth (paragraph 5.139).
- 1.2.31 Various character studies of the Borough have been undertaken, including the *Urban Character Study (2005)* the *Thurrock Landscape Capacity Study (2005)* and the *Thurrock Landscape Character Assessment (2007)*.
- 1.2.32 Policy CSTP23, Point II. requires “the retention and enhancement of significant natural, historic and built features which contribute to the character of the Borough as defined by their value, quality, cultural association and meaning or their relationship to the setting and local context.”
- 1.2.33 Point III. States that “the Council requires the retention and enhancement of strategic and local views, which contribute to a distinctive sense of place. Where development will affect these views, their sensitivity and capacity for change must be adequately assessed and the effect of the development on them appropriately tested.”
- 1.2.34 The Policy requires an assessment based on the *Guidelines for Landscape and Visual Impact Assessment (GLVIA)* or other methodology supported by the Council.

Policy PMD1 – Minimising Pollution and Impacts on Amenity, Health, Safety and the Natural Environment

1.2.35 This policy includes the regulation of visual intrusion and light pollution. Point 3. of the Policy requires assessments to accompany planning applications “where it has reasonable grounds to believe that a development may suffer from, or cause:”

“v. Light pollution...

“viii. Visual intrusion.”

1.2.36 Point 4. of the Policy notes that where harmful effects are confirmed in assessments, planning permission will only be granted “if satisfactory solutions can be achieved through design, or suitable mitigation measures can be put in place...”

Policy PMD2 – Design and Layout

1.2.37 The explanatory text to the Policy recognises that in some places the contrast of land uses within the Borough has led to fragmented character and poor quality of physical and visual linkages. Therefore, “it is essential that new schemes are built to appropriate design and layout standards to protect and enhance the quality and the value of the built environment, natural assets and amenity on and around the development site.” Supporting these aims are a number of Borough-wide studies, including the *Landscape Capacity Study* (2005).

1.2.38 Point 1. states that all development proposals must satisfy the following criteria with regards to:

“i. Character – Development must contribute positively to the character of the area in which it is proposed, and to surrounding areas that may be affected by it. It should seek to contribute positively to local views, townscape, heritage assets and natural features, and contribute to the creation of a positive sense of place.”

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

Policy PMD3 – Tall Buildings

1.2.39 While recognising that tall industrial buildings can have a negative, as well as a positive effect, on the community, the Council wishes to adopt a positive approach to assessing tall building proposals, so long as they are developed in appropriate locations, are of a high-quality design (paragraph 6.14).

1.2.40 At point 8. the Policy recognises that “Tall structures that cannot be occupied (such as silos, telecommunication masts, wind turbines, and chimneys) are not considered tall buildings by the Council and will be dealt with on their own merits, taking into account other relevant policies in the plan and as many of the CABE/English Heritage Criteria for Evaluation [given elsewhere in the Policy] that are relevant.”

Policy PMD4 – Historic Environment

1.2.41 Although concerned with statutorily protected heritage assets (see Volume 3, Chapter 7: Historic Environment) this Policy also refers to preserving and enhancing non-statutorily protected heritage assets, such as ancient woodlands, landscapes and hedgerows (paragraph 6.19).

Policy PMD5 – Open Spaces, Outdoor Sports and Recreation Facilities

1.2.42 The accompanying text to the Policy recognises that open spaces promote social inclusion, community cohesion, mental and physical well-being and regeneration as well as contributing to biodiversity and nature conservation. These places are important to their function, but also to their amenity value, contribution to local character and distinctiveness and to Thurrock’s Greengrid (paragraph 6.21) (see Volume 3, Chapter 8: Land Use, Agriculture and Socio-economics).

1.2.43 With regard to existing facilities, point 1 states that “the Council will safeguard all existing open spaces...development proposals that would result in a complete or partial loss or cause or worsen a deficiency in the area served by the space or facility will not be permitted unless:

“i. Conveniently located and accessible alternative facilities of an equivalent or improved standard will be provided...”

ii. Proposals would not negatively affect the character of the area and/or the Greengrid.”

Supplementary Planning Guidance

Thurrock Landscape Capacity Study (March 2005)

1.2.44 The main purpose of the study (Chris Blandford Associates, 2005) is as a planning tool for assisting strategic decision-making in relation to development and environmental protection (paragraph 1.1.2). The assessment sets out to identify the indicative capacity of Thurrock’s landscapes to different sizes of urban development (paragraph 1.1.3).

1.2.45 As such it does not assess the capacity of the landscape for industrial development. However, it does provide information on key qualities that are desirable to safeguard in different landscape character areas. Those that are specific to the main host landscape

character area Tilbury Marshes LCA C5 where the proposed development Zone A is located are listed on page 20 as:

- The setting to Tilbury Fort;
- Horizontal landform;
- Large scale landscape;
- Sense of exposure and openness;
- County wildlife and nature conservation sites;
- Historic pattern of drainage ditches; and
- Historic green lanes.

1.2.46 The key landscape conditions and options for sustainable development listed on pages 20 and 21 include:

- Ensure new development respects the setting of Chadwell Escarpment Urban Fringe LCA.
- Ensure that linear marshland habitat is retained within larger scale developments.
- Facilitate access to the marshes from settlement edges via green links.
- Soften the edges of developments with areas of open water and reed beds reflecting the moats at Tilbury Fort.

Thurrock Design Guide: Design Strategy Supplementary Planning Document (SPD) (March 2017)

Designing in Context

1.2.47 The Design Guide explains that a detailed study of the proposed development site and its physical context must be undertaken to understand and respond to local distinctiveness (paragraph 3.1). Applicants have to demonstrate how proposed development has responded to:

“A1. The strategic and local setting and key views

A2. Strategic Green Infrastructure and landscape

A3. Character, layout and local features

A4. Site boundaries and adjacent land uses”.

Typology

1.2.48 The Thurrock Design Strategy (Thurrock Borough Council, 2017) sets out the main design principles for new developments in Thurrock. The place typology and key design

requirements relevant to the proposed development are described within the SPD at Typology Three: Commerce and Industry (page 54).

1.2.49 The SPD notes that one of the most striking and defining characteristics of Thurrock is the historic relationship between the Borough and the River Thames, *“which has resulted in a legacy of significant commercial and industrial land uses, infrastructure and associated structures, many of which are highly visible due to their scale”* (paragraph 4.15).

1.2.50 The Design Guide notes that the ports within and adjacent to the Borough are a focus for commerce, employment and activity. Industrial complexes are part of the overall pattern of development associated with the Commerce and Industry typology (paragraph 4.16).

1.2.51 At Paragraph 4.18, the Design Guide explains that *“given the prominence and economic importance of these land uses and structures - and the significant potential for expansion – Thurrock Council is keen to ensure that consideration is given to the design, layout and appearance of developments.”*

Key Design Requirements

1.2.52 The key design requirements for developments within Typology Three developments are set out on page 55 of the Design Guide. Design requirement 1. explains that *“Thurrock Council will expect proposals to demonstrate how issues of grouping and massing have been considered as part of the design process within the context of the wider landscape. Views towards new developments, particularly those that will be prominent features within the landscape, will need to be fully assessed with consideration given to the need for a visual impact assessment.”*

1.2.53 Requirement 7. States that *“extensive use of hard and soft landscaping and tree planting must be included as an integral part of new proposals in order to break up the scale of multiple or groups of commercial and industrial buildings as well as providing a robust visual framework.”*

1.2.54 However, Requirement 8 explains that *“care must be taken when designing hard and soft landscape features to account for the prevailing character of the area – this is particularly important in locations near the Thames where marshland and grasslands predominate.”*

1.2.55 The Design Guide requires that *“boundary treatments and security features must also be designed to have a minimal visual impact whilst remaining effective”* (Requirement 9).

1.2.56 Key design requirement 10, explains that “proposals must consider how plant equipment, areas for machinery and lighting are integrated into the design from the outset to form a ‘composition’ of elements.”

Kent Downs Area of Outstanding Natural Beauty

1.2.57 A section of the Kent Downs Area of Outstanding Natural Beauty (AONB) lies within the study area for the proposed development. Although the proposed development does not lie within a designated landscape, the Zone of Theoretical Visibility (ZTV) indicates that some part of the proposed development might be visible from the Kent Downs AONB.

1.2.58 The special characteristics and qualities of the AONB which distinguish it as a nationally important landscape are set out in the Kent Downs Area of Outstanding Natural Beauty Management Plan 2014-2019 (Second Revision 2014) (Kent Downs AONB Unit, 2014). The list of special qualities includes ‘dramatic landform and views.’ It notes that there are “*breath-taking, long-distance panoramas are offered across open countryside, estuaries, towns...*” (page 7).

1.2.59 The special characteristics and qualities of the landform and landscape character area detailed at section 4.2 of the AONB Management Plan. Views over the Thames from the highest and most open parts of the chalk plateau and dip-slopes are noted under ‘The chalk ridge’ landscape element (page 31). The ‘Expansive open plateaux’ landscape element notes that “*north of the chalk scarp the plateaux offer huge open landscapes with a simple structure and sometimes surprising and dramatic views for instance to the Thames Valley*” (page 32).

1.2.60 The Kent Downs AONB Landform and landscape character Policy LLC2 is concerned with the promotion, management and restoration and appropriate creation of prominent views and viewpoints. However, while part of the landscape would be seen from the AONB, the proposed development would be viewed in the context of the existing, surrounding and intervening industrial development.

1.2.61 Similarly while the interpretation of the term ‘setting’ of the Kent Downs AONB is broad “the setting of the Kent Downs AONB is broadly speaking the land outside the designated area which is visible from the AONB and from which the AONB can be seen, but may be wider when affected by intrusive features beyond that” (page 22) the proposed development would be seen in the context of the other infrastructure already existing and that proposed along the inner Thames Estuary.

1.2.62 In any event, “proposals which would affect the setting of the AONB are not subject to the same level of constraint as those which would affect the AONB itself and the weight to be afforded to setting issues will depend on the significance of the impact...” (page

24). Matters such as the size of proposals, their distance, incompatibility with their surroundings, movement, reflectivity and colour are likely to affect impact. Where the qualities of the AONB, which were instrumental in reasons for its designation, are affected then the impacts should be given considerable weight in decisions. This particularly applies to views to and from the scarp of the North Downs.

1.3 Consultation

1.3.1 Key issues raised during scoping and consultation to date specific to Landscape and Visual Resources are listed in Table 1.3, together with how details of how these issues have been considered in the production of this ES and cross-references to where this information may be found.

Table 1.3: Key points raised during scoping and consultation to date.

Date	Consultee and type of response	Points raised	How and where addressed
30 August 2018	Thurrock Borough Council Landscape and Planning Officers – consultation meeting	The proposed viewpoints were discussed with the officers. Alternative suggestions were made with regards to a few viewpoints. The landscape officer suggested that the viewpoints be the same or similar to the Tilbury 2 and the Tilbury Energy Centre (TEC) viewpoints.	The representative viewpoints are described at paragraphs 3.4.42 to 3.4.78 and illustrated on Figures 3.4 to 3.29. These include photographs from the viewpoints proposed by Tilbury2 and TEC.
31 August 2018	RPS to Thurrock Borough Council Landscape Officer - email	Confirmed that RPS has the Tilbury2 viewpoint plan and requested the TEC viewpoint plan.	
3 September 2018	RPS to Gravesham Borough Council - email	Requested confirmation of viewpoints from Gravesham Borough Council.	
10 September 2018	Gravesham Borough Council Planning Officer to RPS - email	<i>“Gravesham Borough Council will be responding to Thurrock Flexible Generation Plant - EIA Scoping Notification and Consultation for this week’s deadline. Whilst the Scoping Report includes visual receptors to the south of the River Thames in Gravesham, we will be suggesting that the same ones be used as for Tilbury 2 / Tilbury Energy Centre so that there is consistency of approach and comparisons can be drawn between assessments.”</i>	The representative viewpoints are described at paragraphs 3.4.42 to 3.4.78 and illustrated on Figures 3.4 to 3.29. These include photographs from the viewpoints proposed by Tilbury2 and TEC.
11 September 2018	Thurrock Borough Council Landscape Officer to RPS - email	Sent the TEC viewpoint plan, on a ZTV generated for 40 m high stacks.	
12 September 2018	RPS to Thurrock Borough Council Landscape Officer - email	Questioned whether a ZTV for the 50 m high TEC building had been produced. Noted that most of the TEC viewpoints were the same as the Thurrock Flexible Generation Plant viewpoints and that photographs at additional locations had been taken and a few omitted as there weren’t views/barely any view and the effects from that distance would not be significant. The email noted that there was a view of the site from the roof (publicly accessible) of the Wildlife Trust Visitor Centre at Mucking Marshes nature reserve, as the landscape officer had thought, so that photographs from that location has been added. RPS is to send a final list of viewpoints when these have been finalised.	Final PEIR list of viewpoints sent to Thurrock Borough Council Landscape Officer on the 1 October 2018. The representative viewpoint locations are illustrated on Figure 2.2 of this chapter.
12 September 2018	Thurrock Borough Council Landscape Officer to RPS - email	Confirmed that the TEC viewpoint plan was all that Thurrock Borough Council has received to date.	
Reponses included in, or appended to, the Planning Inspectorate (PINS) Scoping Opinion			
20 September 2018	The Planning Inspectorate - Scoping Opinion	<p><i>“ID 4.1.2 Assessment</i> <i>“The ES should clearly explain any assumptions made in the landscape and visual assessment regarding the number, height, diameter and placement of the stacks.</i></p> <p><i>“ID 4.1.3 Mitigation</i> <i>“The Scoping Report indicates that screen planting may be provided as a means of mitigating the impacts on landscape and visual receptors (paragraph 3.23). The ES should clearly describe the proposed landscaping and demonstrate how this relates to other nearby landscaping proposals (e.g. Tilbury2, Tilbury Energy Centre and the Lower Thames Crossing) where such detail is known. It should be clear how the landscape and effects are expected to alter as proposed planting matures. Any interactions with other ES aspects, for example impacts on local ecology, should be explained.</i></p> <p><i>“The Applicant should discuss and make effort to agree the planting specification/ species mix with relevant consultation bodies.</i></p> <p><i>“ID 4.1.4 Receptors</i></p>	<p>ID 4.1.2: Table 2.7 sets out the Maximum Design Scenario, that the LVIA is based upon.</p> <p>ID 4.1.3: The landscape mitigation proposals are summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). Ecological matters are discussed in Volume 3, Chapter 9: Onshore Ecology.</p> <p>All aspects of the landscape mitigation strategy have been discussed with the relevant consultation bodies, as the landscape strategy developed.</p>

Date	Consultee and type of response	Points raised	How and where addressed
		<p><i>"The ES should assess impacts to residential receptors where significant effects are likely to occur. The ES should identify any guidance documents used to inform the assessment of impacts to residential amenity.</i></p> <p><i>"ID 4.1.5 Night-time impacts</i></p> <p><i>"The Scoping Report explains that an assessment of night-time effects on landscape and visual receptors will be undertaken; the Inspectorate advises that this should include impacts from lighting. The Applicant's attention is drawn to the Inspectorate's comments in Table 4.17, ID 4.17.22 of this Opinion.</i></p> <p><i>"ID 4.1.6 Cumulative impacts</i></p> <p><i>"The ES should clearly explain the baseline year used to inform the cumulative landscape and visual assessment. The ES should set out any assumptions made regarding the likely stages of construction/ operation applicable to Tilbury2, the Lower Thames Crossing, Tilbury Energy Centre and the other developments identified.</i></p> <p><i>"ID 4.1.7 Viewpoints and photomontages</i></p> <p><i>"Twenty potential viewpoints are identified (paragraph 8.19 and Figure 9 of the Scoping Report). It is proposed that the exact location of viewpoints and photomontages are agreed with Thurrock District Council (and Natural England in respect of the Kent Downs AONB). For the assessment of cumulative impacts, the Applicant should consider the viewpoints selected for other developments in the area including Tilbury2, Tilbury Energy Centre and Lower Thames Crossing.</i></p> <p><i>"Having regard to the characteristics of the Proposed Development and the range of likely effects, the Inspectorate advises that neighbouring planning authorities including Gravesham Council are also consulted and effort is made to agree representative viewpoints/ photomontages. Both summer and winter views should be included.</i></p> <p><i>"ID 4.1.8 Receptors</i></p> <p><i>"Impacts (including cumulative impacts with other developments) likely to result in significant effects on the visual amenity of users of the River Thames should be assessed in the ES. This is likely to be of most relevance if the cooling water option is pursued.</i></p> <p><i>"ID 4.1.9 Impacts – construction</i></p> <p><i>"The ES should assess impacts with the potential to result in likely significant effects on landscape and visual receptors resulting from use of the construction compounds and use of any temporary structures/features required for construction (such as material/soil stockpiles and cranes).</i></p> <p><i>"ID 4.1.10 Design</i></p> <p><i>"The ES should explain how the siting and design of the proposed structures (and the materials to be used) have been selected with the aim of minimising impacts to landscape and visual receptors.</i></p> <p><i>"ID 4.3.3 Impacts to users of Public Rights of Way</i></p> <p><i>"The ES should assess impacts to users of PRow where likely significant effects may occur. The assessment of impacts on PRow users should consider potential interactions with other aspect assessments as relevant (for example noise, dust, recreation and visual impact).</i></p> <p><i>"ID 4.17.2 An assessment of impacts from lighting, with the exception of potential impacts from light on ecological receptors</i></p> <p><i>"The Inspectorate notes the relatively undeveloped, rural nature of the application site. Whilst specific details of the lighting requirements are not provided, the Inspectorate assumes that during operation, permanent night-time lighting would be required for the main development site. There is also potential for cumulative visual effects from lighting</i></p>	<p>ID 4.1.4: The impact of the proposed development on residential receptors is assessed in paragraphs 4.1.1 to 4.1.5 and paragraphs 4.2.8 to 4.2.12 as well as within the assessment of the representative viewpoints.</p> <p>ID 4.1.5: Night-time effects of the proposed development, including lighting during construction are assessed at paragraphs 4.1.6 and 4.1.50 and at the operation stage at paragraphs 4.2.5 and 4.2.50.</p> <p>ID 4.1.6: A cumulative impact assessment is detailed in Volume 4, Chapter 19.</p> <p>ID 4.1.7: Initial viewpoints were discussed and agreed with the relevant officers at Thurrock and Gravesham Borough Councils. The viewpoints used by Tilbury2 and suggested by TEC have been used. In addition, further viewpoints, suggested by Essex County Council and others apparent during fieldwork have been included in the assessment. A photograph has been taken from the Kent Downs AONB (Viewpoint 29, Figure 3.24).</p> <p>Gravesham Borough Council has been consulted and requested the viewpoints used in the Tilbury2 and TEC LVIA's. Both summer and winter photographs from the agreed representative viewpoints have been included in this ES chapter (Figures 3.4 to 3.29).</p> <p>ID 4.1.8: The visual impact of the development proposal on users of the River Thames is assessed at paragraphs 4.1.27 and 4.2.27.</p> <p>ID 4.1.9: The impacts during the construction phase of the proposed development, including construction routes, compounds and stockpiles of materials, are assessed in Section 3.5 of this chapter.</p> <p>ID 4.1.10: The reasons for the landscape mitigation summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>ID 4.3.3: The visual impacts on users of PRow are considered in paragraphs 4.1.16 to 4.1.20, paragraphs 4.2.16 to 4.2.20, as well as within the representative viewpoint assessments.</p> <p>ID 4.17.2: Details of the proposed lighting are set out in Volume 2, Chapter 2: Project Description. The night-time</p>

Date	Consultee and type of response	Points raised	How and where addressed
		<p><i>associated with other proposed developments. As such, the Inspectorate considers that any likely significant effects on the visual amenity of residents arising from night -time construction and operational lighting should be assessed. Any impacts from lighting on navigation should also be assessed where significant effects are likely.</i></p>	<p>impacts of the proposed development on landscape receptors are considered in paragraphs 4.1.6 and 4.2.5 to 4.2.6. For visual receptors, paragraphs 4.1.50 to 4.1.50 and 4.2.5 to 4.2.50. The cumulative night-time impacts of the Thurrock Flexible Generation Plant facility together with other known NSIPs and other cumulative schemes, on landscape and visual resources and receptors is outlined in Volume 4, Chapter 19.</p>
<p>6 September 2018</p>	<p>Essex County Council (appended to PINS Scoping Opinion) - letter</p>	<p><i>“The non-technical summary correctly identifies the need to assess cumulative impacts arising from other national infrastructure projects and developments within this area. There will be a need to consider the landscape and visual impacts associated with the development of land which may otherwise have provided an element of landscape mitigation for the proposed development of Tilbury 2 and London Thames Crossing. The proposed location for the Thurrock Flexible Generation Plant is directly to the east of the DCO order limits for Tilbury 2 so this will impact on the scope for the marshes to offer wider landscape mitigation for this development.</i></p> <p><i>“Specific comments</i> <i>“The DCO boundary will need to incorporate all land where the primary landscape mitigation measures are proposed. The LVIA will need to identify how the proposal will impact upon the effectiveness of the proposed landscape mitigation strategy for Tilbury 2.</i></p> <p><i>“Paragraph 8.18 and 8.19 - Proposes 20 potential viewpoints with the exact location of representative viewpoints and photomontage ‘to be agreed with Thurrock Council’. Figure 6 9 shows the proposed locations. These viewpoint locations appear to be limited in range and in terms of assessment of visual impacts. The final choice of viewpoints should be agreed with all the relevant local planning authorities. Visual receptors should be considered in terms of their type for example residential, transport road/rail and recreational i.e. visitors to promoted sites, bridleway and footpath users. It is suggested that other areas where viewpoints need to be considered and identified are as follows:</i></p> <ul style="list-style-type: none"> • <i>Fort Road, east of Tilbury (note VP 11 Tilbury 2)</i> • <i>West Tilbury from the St James Churchyard, and from footpath 68</i> • <i>West Tilbury from Church Road</i> • <i>North of West Tilbury, from footpaths 67 and 63.</i> • <i>Chadwell St Mary, south east side of settlement from footpaths</i> 	<p>The cumulative impacts arising from other NSIPs and developments within the area are assessed in Volume 4, Chapter 19.</p> <p>The configuration of the infrastructure on Zone A and the location and extent of the replacement Common Land is shown on the layout plan contained within Volume 2, Chapter 2: Project Description. A landscape mitigation strategy is summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>Specific comments</p> <p>The DCO boundary is shown on the Works Plans (application document A2.3). The landscape and visual impacts of Tilbury2 and the Thurrock FGP are considered in the Cumulative Assessment – Volume 4 Chapter 19.</p> <p>With regard to the number of viewpoint locations: Thurrock Borough Council and Gravesham Borough Council have expressed their wish to have the same or similar viewpoints to those used/suggested in the Tilbury2 and TEC projects. In addition, the fieldwork revealed more viewpoints and, in some cases, more suitable locations than those set out in the initial viewpoint selection. The viewpoint photography is at Figures 3.4 to 3.29. Responses to individual viewpoints are set out below:</p> <p>Fort Road, East of Tilbury - Photograph taken (Viewpoint 9, Figure 3.12).</p> <p>West Tilbury from St James' churchyard - Photograph taken from churchyard (Viewpoint 7, Figure 3.10). Restricted views from PRoW 68 - not included.</p> <p>West Tilbury from Church Road - Restricted views from Church Road or adjacent roads due to hedgerows - not included.</p> <p>North of West Tilbury from footpath 67 (Viewpoint 5, Figure 3.8). and bridleway 63 (Viewpoint 34, Figure 3.29) and bridleway 58 (Viewpoint 33, Figure 3.28).</p> <p>South-east of Chadwell St Mary from footpath 72 (Viewpoint 4, Figure 3.7) and public open space at Hutts Hill, (Viewpoint 3, Figure 3.6).</p>

Date	Consultee and type of response	Points raised	How and where addressed
		<ul style="list-style-type: none"> • East Tilbury, edge of new settlement extension and bridleway 58 • South of Station Road, footpath 200 • Coalhouse Fort, various locations including the car park • Coalhouse Point and footpath 146, Two Forts Way <p><i>"Figure 9.8 of the Tilbury 2 LVIA documentation also provides useful locations in relation to some of the areas.</i></p> <p><i>"The Scoping Report states that five visual representations will be provided. It is suggested that this seems rather limited given the range and scope of likely visual receptors with the zone of theoretical visibility. Once the assessment process has been undertaken it is likely that this will highlight the need for additional visual representations to be presented. Some viewpoint locations may also coincide with the Heritage receptor locations for example Coalhouse Fort and its setting.</i></p> <p><i>"The potential landscape and visual impacts arising from this proposed NSIP development on the identified receptors, designated sites and adjacent landscapes will need to be assessed and identified. Proposals for appropriate landscape mitigation measures, to deal with the identified landscape and visual impacts will need to be set out in a Landscape Mitigation Strategy, in a similar manner to that proposed for Tilbury 2.</i></p> <p><i>"The strategy will need to identify additional landscape mitigation measures which are required to deal with the residual landscape and visual impacts arising from the development, and associated infrastructure. This is likely to include the need for off-site measures.</i></p> <p><i>"Mitigation measures will need to be identified and these should be designed to accord with the key characteristics and qualities of the neighbouring landscape character areas. The Tilbury urban area, West Tilbury, Tilbury Marshes and Chadwell escarpment LCA areas are likely to experience the most significant visual impacts and measures to mitigate impacts and reinforce the landscape condition should be designed accordingly.</i></p> <p><i>"Where the identified landscape measures fall outside the DCO boundary line then specific agreements to ensure that works are secured, delivered (funded and implemented) and managed appropriately will need to be formulated."</i></p>	<p>East Tilbury, edge of new settlement extension and bridleway 58 –Photograph from the junction of Muckingford Road and footpath 60 (Viewpoint 2, Figure 3.9).</p> <p>South of Station Road, footpath 200 - PRoW 200 is very overgrown. (Viewpoint 10, Figure 3.13)</p> <p>Coalhouse Fort, various locations including the car park - See Viewpoint 17, Figure 3.18 and Viewpoint 30, Figure 3.25.</p> <p>Coalhouse Point and footpath 146, Two Forts Way – Viewpoint 31, Figure 3.26 and Viewpoint 32, Figure 3.27 are views from Coalhouse Point. Photographs taken from Thames Estuary Path/Two Forts Way/FP146/Cycle Route 13, (Viewpoints 15 and 16, Figures 3.17 and 3.18).</p> <p>The report uses the Tilbury2 documentation as far as is relevant to the Thurrock Flexible Generation Plant development proposal.</p> <p>Following fieldwork eighteen viewpoints have been selected from a range of viewpoints sixteen of these are presented as wirelines at Figures 4.1 to 4.20. Volume 3, Chapter 7: Historic Environment has used several of the same viewpoints as this chapter. Photomontages have been generated for 11 of these viewpoints and are presented as Figures 4.21 to 4.31.</p> <p>Landscape mitigation is summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9). No landscaping measures outside the DCO application boundary are envisaged at this stage.</p>
7 September 2018	Gravesham Borough Council (appended to PINS Scoping Opinion) - Delegated Report	<p><u>"General</u></p> <p><i>"From a Gravesham perspective, the key issues that need to be covered by the Environmental Statement (both on a solus basis and in combination with other schemes) includes landscape and visual resources.</i></p> <p><u>"Cumulative Impacts</u></p> <p><i>"In terms of cumulative impacts, the list of projects included in the Scoping Report includes:</i></p> <ul style="list-style-type: none"> • POTLL Tilbury 2 • Lower Thames Crossing • Tilbury Green Power (within existing Tilbury Docks area - Tilbury 1) • The continuing demolition of RWE Tilbury B power station • RWE proposals for Tilbury Energy Centre • London Distribution Park 	The cumulative impact assessment is set out in Volume 4, Chapter 19.

Date	Consultee and type of response	Points raised	How and where addressed
		<ul style="list-style-type: none"> <i>Goshens Farm land remediation</i> <p><i>“Cumulative impacts should be considered for both the construction and operational phases of the developments. In addition, consideration should be given as to the implications of some of the above not coming forward, given they do all have consent or there may be a failure to implement. For example, in the event of Tilbury 2 or the Tilbury Energy Centre (TEC) not being granted consent or being taken forward, the proposed development subject of current scoping would be in a more exposed location relative to Gravesham given the absence of screening development. This may have implications in terms of visual impact and noise transmission.</i></p> <p><i>“It is also suggested that consideration be given as to whether the NSIP proposals for London Resort at Swanscombe Peninsula could result in cumulative impacts that need to be taken into consideration - particularly if water cooling is used or water transport used during the construction phase, given the proposed Marine Conservation Areas detailed in the Scoping Report.</i></p> <p><u>“Landscape and Visual Resources</u></p> <p><i>“The proposal will extend the area of industrial development to the east of Tilbury Fort, with the potential up to 60 x 40m high exhaust stacks in particular being a prominent feature. Whilst Green Belt is not an environmental designation per se, the development is likely to impact on the perception of openness and rurality of the countryside to the east of Tilbury lying north of the existing developed riverside. Taken in combination with Tilbury 2, the RWE Tilbury Energy Centre, and Lower Thames Crossing this could significantly change the landscape character of this area when viewed from south across the River Thames. The need to have security lighting on-site means that this impact also needs to be assessed both during the daytime and during hours of darkness.</i></p> <p><i>“Whilst the Scoping Report includes visual receptors to the south of the River Thames in Gravesham, it is suggested that the same ones be used as for Tilbury 2 / Tilbury Energy Centre so that there is consistency of approach and comparisons can be drawn between assessments.</i></p> <p><i>“Footpath NG1 and NS138 are of particular importance as the main riverside footpath comprised in the Saxon Shore Way/Coastal Path east of Gravesend. An assessment of visual impact from the junction of PROWs NS138 and NS318 is therefore welcome given its location adjacent to Shornemead Fort, a currently undesignated heritage asset forming part of the historic Thames defences. This therefore will also be important in determining potential impact on the significance of these heritage assets through development within their setting. A viewpoint adjacent to Gravesend Town Pier and at Windmill Hill is also supported as key vantage points.</i></p> <p><i>“However, it is requested that the visual impact of the proposal also be assessed from the Gravesend Riverside Leisure Area/New Tavern Fort given the popularity of this area as one of the key open spaces within Gravesham and its historical importance relative to Tilbury Fort. This would be consistent with the approach taken in respect of Tilbury 2 and the RWE Tilbury Energy Centre.</i></p> <p><i>“The Council stresses that the in-combination effects in regard to air quality, noise and vibration, landscape and visual effects, socio-economic and cultural heritage are the areas where it considered special attention needs to be undertaken in regard to this development.”</i></p>	<p>The assessment of the visual impacts during the construction phase of the Thurrock Flexible Generation Plant facility on its own are considered in Section 4.1. Operational visual impacts are assessed in Section 4.2. Visual impacts during decommissioning are assessed in Section 4.3. Night-time landscape effects are considered at paragraph 4.1.7 and paragraphs 4.2.5 to 4.2.6. Night-time visual effects at considered in paragraphs 4.1.50 to 4.1.51 and 4.2.50 to 4.2.51.</p> <p>The cumulative impact assessment at Volume 4, Chapter 19 considers the London Resort on the Swanscombe Peninsula.</p> <p>The cumulative impact assessment at Volume 4, Chapter 19 considers effects on landscape character and visual effects in combination with other developments including Tilbury 2. The impact of the TEC is no longer part of the assessment.</p> <p>The representative viewpoints used in the LVIA correspond to those used in Tilbury2 and TEC, as advised by Thurrock and Gravesham Borough Councils. Additional viewpoints have been added following fieldwork and consultation with Essex County Council.</p> <p>The representative viewpoint locations and locations of visualisations are shown on Figure 2.2. The character photograph locations are shown on Figure 2.3. The impact of the proposed development on the setting of designated and undesignated historic assets is assessed in Volume 3, Chapter 7: Historic Environment.</p> <p>Representative Viewpoints 20 and 21 (Figures 3.19 and 3.20) are the views from New Tavern Fort and the Gravesend Riverside Leisure Area and the Saxon Shore Way as it is routed along Gordon Promenade adjacent to the River Thames and north of Gordon Recreation Ground/Gardens.</p> <p>The in-combination effects are considered in Volume 5, Chapter 31: Summary of Cumulative Effects. Inter-related effects are considered in Volume 5, Chapter 31: Inter-Related Effects.</p>
7 September 2018	Marine Management organisation (appended to PINS Scoping Opinion) -	<i>“8.1 The MMO welcomes the methodology for informing the potential landscape and visual impacts which can be found in section 8.10 of the scoping report, including considering mitigation measures as part of the iterative design process.”</i>	Noted. The methodology is set out in Section 2 of this chapter.
7 September 2018	Natural England (appended to PINS Scoping Opinion) – email	<p><u>“Cumulative and in-combination effects</u></p> <p><i>“The scale of development proposed in this area requires careful consideration of both temporary and permanent in-combination impacts. The EIA will need to consider impacts on existing environmental features, previous mitigation commitments of the land within and adjacent to the development and any mitigation and compensation schemes that</i></p>	The proposed landscape mitigation is summarised in Table 2.8, expanded in Section 2.8 and detailed in the Illustrative Landscape Plan (application document A2.9).

Date	Consultee and type of response	Points raised	How and where addressed
		<p><i>are required enable the delivery of other development coming forward in this locality. We would advise that one approach would be the preparation of a co-ordinated mitigation strategy would be agreed between the applicants for this site and nearby developments which would safeguard and join up important environmental features and provide enhancement at the landscape scale.</i></p> <p><i>"We agree with the Tier 1 and 2 developments listed in para 6.58 with the potential for cumulative effects, although the applicant may find it helpful to consult Thurrock Council for other relevant projects to include.</i></p> <p><u>"Nationally Designated Landscapes</u></p> <p><i>"As the development site is within/adjacent to Kent Downs Area of Outstanding Natural Beauty (AONB), consideration should be given to the direct and indirect effects upon this designated landscape and in particular the effect upon its purpose for designation within the environmental impact assessment, as well as the content of the relevant management plan for this AONB.</i></p> <p><u>"Landscape and visual impacts</u></p> <p><i>"Natural England would wish to see details of local landscape character areas mapped at a scale appropriate to the development site as well as any relevant management plans or strategies pertaining to the area. The EIA should include assessments of visual effects on the surrounding area and landscape together with any physical effects of the development, such as changes in topography. The European Landscape Convention places a duty on Local Planning Authorities to consider the impacts of landscape when exercising their functions.</i></p> <p><i>"The EIA should include a full assessment of the potential impacts of the development on local landscape character using landscape assessment methodologies. We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character, as detailed proposals are developed.</i></p> <p><i>"Natural England supports the publication Guidelines for Landscape and Visual Impact Assessment, produced by the Landscape Institute and the Institute of Environmental Assessment and Management in 2013 (3rd edition). The methodology set out is almost universally used for landscape and visual impact assessment.</i></p> <p><i>"In order to foster high quality development that respects, maintains, or enhances, local landscape character and distinctiveness, Natural England encourages all new development to consider the character and distinctiveness of the area, with the siting and design of the proposed development reflecting local design characteristics and, wherever possible, using local materials. The Environmental Impact Assessment process should detail the measures to be taken to ensure the building design will be of a high standard, as well as detail of layout alternatives together with justification of the selected option in terms of landscape impact and benefit.</i></p> <p><i>"The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. In this context Natural England advises that the cumulative impact assessment should include other proposals currently at Scoping stage. Due to the overlapping timescale of their progress through the planning system, cumulative impact of the proposed development with those proposals currently at Scoping stage would be likely to be a material consideration at the time of determination of the planning application.</i></p> <p><i>"The assessment should refer to the relevant National Character Areas which can be found on our website. Links for Landscape Character Assessment at a local level are also available on the same page."</i></p>	<p>The cumulative impact assessment at Volume 4, Chapter 19 considers effects on landscape and visual resources. A co-ordinated mitigation strategy at the landscape scale is to be confirmed.</p> <p>The site of the Thurrock Flexible Generation Plant facility does not lie within or adjacent to any designated landscapes, including the Kent Downs AONB. There are no direct landscape effects on the Kent Downs AONB. The direct impact on the Special Qualities of the AONB insofar as they relate to views over the Thames Estuary is not significant, as discussed in Section 4.7.</p> <p>Landscape character within the study area is illustrated on Figure 3.2 and Figure 3.3. This chapter assesses the impact of the proposed Thurrock Flexible Generation Plant facility on landscape and visual resources at Section 3.5.</p> <p>This chapter assesses the impact of the proposed Thurrock Flexible Generation Plant facility on landscape and visual resources at Section 3.5.</p> <p>The methodology set out in Section 2 is based on the <i>Guidelines for Landscape and Visual Impact Assessment: Third Edition (GLVIA)</i> (Landscape Institute and Institute for Environmental Management and Assessment, 2013).</p> <p>The proposed landscape mitigation is summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>The cumulative impacts during construction, operation and decommissioning are considered in Volume 4, Chapter 19.</p> <p>National character areas (NCAs) are reviewed at paragraphs 3.3.1 to 3.3.3 and shown on Figure 3.2. Local landscape character areas are reviewed in paragraphs 3.3.4 to 3.3.16 and illustrated on Figure 3.3.</p>

Date	Consultee and type of response	Points raised	How and where addressed
5 September 2018	Tilbury2 (Port of Tilbury London) (appended to PINS Scoping Report) – note/report	<p><i>“Landscape Character and Visual Amenity</i></p> <p><i>“3.13 TFGP will create further change in the local landscape with Tilbury2, TEC and LTC, as such the cumulative effect on local landscape character could be of increased significance within the Tilbury Marshes character area. These schemes having been constructed would likely require a reassessment of this character area by Thurrock Council to better reflect what will be increasingly urban/urban fringe characteristics.</i></p> <p><i>“3.14 The combined sight and sound of the four projects could have an overall effect of increased significance on scenic quality and tranquillity. The area where this effect would likely be most marked is broadly defined by the rural extents of the West and East Tilbury Marshes, including the north bank of the Thames as well as the eastern reaches of the Chadwell Escarpment.</i></p> <p><i>“3.15 The combined effect of TFGP with Tilbury 2, TEC and LTC could affect cultural heritage value associated with the SAM’s of Tilbury Fort, New Tavern Fort and Coalhouse Fort. Being to the east of Tilbury2, the TFGP could increase the presence of industry in the far distance from Coalhouse Fort, adding to TEC and LTC if this were visible and audible in the middle distance (if a link to Tilbury were constructed). The cumulative impacts of all four schemes on leisure and tourism value would need to be considered further once the detail of TFGP is known, albeit it does not appear that any public rights of way are directly affected. In terms of visual amenity, the combined effects of all four projects would be experienced in views from the east and north-east that take in the TEC site and the TFGP (that would be prominent and consolidate the presence of industry at Tilbury2). From the east the effect could be substantial in close views but slight in more distant views such as Coalhouse Fort. From the south (when viewed from Gravesham), the cumulative effects of four schemes could be greater depending on how TFGP is viewed in relation to TEC.</i></p> <p><i>“3.16 The cumulative effect of artificial lighting would increase when Tilbury2, TFGP, TEC and LTC schemes are all operational.”</i></p>	<p>An assessment of the cumulative impacts on landscape and visual resources and receptors is at Volume 4, Chapter 19. Cumulative visualisations are provided at Volume 4, Chapter 19.</p> <p>The cumulative impact on leisure and tourism receptors is assessed in Volume 4, Chapter 19.</p> <p>The cumulative night-time impacts are assessed at Volume 4, Chapter 19.</p>
7 September 2018	Landscape Officer Thurrock Borough Council (appended to PINS Scoping Report)	<p><i>“The proposed Landscape and Visual Impact Assessment will be carried out in accordance with the best practice guidance e.g. the Guidelines for Landscape and Visual Impact Assessment 3rd Edition. During an initial meeting potential viewpoints were discussed. It is agreed that these will be finalised with the local authorities prior to commencement of the LVIA.</i></p> <p><i>“At present the route to be used for construction traffic has yet to be finalised. There is concern that the option running south and east of Chadwell St Mary using Turnpike Lane is likely to have significant adverse impacts on the characters of historic lanes the adjacent Conservation Area. It is hoped that an alternative route can be identified.</i></p>	<p>Following fieldwork, a revised representative viewpoint location plan was sent to the landscape officer at Thurrock District Council on the 1st October 2018. The locations of these viewpoints were subsequently agreed</p> <p>The locations of the construction routes have been visited and the impacts assessed in Section 4.1. Landscape mitigation is summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p>

Date	Consultee and type of response	Points raised	How and where addressed
3 September 2018	Public Health Commissioning Manager, Thurrock Borough Council (appended to PINS Scoping Opinion)	<p><i>"The World Health Organisation (WHO) defines health as "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This definition encapsulates the 'holistic' and 'whole' person. Health and wellbeing can be affected by a variety of complex and interrelated factors including the built environment and communities that people live in. The definition also focusses on keeping people well. In order to support people to remain well requires acknowledgement of the role that wider determinants of health can play. This includes consideration of issues such as landscape, traffic, congestion, air quality, and how economic factors such as employment can impact on health.</i></p> <p><i>"The identification within the LVIA for the use of greening and landscaping with strategic planting will not only support mitigation on air quality but would look to mitigate the impacts on climate change (which will include issues arising from flooding and managing extremes in weather temperature) and will also benefit local residents and employees in terms of the mental well-being benefits that a green visual landscape would bring. Light pollution will also need to be identified within this, as this could have an effect on well-being through sleep deprivation.</i></p> <p><i>"We would also like, as part of the socio-economic and amenity element, to touch on the Landscape and visual effects LVIA that is to be undertaken and suggest that consideration be paid to the potentially negative effects to emotional wellbeing and potential decrease in civic pride that could be felt by Thurrock residents through bad visual planning, as well as potential economic effects on the locality by the negativity of visitors from outside the borough to the historical sites and SSI areas. It is suggested that consultation with other developments in agreeing a plan around greening, colours and planting to be undertaken."</i></p>	<p>Public Health is considered more fully in Volume 3, Chapter 13: Human Health Impact Assessment.</p> <p>The details and the location of the landscape mitigation, are summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p>
Responses to the Preliminary Environmental Information Report			
6 November 2018	Brentwood Borough Council (letter to the applicant)	<i>"The Borough Council has confined its considerations to strategic matters which could affect planning interests in the Borough and offers no comments."</i>	Noted
8 November 2018	London Borough of Bexley (letter to the applicant)	<i>"I can confirm that the London Borough of Bexley wishes to raise no objections to the proposal."</i>	Noted
8 November 2018	Castle Point Borough Council (letter to the applicant)	<p><i>"The applicants have identified that the proposal will have no significant impact on...the landscape..."</i></p> <p><i>"Whilst the proposed development will have considerable mass, the distance from Canvey Island (the closest point of the Borough to the proposal) and the fact that that it is located to the west of other significant development at Coryton and Tilbury, significantly diminishes the impact in terms of alterations to long-distance views.</i></p> <p><i>"The proposal is not considered to have any significant adverse consequences for the Borough."</i></p>	Noted

Date	Consultee and type of response	Points raised	How and where addressed
14 November 2018	Gravesham Borough Council (letter to the applicant)	<p><i>"It should be noted that consultation has recently been undertaken in relation to the potential construction of a new generating plant by RWE (Tilbury Energy Centre) on the Tilbury Power Station site. That development was referred to as the Tilbury Energy Centre (TEC). However on the 1st November 2018, RWE (the prospective applicant for that development) wrote to interested parties advising that following many feasibility studies, environmental assessments and surveys to enable the submission of an application for a Development Consent Order (DCO) they have made a decision to freeze the TEC development project.</i></p> <p><i>"The application site lies within the Green Belt and (in part) on common land. Landscape is currently impacted on by high voltage power lines that run broadly north-south leading down toward the former Tilbury Power Station site.</i></p> <p><i>"Road access to the site for construction and maintenance purposes has yet to be determined but would clearly be from the Thurrock side of the river and not impact on Gravesham.</i></p> <p><i>"From a Gravesham Borough Council's (GBC) perspective, the key planning issues in this case are likely to be impacts in terms of: ...Landscape and visual impact (including standalone and in-combination impacts with Tilbury2 and Lower Thames Crossing*.) (Impact could also occur should the TEC project become unfrozen).</i></p> <p><i>"The proposal clearly has the potential to have a landscape...impact when viewed from the south of the River Thames because it stands to increase the extent of built development at Tilbury eastwards onto areas of residual marsh and farmland.</i></p>	<p>References to the TEC development has been removed from the cumulative impact assessment in Volume 4, Chapter 19 and the cumulative wirelines in Volume 4, Chapter 19.</p> <p>Development in the Green Belt is considered in application document A8.3.</p> <p>The cumulative impacts of the Thurrock Flexible Generation Plant development with other projects in the area is considered at Volume 4, Chapter 19.</p> <p>Landscape and visual effects are considered in Section 4 of this chapter.</p>
14 November 2018	Kent County Council (letter to the applicant)	<p><i>"The County Council considers that one key issue is ensuring that the scheme delivers significant and appropriate environmental mitigation...The type of landscaping...mitigation should be considered within this context."</i></p>	<p>Landscape mitigation is summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 of this Chapter and detailed in the Illustrative Landscape Plan (application document A2.9).</p>
22 November 2018	Kent Downs AONB Unit (email to applicant)	<p><i>"I can confirm that we have no comments to make at this stage."</i></p>	<p>Noted</p>
4 January 2019	Thurrock Council (correspondence to applicant)	<p><i>"The Council has previously agreed the general approach and key viewpoint receptors.</i></p> <p><i>"The council would welcome the opportunity to discuss the emerging landscape mitigation strategy which is to form part of the ES.</i></p> <p><i>"Table 2.7 indicates that the applicant would be willing to support measures to restore hedgerows local to the scheme not directly affected by the development. This is welcomed however it will be necessary for more detail to be provided as to the area where this is proposed, how it relates to the DCO schemes in the vicinity and how it will be delivered and maintained. It will be necessary to determine if these measures will be included within the redline boundary or delivered via another mechanism e.g. s106.</i></p> <p><i>"The main adverse visual effects arising from the main development site will be experienced around the West Tilbury area. It is agreed that the effects are less likely to be significant beyond this area. The Cumulative Wire Lines do show how the effects of the separate DCO schemes will start to have significant effects of wider views.</i></p> <p><i>"The council is concerned however about the landscape and visual effects caused by the construction routes. For example the route running north-south would directly affect West Tilbury Conservation Area."</i></p>	<p>The Council's response on general approach and viewpoints is noted.</p> <p>Landscape mitigation is summarised in Table 2.8, expanded in paragraphs 2.8.1 to 2.8.5 of this Chapter and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>The Council's comments on visual effects of the Thurrock Flexible Generation Plant are noted. ES Volume 4, Chapter 19 describes the cumulative effects, which are illustrated in the cumulative photowireline figures in that chapter.</p> <p>The landscape and visual effects of the construction routes are considered in Section 4.1. The effects on the West Tilbury Conservation Area are considered in Volume 3, Chapter 7: Historic Environment.</p>

<p>11 January 2018</p>	<p>Essex County Council (Anne Westover) (in letter attached to email to chapter author)</p>	<p>General Comment <i>“Further to my scoping response I welcome the additional viewpoints selected and also the provision of photograph and wireframe illustrations for these.”</i></p> <p>Comments within Table <i>“Page 17, Table 1.3: I support the comment made by the Public Health commissioning manager TBC in the scoping response and summarised within the PEIR: ‘We would also like, as part of the socio-economic and amenity element, to touch on the Landscape and visual effects LVIA that is to be undertaken and suggest that consideration be paid to the potentially negative effects to emotional wellbeing and potential decrease in civic pride that could be felt by Thurrock residents through bad visual planning, as well as potential economic effects on the locality by the negativity of visitors from outside the borough to the historical sites and SSI areas. It is suggested that consultation with other developments in agreeing a plan around greening, colours and planting to be undertaken.’ I note that Table 2.7 provided gives little detail around these matters at present but this should be in considerable detail for the EIA submission.</i></p> <p><i>“Page 13, Table 1.3: The boundary of the DCO should not prohibit necessary landscape mitigation.</i></p> <p><i>“Page 30: Reference to lighting on page 30: ‘Directional, motion-activated security lighting used at main development site (Zone A) and above ground installation for gas connection (Zone E) Reasonable maximum potential night-time visual impact. As the flexible generation plant is not manned on-site during normal operation, full-time lighting at night is not required’. I welcome this approach however it seems unlikely that some form of lighting for the main site will not be required particularly given the proposed engine stack heights Lighting proposals and impacts for all aspects of the development in terms of the construction and operational development phases will need to be clearly set out within the EIA.</i></p> <p><i>“Page 30: The retained access road / track through Zone C is likely to have visual impact, in addition the possible retention of the temporary access road through Zone J. This possible retention of the route is referred to in Table 2.6. These will need to be designed to minimise both physical and visual impact with appropriate landscape mitigation/enhancement measures incorporated. The LVIA will need to assess impact, both in short and longer term and propose suitable mitigation/landscape enhancement, there may be locations (Zone J is more restricted) where this will need to be outside the DCO boundary and therefore off-site. Proposals such as hedgerow, and tree planting, may be appropriate.</i></p> <p><i>“Page 31: Para 2.8 I support the broad outline provided in terms of landscape mitigation ‘Landscape Proposals Plan’. However there is little information provided to date on this matter. Securing the long term management of landscape elements (and ecological management) both within and off-site will need to be secured via appropriate legal agreements. Again there is an opportunity for this to be dealt with in conjunction with other developments/developers for the Port and Tilbury energy centre particularly in respect of the cumulative landscape impacts and mitigation measures.</i></p> <p><i>“Page 32 Current baseline and zones: Installations at Zone E will need to be presented and evaluated in terms of local impact. Landscape mitigation, enhancement/restoration measures are likely to be needed at Zones D and E. I note the reference to Zone F1, the exchange common land, and the zone where landscape mitigation could be provided. Elsewhere this is described as the ‘primary area for landscape mitigation’. This is of concern. The scheme of landscape mitigation should deal with the adverse impacts arising from the various elements and phases of the development experienced by receptors over a wider area. Zone F1 may be suitable for some aspects of mitigation, in certain views and subject to other land uses proposed and ecological considerations. However other adverse impacts will need to be dealt with appropriately including provision for landscape mitigation within/bounding the main construction zone A.</i></p> <p><i>“Page 72: Para 6.3.1 states that: ‘Fieldwork based on the responses received in the Scoping Opinion will be completed. This will include winter photography from selected viewpoints, after the leaves have fallen from the trees. Following consultation on the PEIR any additional photography will be taken at the same time. This information will be analysed and incorporated into the assessment. The night-time baseline will be established. Following these further studies and in consultation with other specialists, landscape mitigation proposals will be produced, and will form part of an outline Landscape Proposals Plan.’ Table 6.1 states under ‘proposed monitoring’: Five year defects liability period as part of a Landscape Proposals Plan to be produced. Depending on the form and timescale for the landscape and ecological management plan this may not be a sufficient timescale. The DLP may be sufficient in terms of the contractual (landscape) responsibilities only but long term management proposals will need to ensure they encapsulate successful</i></p>	<p>General Comment: Noted.</p> <p>Comments within Table: Page 17: Comments on public health are noted, Public Health is discussed in detail in Volume 3, Chapter 13: Human Health Impact Assessment. Table 2.8 summarises the landscape mitigation proposals, this is expanded in paragraphs 2.8.1 to 2.8.5 of this chapter and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>Page 13: Table 2.8 summarises the landscape mitigation proposals, this is expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>Page 30: Reference to Lighting on page 30: Volume 2, Chapter 2: Project Description describes the lighting during construction and operation phases of the project. In summary, based on all standard CAA guidance the stacks will not require lighting. However, during the construction phase, cranes might if they are over 60 m, based on the CAA scoping response.</p> <p>Page 30: Table 2.8 summarises the landscape mitigation proposals, this is expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>Page 31: Table 2.8 summarises the landscape mitigation proposals, this is expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>Page 32: Table 2.8 summarises the landscape mitigation proposals, this is expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative Landscape Plan (application document A2.9).</p> <p>Page 72: Table 2.8 summarises the landscape mitigation proposals, this is expanded in paragraphs 2.8.1 to 2.8.5 and detailed in the Illustrative. Landscape Plan (application document A2.9).</p>
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Date	Consultee and type of response	Points raised	How and where addressed
		<p><i>establishment i.e. minimum 20 years. I support the approach outlined in 6.3.1. However I reiterate my comments at scoping stage 4th September: Mitigation measures will need to be identified and these should be designed to accord with the key characteristics and qualities of the neighbouring landscape character areas. The Tilbury urban area, West Tilbury, Tilbury Marshes and Chadwell escarpment LCA areas are likely to experience the most significant visual impacts and measures to mitigate impacts and reinforce the landscape condition should be designed accordingly. Where the identified landscape measures fall outside the DCO boundary line then specific agreements to ensure that works are secured, delivered (funded and implemented) and managed appropriately will need to be formulated. We (that is ECC) have previously suggested that a Landscape Mitigation Fund be set up and funded from the various major developments within the area and used to fund landscape mitigation projects and enable management measures/projects to be undertaken."</i></p> <p>Further comments on the landscape and visual resources chapter</p> <p><i>"I have not commented on the current findings of the LVIA.</i></p> <p><i>"The viewpoint photographs and character photographs are of excellent quality and will assist with the assessment process. I note the commentary around further updates to take into account winter months/no foliage.</i></p> <p><i>"The wireline images are also excellent both for the FGP alone and the cumulative wireframes. I advise that these also be labelled in terms of location (not just number) to enable quick reference without having to refer to the location map. This has been done for the viewpoint and character photographs and is immensely helpful."</i></p> <p>Comment on Ecological Management Plan</p> <p><i>"Page 21 Outline ecological management plan: This states that: 8.2.2 A detailed landscape and ecology management plan would be produced that includes management regimes for ecological habitats and features as given on the indicative mitigation plan (Figure 4.1). I note that the proposals extend to F1, I and F2 only. The landscape and ecological management plan and mitigation proposals should be worked up together as a joint document. Proposals should also incorporate all the wider landscape mitigation measures for the development zones and in particular zones A, C where permanent construction elements are proposed and Zone I where the construction laydown zone is likely to have significant impacts."</i></p> <p>A LEMP will be produced to discharge the DCO requirement pre construction. An Illustrative Landscape Plan (Application document A2.9) has been produced which shows the ecology and landscape mitigation proposals.</p>	<p>Further comments on landscape and visual resources chapter: Comment on photography and viewpoints is noted.</p> <p>The location of the viewpoints presented in Figures 3.4 to 3.29 has been added to Figure 2.3.</p> <p>Comment on outline Ecological Management Plan: The LEMP will be produced to discharge the DCO requirement pre-construction.</p>

<p>11 November 2019</p>	<p>Gravesham Borough Council (letter to the applicant)</p>	<p><i>'Gravesham Borough Council would like to make the following comments/observations in relation to your recent fresh consultation under section 42 of the Planning Act 2008 (as amended) in relation to proposed changes to the project compared with that subject to section 42 consultation from 16 October 2018 to 14 November 2018.</i></p> <p><i>The Borough Council responded on the 14 November 2018 to the previous section 42 consultation. The current proposed changes are, in your summary, in this consultation are:</i></p> <ul style="list-style-type: none"> <i>• Construction access to the site will be taken from the south and west rather than to the north;</i> <i>• A new permanent causeway into the River Thames will be constructed and used during construction for the delivery of abnormal indivisible loads by water, along with a haul road from the causeway to the construction site. There are two, alternative, options proposed for the route of that haul road in this consultation;</i> <i>• Primary construction access will be from the west through land to the north of the recently constructed Tilbury 2 site and will connect the main Project site to the A1089 public highway;</i> <i>• Previously proposed access routes for abnormal indivisible loads have been removed from the Project;</i> <i>• Previously proposed works to existing public highways to the north of the Project site and the creation of a new construction haul road running east-west from the A126 Gateway Academy roundabout have been removed from the Project;</i> <i>• Alteration of the areas of land to be used for wildlife habitat compensation;</i> <i>• Additional land to the west of the main Project site has been included for carbon capture readiness; and</i> <i>• A new footpath has been added to link Fort Road with the replacement common land included in the Project.</i> <p><i>The primary change of relevance to Gravesham Borough Council is the proposal to construct a new permanent causeway into the River Thames along with two alternative access routes, with the consequential amendments to the red line boundary. This brings the construction facilities much closer to the east side of Gravesend and also directly impacts on the marine environment.</i></p> <p><i>The Project Changes report sets out the reasons for the causeway and an outline of its design. Impact on salt marsh is noted along with other issues to do with the dredged channel. There is however no discussion of the landscape, noise, lighting, historic environment and other potential impacts on Gravesham or Thurrock from the proposal. As use of causeway is dictated by the tide it has to be assumed that it could be operational at any point of the day or night. Para 3.5 makes reference to the top of the causeway being 'X meters AOD', please clarify what this should say.</i></p> <p><i>It may be noted that in the September 2018 Scoping Opinion from PINS Table 1.5 on Construction Impacts it says 'If the option to transport materials/abnormal loads via water is pursued, noise impacts from ships/barges should be assessed where significant effects are likely'. This was scoped out previously as no longer being proposed, but is now logically back in scope. There is no information provided on these potential implications of the new proposed causeway so it is not possible to make further comment.</i></p> <p><i>It will be necessary to explore the implications from these proposals on Gravesham including the in combination effects. Tilbury 2 is now permitted and under construction, and far more is known about Lower Thames Crossing than when the original consultation was carried out. From these revised proposals and following the list in Part 5 of the Overarching National Policy Statement for Energy (EN-1, July 2011) lists generic impacts that may arise from infrastructure projects. The following would appear to be potentially relevant (to LVIA):</i></p> <p><i>5.9 Landscape and Visual</i></p> <p><i>It is not clear what the future use of the causeway is, which is described as permanent (para 3.1). The new Zone plan (Zone G) suggests that the access connections are temporary whereas for one of the deleted links (see para 3.16 (c)) it was suggested it would remain should large loads be required in the future. Clarity, and the carrying out of environmental assessment, is required.</i></p> <p><i>It is noted that PINS advised the applicant to 'consider a SoCG with neighbouring Local Authorities regarding visual impacts from the project' (S.51 advice 31 Jan 2019). Combined with the proposed changes it would be helpful to have a meeting to understand the proposals better and explore common ground, and meet the PINS suggestion.</i></p> <p><i>The Council has previously advised that a Planning Performance Agreement should be put in place as no fees are received for this proposal. This means that all costs for GBC's input into the project is being borne by the Council.'</i></p>	<p>The Council's response on the assessment of the construction of the new permanent causeway into the River Thames and two alternative access routes is noted.</p> <p>The landscape and visual impacts of the new causeway and associated impacts of ships/barges servicing the causeway are assessed in Section 4.</p> <p>They are also considered as part of the cumulative assessment in Volume 4, Chapter 19.</p>
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Date	Consultee and type of response	Points raised	How and where addressed
15 April 2020 and 05 May 2020	Thurrock Borough Council and Gravesham Borough Council	To inform these consultees about the further visualisations being produced for viewpoints within their administrative areas, and to agree that the application documents including photomontage visualisations information will be made available to the local authorities for review on submission of the application.	Photowireline and photomontage visualisations are presented at Figures 4.1 to 4.31 of this chapter.

2. Assessment Approach

2.1 Guidance

Relevant Landscape Guidance

2.1.1 As a matter of best practice, this assessment has been undertaken based on the relevant guidance on landscape and visual assessment. This includes:

- *Guidelines for Landscape and Visual Impact Assessment: Third Edition* (Landscape Institute and Institute of Environmental Management and Assessment, 2013) (GLVIA);
- *Landscape Character Assessment – Guidance for England and Scotland* (The Countryside Agency and Scottish Natural Heritage, 2002);
- *Technical Information Note 08/2015: Landscape Character Assessment*, (Landscape Institute, February 2016); and
- *Technical Guidance Note 06/19: Visual Representation of Development Proposals* (Landscape Institute, September 2019).

2.2 Approach

2.2.1 As set out in GLVIA, this Landscape and Visual Impact Assessment (LVIA) assesses the potential significant landscape and visual effects of the proposed Thurrock Flexible Generation Plant facility. Those resources and receptors that do not have the potential to experience significant effects are identified, but not assessed.

2.2.2 Landscape and visual effects are assessed separately, although the procedure for assessing each of these is closely linked. A clear distinction has been drawn between landscape and visual effects as described below:

- Landscape effects relate to the effects of a proposed development on the physical characteristics of the landscape and its resulting character and quality; and
- Visual effects relate to the effects on views experienced by visual receptors (e.g. residents, footpath users, tourists etc.) and on the visual amenity experienced by those people.

2.2.3 The LVIA assesses the short-term effects of the construction and decommissioning phases and the long-term effects relating to the operation and maintenance phase.

Baseline study

2.2.4 A desk-based review of legislative and planning context relevant to the site and landscape and visual issues associated with the proposed development has been undertaken (Section 2).

2.2.5 A combination of desk-based study and fieldwork has been used to determine both the landscape and the visual baseline conditions.

2.2.6 A Zone of Theoretical Visibility (ZTV) has been generated (based on a 40 m stack height) to show the extent of theoretical visibility of the proposed development and the landscape areas that might be indirectly affected within the LVIA study area.

2.2.7 Fieldwork was undertaken in late August 2018 and early to mid-September 2018 as well as in February and September 2019. Consequently, there is photography that represents both summer conditions, with the leaves on the trees and hedgerow plants, and winter conditions, when there is very little or no intervening vegetation. Where there was very little vegetation at viewpoints (so little that it would make no difference to the assessment) winter photographs have not been taken. Seasonal change to views is noted in the text.

2.2.8 The visual context of the proposed development was established in 2018, including the extent of views from public footpaths, residential properties, commercial properties, recreational areas/open space, roads and other receptors. However, by September 2019 Tilbury B Power Station had been demolished and the drill ship Sertao, which had previously been docked there, was absent. Consequently, a new set of photographs were taken to reflect this change to viewpoints which were particularly affected by the demolition on 12th and 29th September 2019.

2.2.9 The assessment is illustrated by representative viewpoint photographs towards the existing site from publicly accessible locations that have been agreed with Thurrock Borough Council and Gravesham Borough Council. Additional viewpoints were requested by Essex County Council and these viewpoints added (where available and relevant) when the fieldwork was being undertaken. The representative viewpoint locations are illustrated on Figure 2.2 and the viewpoints at Figures 3.4 to 3.29. Photowirelines have been prepared for key viewpoint locations, to illustrate the proposed development within the existing context of the surrounding landscape (Figures 4.1 to 4.20). In addition, photomontages were requested by PINS. Eleven of the agreed representative viewpoints were chosen. These illustrate close views, or views available to sensitive visual receptors. They were chosen to represent a range of locations. Figure 2.2, below, is the Representative Viewpoint Location Plan, indicating which viewpoints have

corresponding photomontages. The photomontages are presented as Figures 4.21 to 4.31.

- 2.2.10 The representative viewpoints were identified using the ZTV. They were confirmed or adjusted through fieldwork, with additional viewpoints being added where it was thought it would aid the better understanding of the baseline visual resources and therefore, the assessment. Those viewpoints suggested in the Scoping Opinion responses were also investigated. Essex County Council requested that viewpoints were photographed from Coalhouse Fort which were subsequently undertaken.
- 2.2.11 Fieldwork also identified landscape baseline conditions, and included an investigation of the existing topography, existing vegetation, roads and built development. Landscape character photographs for the main site (Zone A) the gas connection point (Zone D3) the pipeline route and access road routes (Zones C, D1, D2 and G) and other areas within the proposed development boundary are included within the LVIA at Figures 3.30 to 3.33. The locations of the character photographs are shown on Figure 2.3.
- 2.2.12 The visual context of the proposed development has been established, including the extent of views from public footpaths, residential properties, commercial properties, recreational areas/open space, roads and other receptors.
- 2.2.13 The likely landscape and visual effects of the proposed development have been assessed by considering the change that would result from it against the landscape and visual resource or receptor, as summarised in Figure 2.1 below:

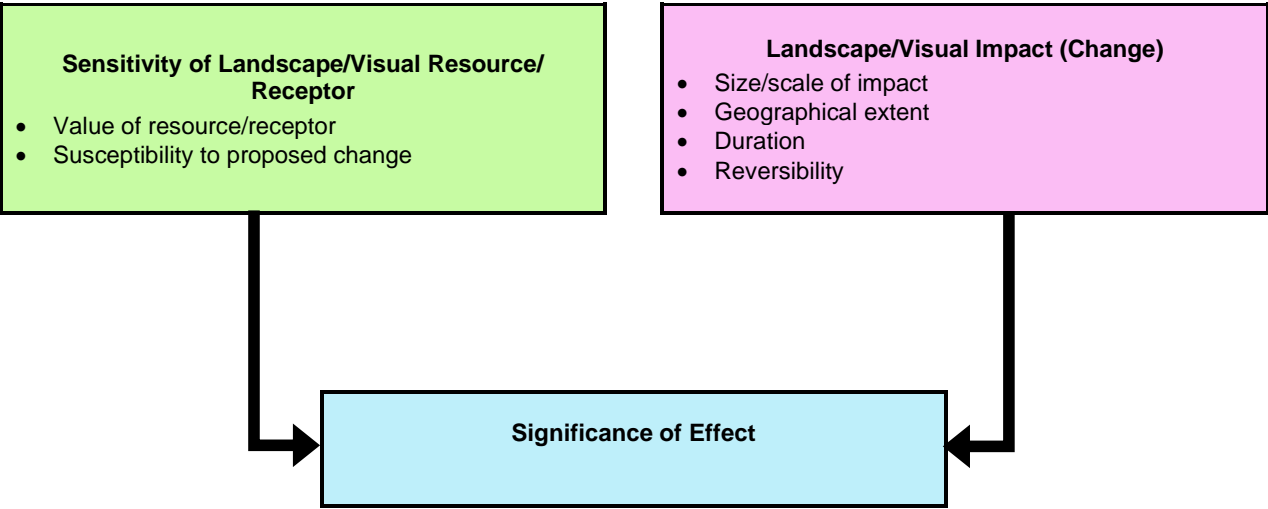


Figure 2.1: Assessment Approach.

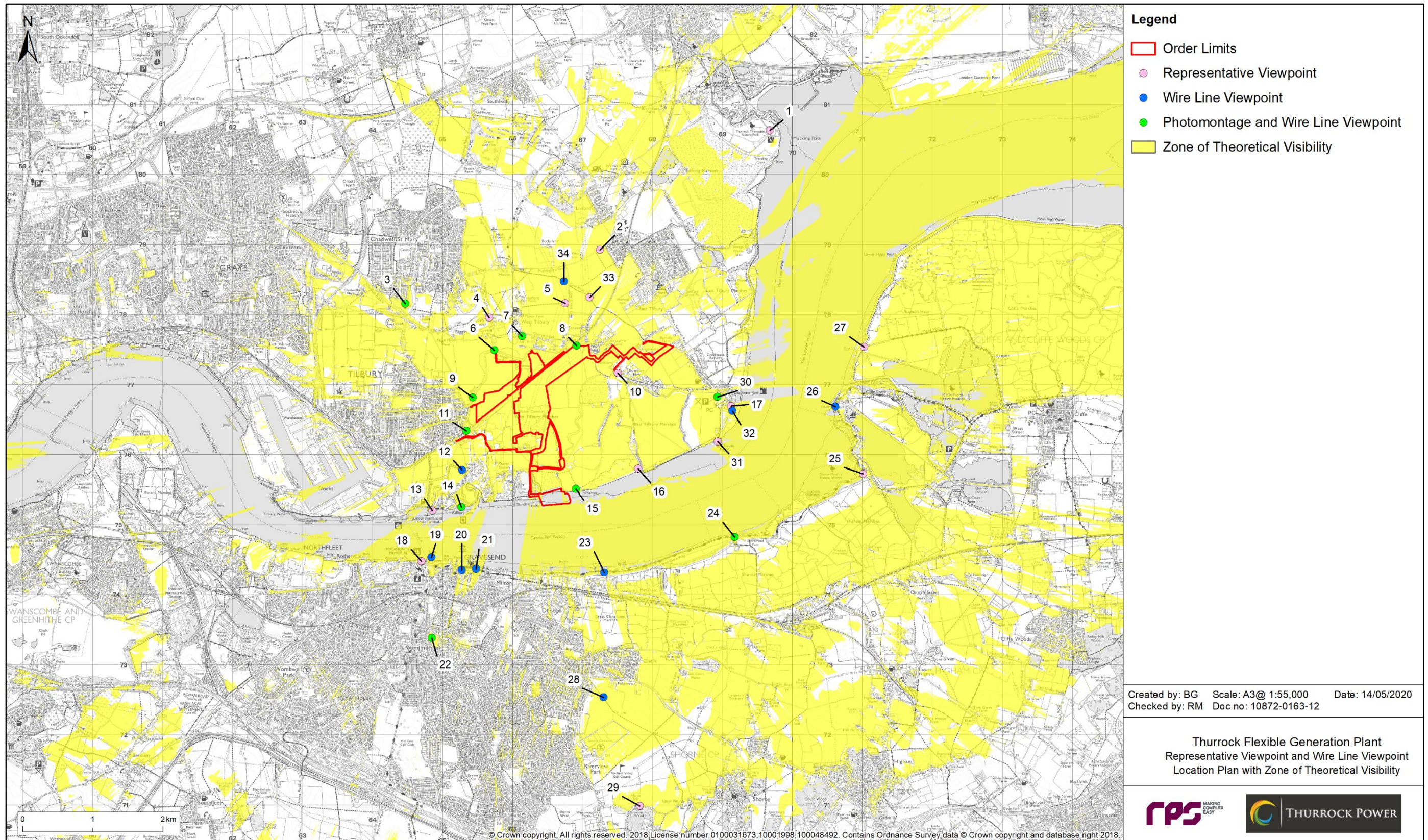


Figure 2.2: ZTV and Representative Viewpoint, Photowireline and Photomontage Locations.

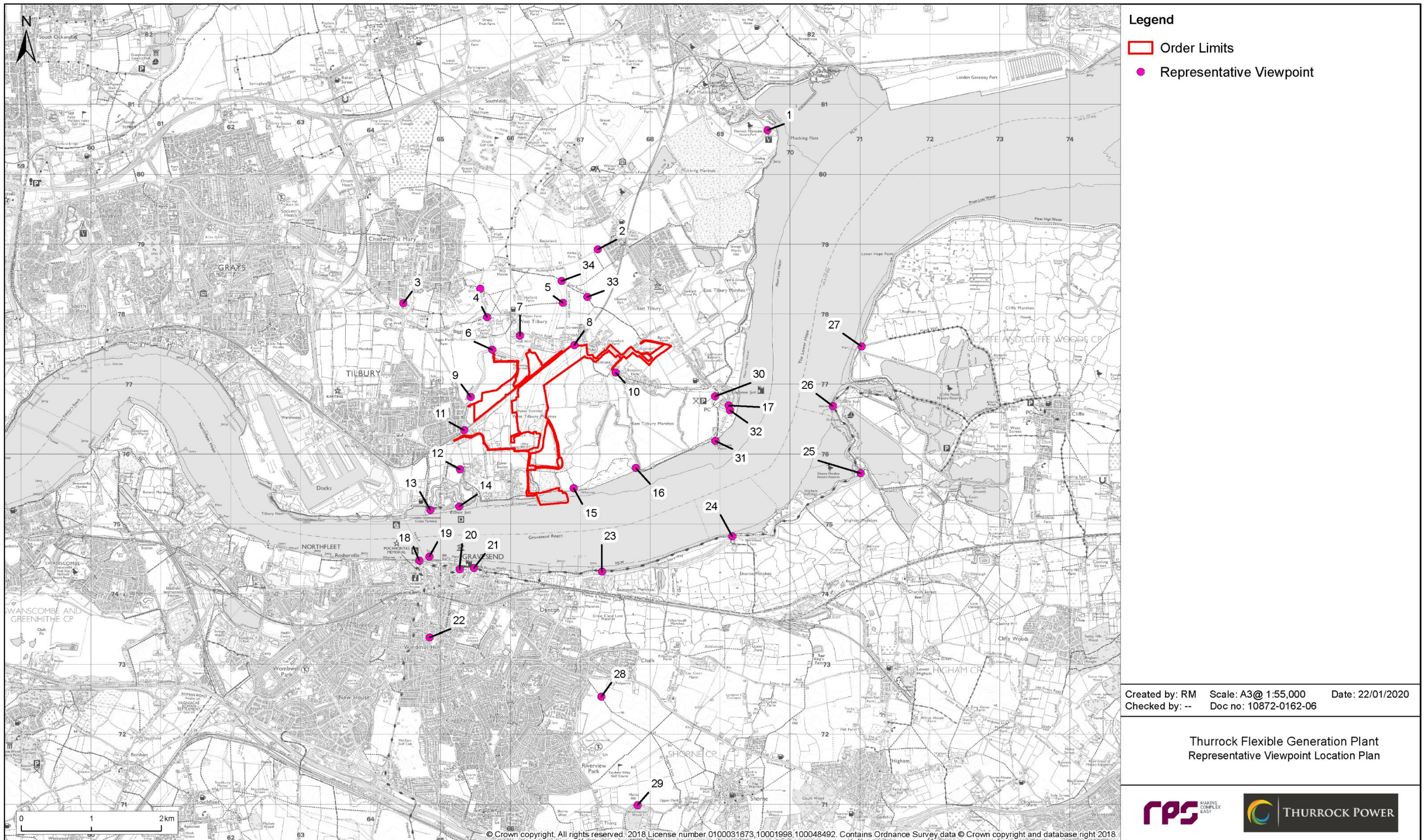


Figure 2.3: Representative Viewpoint Locations.

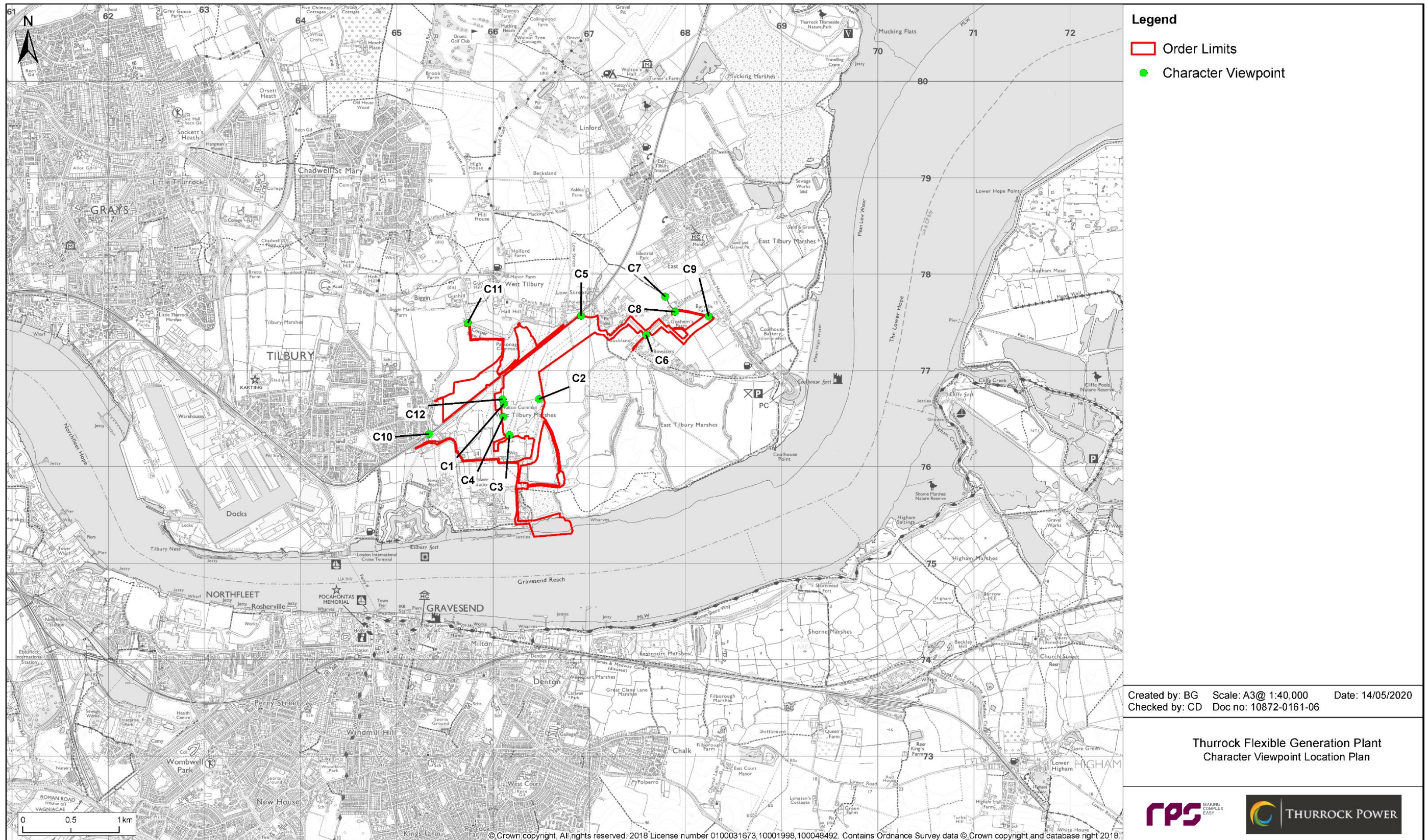


Figure 2.4: Character Photograph Locations.

Desktop study

2.2.14 Information on landscape and visual resources within the 10 km study area was collected through a detailed desktop review of existing studies. These are summarised at Table 2.1 below.

Table 2.1: Summary of key desktop reports.

Title	Source	Year	Author
National Landscape Character Areas: <ul style="list-style-type: none"> 81: Greater Thames Estuary 111: North Thames Basin 113: North Kent Plain 119: North Downs 	Natural England website, accessed September 2018	2018	Natural England
Thurrock Landscape Character Assessment	Extract from Thurrock Borough Local Plan Evidence Base	Undated	Thurrock Borough Council
Thurrock Landscape Capacity Study	Thurrock Council	2005	Chris Blandford Associates
Kent Downs AONB Management Plan 2014-2019: Second Revision	Kent Downs AONB Partnership	2014	Kent Downs AONB Partnership

Site specific surveys

2.2.15 Fieldwork and representative viewpoint photographs have been undertaken as agreed with Thurrock Borough Council, Gravesham Borough Council and Essex County Council and as advised by Natural England.

Table 2.2: Summary of site-specific surveys undertaken.

Title	Extent of survey	Overview of survey	Survey provider	Year	Reference to further information
Fieldwork – photography within the Borough of Thurrock	Within study area	Photography for representative viewpoint and character studies to inform both the landscape and visual impact assessments	RPS	30 August 2018	See Figures 3.4 to 3.33

Fieldwork – photography within the Borough of Thurrock	Within study area	Photography for representative viewpoint and character studies to inform both the landscape and visual impact assessments	RPS	4 September 2018	See Figures 3.4 to 3.33
Fieldwork – photography within the Borough of Gravesham	Within study area	Photography for representative viewpoint and character studies to inform both the landscape and visual impact assessments	RPS	5 September 2018	All panoramas superseded by later fieldwork
Fieldwork – photography and proposed development characterisation within Thurrock and Gravesham Boroughs	Within study area	Photography for representative viewpoint and character studies to inform both the landscape and visual impact assessments	RPS	7 September 2018	See Figures 3.4 to 3.33
Fieldwork – photography within Thurrock and Gravesham Boroughs, including preliminary fieldwork/photography following Essex County Council's request for viewpoints contained within the Scoping Opinion.	Within study area	Photography for representative viewpoint and character studies to inform both the landscape and visual impact assessments	RPS	25 September 2018	See Figures 3.4 to 3.33
Fieldwork – photography within the Borough of Thurrock	Within study area	Winter photography for representative viewpoint studies to inform the visual impact assessment	RPS	26 th February 2019	See Figures 3.4 to 3.33
Fieldwork – photography within the Borough of Thurrock	Within study area	Summer photography for representative viewpoint studies to inform the visual impact assessment	RPS	12 th September 2019	See Figures 3.4 to 3.33
Fieldwork – photography within the Borough of Gravesham	Within study area	Summer photography for representative viewpoint studies to inform the visual impact assessment	RPS	27 th September 2019	See Figures 3.4 to 3.33

2.3 Study area

- 2.3.1 The site of the proposed development is divided into a number of zones (see Figure 2.5). A study area of 10 km from the outer edges of the proposed development for the LVIA (Figure 2.6) has been adopted. The study area is based on stack heights of 40 m and the main generating station building height of 20 m, experience of assessing this type of development, and the context in which the proposed development is located.

2.4 Uncertainties and/or data limitations

- 2.4.1 A ZTVs is only a first step in indicating whether or not a proposed development might be visible from a certain location.
- 2.4.2 The digital surface model (DSM) used in the production of the ZTV is derived from LiDAR data from DEFRA. The LIDAR Composite DSM 2 m cell size, data was used. Where LiDAR was not available for certain areas the OS Terrain 5 data was used and resampled to 2 m. The 'targets' are the parts of the development which were used to generate the ZTV and included the 40m high stacks associated with the FGP.
- 2.4.3 The ZTV only indicates that part of the proposed development can be seen, it does not indicate how much can be seen, and does not allow for distance or different weather conditions. This can only be established through fieldwork, photomontages and expert judgement.
- 2.4.4 The visual assessment is based on analysis of OS mapping of the proposed development and surrounding area and on field survey work, noting views towards the proposed development from publicly accessible viewpoints in the surrounding landscape. Although every effort has been made to include viewpoints in sensitive locations and areas from which the proposed development is likely to be most visible, not all public viewpoints from which the proposed development would be seen are included in the assessment.
- 2.4.5 Photowirelines of the outline of the proposed development are presented as Figures 4.1 to 4.20. Photomontages of the proposed development have been produced for 11 of the representative viewpoints and are presented as Figures 4.21 to 4.31.
- 2.4.6 The visualisations do not include any proposed landscape mitigation. However, the text notes the landscape mitigation and the impact of the Thurrock Flexible Generation Plant has been made at winter Year 1, i.e. the worst-case scenario and summer Year 15 when the landscape mitigation is becoming established.

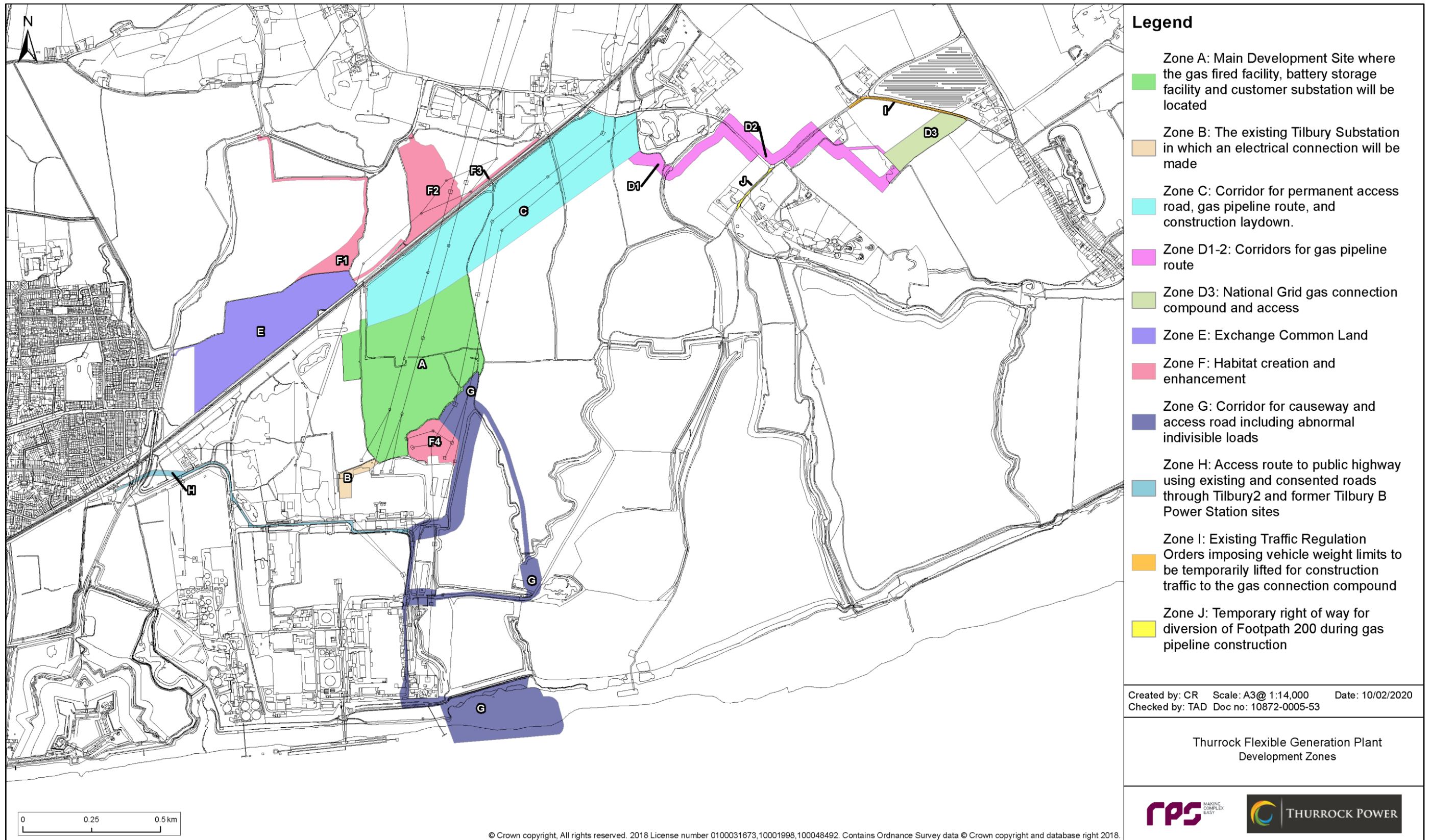


Figure 2.5: Development Zone Plan.

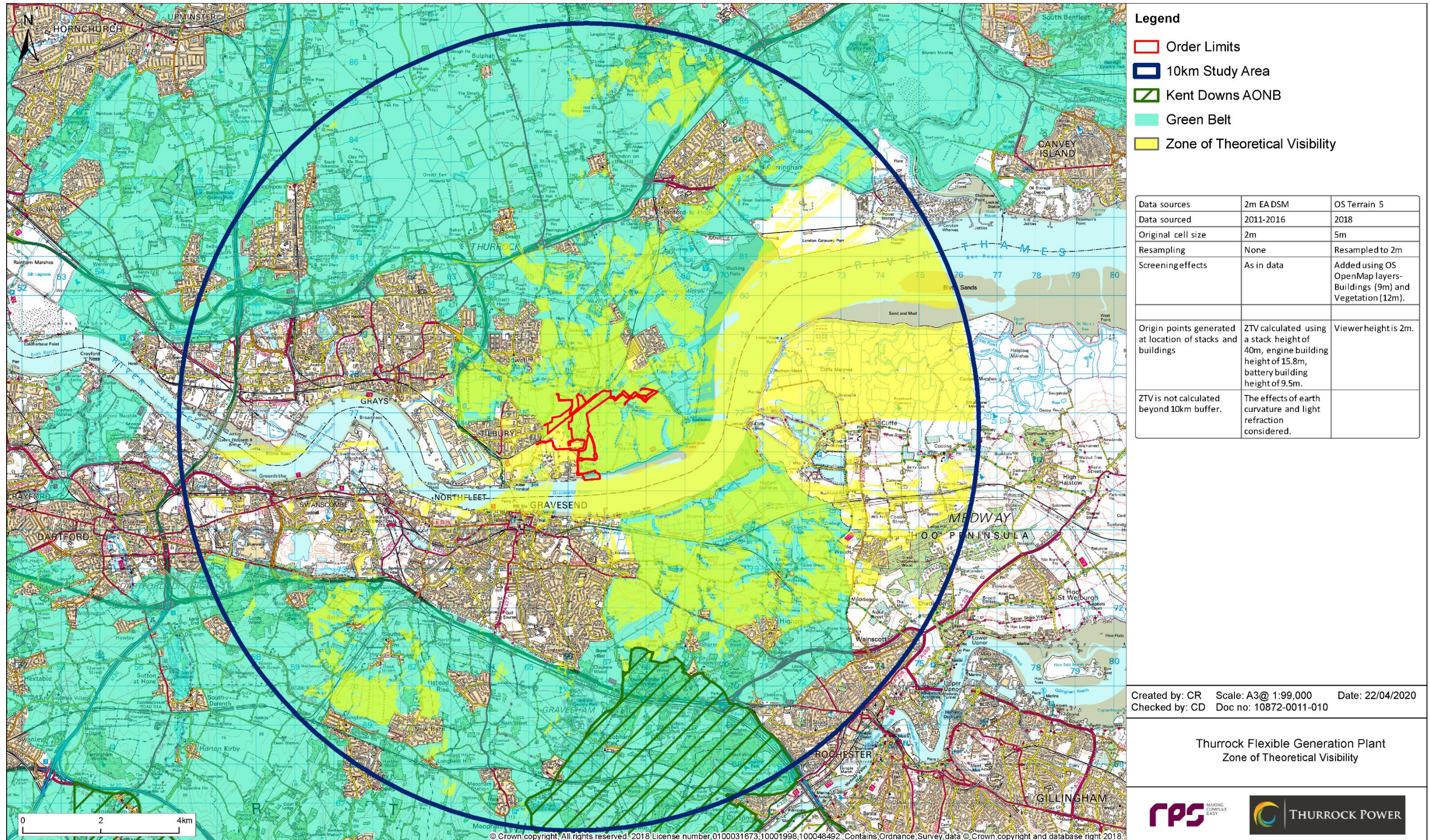


Figure 2.6: Landscape and Visual Impact Assessment ZTV and 10 km Study Area.

2.5 Impact assessment criteria

- 2.5.1 The purpose of the assessment is to evaluate the magnitude of impact (change) to landscape and visual resources and receptors to enable the likely significant effects of the proposed development to be identified.
- 2.5.2 GLVIA states that the level of effects is ascertained by professional judgement based on consideration of the sensitivity of the baseline landscape or visual receptor and the magnitude of change experienced by the receptors as a result of the proposed development.
- 2.5.3 This section describes the criteria applied in this chapter to characterise the magnitude of potential impacts and sensitivity of receptors. The terms used to define magnitude and sensitivity are based on those used in the DMRB methodology, which is described in further detail in Volume 2, Chapter 4: Environmental Impact Assessment Methodology.

Magnitude of impact on landscape resources / receptors

- 2.5.4 The magnitude of impact or change affecting landscape receptors depends on the size or scale, geographical extent of the area influenced and its duration and reversibility. These factors are described below:
- 2.5.5 Size or scale: “The extent of the existing landscape elements that will be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape...; the degree 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...”; and, “whether the effect [impact] changes the key characteristics of the landscape, which are critical to its distinctive character” (GLVIA, para 5.49).
- 2.5.6 Geographical extent: Distinct from scale or size, this factor considers the geographical area over which the landscape impacts will be felt, it might, for example, be a moderate loss of landscape receptors or character over a large area, or a large loss of receptors or character over a very localised area. At para 5.50 GLVIA notes that *“in general effects [impacts] may have an influence at the following scales, although this will vary according to the nature of the project and not all may be relevant on every occasion: at the site level within the development site itself; at the level of the immediate setting of the site; at the scale of the landscape type or character area within which the proposal lies; and, on a larger scale, influencing several landscape types or character areas.”* For the purposes of this LVIA, the assessment considers the impact of the proposed

development on the published landscape character areas and units, both at county and national level, i.e. the third and fourth landscape scales.

- 2.5.7 Duration and reversibility: Duration is categorised as short, medium or long-term as defined in ES Chapter 4 para 2.5.13. GLVIA explains that as there are no standard lengths of time within these categories, the assessment must state what these are and why these have been chosen (GLVIA, para 5.51). Reversibility is described as *“a judgement about the prospects and practicality of the particular effect being reversed in, for example, a generation”* (GLVIA, para 5.52). Projects can be considered to be permanent (irreversible), partially reversible or fully reversible. For the purposes of this LVIA the proposed development is considered to be fully reversible.

Magnitude of impact on visual receptors

- 2.5.8 As with the magnitude of landscape impacts, the magnitude of impact or change affecting visual receptors depends on the size or scale, geographical extent of the area influenced and its duration and reversibility. These factors are described below:
- 2.5.9 Size or scale: Judgements need to take account of: “the scale of the change [impact] in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the proposed development; the degree of contrast or integration of any new features or changes in the landscape with existing or remaining landscape elements and characteristics in terms of form, scale and mass, line, height, colour and texture; and, the nature of the view of the proposed development, in terms of the relative amount of time over which it will be experienced and whether views will be full, partial or glimpses” (GLVIA, para 6.39).
- 2.5.10 Geographical extent: This will vary from viewpoint to viewpoint and will reflect: “the angle [orientation] of view in relation to the main activity of the receptor; the distance of the viewpoint from the proposed development; and, the extent of the area over which the changes [impact] would be visible” (GLVIA, para 6.40).
- 2.5.11 Duration and reversibility of visual impacts: As with landscape impacts, duration should be categorised as short, medium or long-term and projects considered to be permanent (irreversible), partially reversible or fully reversible (GLVIA, para 6.41). For the purposes of this LVIA the impacts on views of the proposed development are considered to be fully reversible.
- 2.5.12 The criteria for defining magnitude of impact in this chapter are outlined in Table 2.3.

Table 2.3: Criteria for magnitude of impact.

Magnitude of impact	Landscape Impacts	Visual Impacts
Major	Where there are substantial changes affecting the character of the landscape, or important elements. Proposed development within or close to affected landscape. Size of development out of scale with existing elements.	Dominant. Has a defining influence on the view.
Moderate	The proposed development forms a visible and recognisable feature in the landscape. Proposed development is within or adjacent to affected character area/type. Scale of development fits with existing features.	Prominent. Has an important, but not defining influence on view; is a key element in the view.
Minor	Changes to the physical landscape, its character and the perception of the landscape are slight.	Visible, but not prominent. Minor component and no marked effect on view.
Negligible	The impact of change on the perception of the landscape, the physical features or the character is barely discernible.	The character of the view will not be altered by the proposed development. The proposed development is at such a distance or is heavily screened so as to be barely perceptible and may only be visible in clear conditions. May go unnoticed.
No change	No loss or alteration of landscape characteristics, features or elements; no observable impact either adverse or beneficial.	No loss or alteration of elements that make up the view: no observable impact either adverse or beneficial on the view.

Sensitivity of Landscape Receptors

- 2.5.13 The sensitivity of a landscape receptor is a combination of *“judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape”* (GLVIA, para 5.39). For the purpose of this assessment, susceptibility and value of landscape receptors are defined as follows:
- 2.5.14 Landscape susceptibility: *“the ability of the landscape receptor (whether it be the overall character or quality/condition of a particular landscape type or area, or an individual element and/or feature, or a particular aesthetic and perceptual aspect) to accommodate the proposed change without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies”* (GLVIA, para 5.40).

2.5.15 Value of the landscape receptor: *“The value of the Landscape Character Types or Areas that may be affected, based on review of designations at both national and local levels, and, where there are no designations, judgements based on criteria that can be used to establish landscape value; and, the value of individual contributors to landscape character, especially the key characteristics, which may include individual elements of the landscape, particularly landscape features, notable aesthetic, perceptual or experiential qualities, and combinations of these contributors”* (GLVIA, para 5.44).

Sensitivity of visual receptors

- 2.5.16 Visual receptors are always people. The sensitivity of each visual receptor (the particular person or group of people likely to be affected at a specific viewpoint) *“should be assessed in terms of both their susceptibility to change and in views and visual amenity and also the value attached to particular views”* (GLVIA, para 6.31). For the purpose of this assessment, susceptibility and value of visual receptors are defined as follows:
- 2.5.17 Visual susceptibility: *“The susceptibility of different visual receptors to changes in views and visual amenity is mainly a function of: the occupation or activity of people experiencing views at the particular locations; and, the extent to which their attention or interest may therefore be focused on the views and the visual amenity they experience at particular locations”* (GLVIA, para 6.32).
- 2.5.18 Value of views: Judgements made about the value of views should take account of: *“recognition of the value attached to particular views, for example in relation to heritage assets, or through planning designations; and, indicators of value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment (such as parking places, sign boards or interpretive material) and references to them in literature or art...”* (GLVIA, para 6.37).
- 2.5.19 Sensitivity is not readily graded in bands and GLVIA notes, with regards to visual sensitivity, that the division of who may or may not be sensitive to a particular change *“is not black and white and in reality there will be a gradation in susceptibility to change”* (GLVIA, para 6.35). However, in order to provide both consistency and transparency to the assessment process Table 2.4 defines the criteria which have guided the judgement as to the intrinsic susceptibility and value of the resource/receptor and subsequent sensitivity to the proposed development.
- 2.5.20 The criteria for defining sensitivity in this chapter are outlined in Table 2.4.

Table 2.4: Criteria for sensitivity.

Sensitivity	Landscape resource/receptor	Visual resource/receptor
Very High	Landscape value internationally recognised, with very limited or no potential for substitution	Views of very high importance and rarity. Viewers travel long distances, including from other countries to experience the view.
High	Landscape value recognised by existing or proposed national designation. The qualities for which the landscape is valued are in a good condition, with a clearly apparent distinctive character and absence of detractors. This distinctive character is susceptible to relatively small changes.	Large number or high sensitivity of viewers assumed. Viewers' attention very likely to be focused on landscape, e.g. residents experiencing views from dwellings; users of strategic recreational footpaths and cycle ways; people experiencing views from important landscape features of physical, cultural or historic interest, beauty spots and picnic areas.
Medium	Landscape value is recognised or designated locally; the landscape is relatively intact, with a distinctive character and few detractors; and is reasonably tolerant of change.	Viewers' attention may be focused on landscape; such as users of secondary footpaths, and people engaged in outdoor sport or recreation (e.g. horse riders using gallops).
Low	Local landscape areas or receptors of low to medium importance, with no designations; landscape is in a poor condition and a degraded character with the presence of detractors such as industrial units; and the landscape has the capacity to potentially accommodate significant change.	May include people at their place of work, or engaged in similar activities, whose attention may be focussed on their work or activity and who may therefore be potentially less susceptible to changes in view. Occupiers of vehicles whose attention may be focused on the road.
Negligible	Landscapes of very low importance and rarity, numerous detractors and features, the landscape is able to whole sale accommodate change.	Quick transient views such as fast-moving vehicles or views from industrial areas, land awaiting redevelopment and or views from landscapes of no or very low importance

Significance of effect for landscape and visual receptors

2.5.21 GLVIA explains, at paragraph 5.55, that a sequential approach can be adopted when assessing landscape significance, “susceptibility to change and value can be combined into an assessment of sensitivity for each receptor, and size/scale, geographical extent and duration and reversibility can be combined into an assessment of magnitude for each effect. Magnitude and sensitivity can then be combined to assess overall

significance.” The significance of the effect upon landscape and visual resources is determined by correlating the magnitude of the impact (change) and the sensitivity of the receptor. The particular method employed for this assessment is presented in Table 2.6. Where a range of significance of effect is presented in Table 2.6, the final assessment for each effect is based upon expert judgement, using the criteria in Table 2.5 below.

Table 2.5: Definition of terms relating to the significance of effect criteria for Landscape and visual effects.

Significance of effects	Landscape resource	Visual resource/amenity
None	Where proposals would not alter the landscape character of the area.	Where proposals would retain existing views.
Negligible	Where proposed changes would have an indiscernible effect on the character of an area.	Where proposed changes would have a barely noticeable effect on views/visual amenity.
Minor	Where proposed changes would be at slight variance with the character of an area.	Where proposed changes to views, although discernible, would only be at slight variance with the existing view.
Moderate	Where proposed changes would be noticeably out of scale or at odds with the character of an area.	Where proposed changes to views would be noticeably out of scale or at odds with the existing view.
Major	Where proposed changes would be uncharacteristic and/or would significantly alter a valued aspect of (or a high quality) landscape.	Where proposed changes would be uncharacteristic and/or would significantly alter a valued view or a view of high scenic quality.
Substantial	Where proposed changes would be uncharacteristic and/or would significantly alter a landscape of exceptional landscape quality (e.g., internationally designated landscapes), or key elements known to the wider public of nationally designated landscapes (where there is no or limited potential for substitution nationally).	Where proposed changes would be uncharacteristic and/or would significantly alter a view of remarkable scenic quality, within internationally designated landscapes or key features or elements of nationally designated landscapes that are well known to the wider public.

2.5.22 For the purpose of this LVIA any effects with a significance level of moderate or less are considered to be not significant.

Table 2.6: Matrix used for the assessment of the significance of an effect.

	Magnitude of impact					
	<i>No change</i>	<i>Negligible</i>	<i>Minor</i>	<i>Moderate</i>	<i>Major</i>	
Sensitivity of receptor	<i>Negligible</i>	None	Negligible	Negligible or Minor	Negligible or Minor	Minor
	<i>Low</i>	None	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
	<i>Medium</i>	None	Negligible or Minor	Minor	Moderate	Moderate or Major
	<i>High</i>	None	Minor	Minor or moderate	Moderate or major	Major or Substantial
	<i>Very high</i>	None	Minor	Moderate or major	Major or Substantial	Substantial

2.6 Maximum design envelope parameters for assessment

- 2.6.1 The maximum design envelope parameters identified in Table 2.7 have been selected as those having the potential to result in the greatest effect on an identified receptor or receptor group. These parameters have been identified based on the overview description of the development provided in Volume 2, Chapter 2: Project Description, including all potential development options where these are under consideration by the applicant.
- 2.6.2 The maximum design envelope parameters are represented in the photowirelines and these have formed the basis of the maximum-case assessment of landscape and visual effects. The design envelope encompasses a range of options for spacing or clustering of the exhaust stacks, which are shown in the photowirelines (Figures 4.1 to 4.20 options a to c), and for the assessment of the effects on individual representative viewpoints, the maximum-impact stack layout has been considered in the assessment.
- 2.6.3 In addition to the photowirelines, illustrative photomontages have been produced. These visualisations present one potential design option within the maximum design envelope and have been considered in the assessment as a whole. However, for the avoidance of doubt, the photowirelines represent the maximum case on which the conclusions regarding potential significance of effects at each viewpoint have been based.
- 2.6.4 With regard to the colours, textures and finishes of the proposed development's buildings, the assessment has been based on steel cladding in a neutral grey colour

as a reasonable maximum case. As noted in the mitigation section of this chapter and expanded upon in the Design Principles Statement (application document A8.4), the materials, colours and finishes of the proposed development will be subject to detailed design and approval by Thurrock Council. Cladding materials with a graduated colour palette to assist in merging the development's buildings into the background landscape and skyline have been suggested and this is expected to reduce the magnitude of visual and landscape character impacts compared to the maximum case assessed in this chapter.

2.7 Impacts scoped out of the assessment

- 2.7.1 The predicted frequency of occurrence and extent of visible water vapour in exhaust gas plumes from the Flexible Generation Plant is detailed in Volume 6, Appendix 12.7. The plumes are predicted to be visible outside the Zone A boundary for between 0.1% to a maximum of 0.5% of the year. The average plume length is predicted to be 4m. The maximum predicted length is 172m. As the average predicted occurrence of plumes is expected to be for a low percentage of the year and of small average extent, it is judged that there is no potential for significant landscape and visual effects and further assessment is therefore scoped out.
- 2.7.2 Table 2.7 identifies the potential impacts that will be assessed at the different stages of the development.

Table 2.7: Maximum design envelope parameters assessed.

Potential impact	Maximum design scenario	Justification
Construction		
Temporary visual and landscape character impact of construction activity and plant	Tower cranes used at any time in Zone A during phases 1 and 2 of construction period.	Reasonable maximum potential visual impact from temporary construction activity.
	Directional, motion-activated security lighting used at main development site (Zone A), above ground installation for gas connection (Zone D3) and main component laydown area (within Zone C) during a construction period lasting up to six years.	Reasonable maximum potential night-time visual impact. The applicant does not expect that other areas of trenching or haul road would require security lighting at night.
	Access roads in Zone C and Zone G used during construction.	To assess the impact of traffic using all of the proposed access routes.
Operation and maintenance		
Visual and landscape character impact of buildings and structures	<p>Maximum building envelopes as follows:</p> <ul style="list-style-type: none"> Up to 48 gas engine stacks up to 40m high, up to 3.2m outer diameter for up to first 30m height, otherwise up to 2.1m outer diameter Gas engine buildings or structures collectively up to up to 135m wide, 265m long and 20m high Battery system in freestanding containerised units or housed within one or more buildings, in total up to 106m wide, 106m long and 10m high On-site (zone A) substation components up to 15m high Above-ground installation structures (Zone D3) up to 5m high in compound 50m by 50m Causeway is a permanent structure 	Maximum dimensional envelopes within which buildings or equipment would be located.
Visual and landscape character impact of lighting at night	Directional, motion-activated security lighting used at main development site (Zone A) and above ground installation for gas connection (Zone D3).	Permanent external lighting is not proposed by the applicant.
Visual and landscape character impact of access roads	Roads through both Zone C and Zone G may be used for operational access. Maximum operational traffic as specified in Volume 3, Chapter 10: Traffic and Transport.	Reasonable maximum potential impact of road and traffic in operation; maximum design scenario parameters have been defined in that chapter.
Decommissioning		
Visual and landscape character impact of buildings, structures and access road	Ongoing operation of all or part of flexible generation plant after 35 years.	Greatest ongoing, long-term impact.
Temporary visual and landscape character impact of deconstruction activity and plant	Decommissioning and deconstruction of development requires similar timescale, plant and working methods as construction.	Greatest short-term impact of deconstruction.

2.8 Measures adopted as part of Thurrock Flexible Generation Plant

- 2.8.1 A number of measures have been designed into the Flexible Generation Plant to reduce the potential for impacts on landscape and visual resources. These are summarised in Table 2.8.
- 2.8.2 The details and the location of the landscape mitigation, including details of materials, are set out in paragraphs 2.8.3 to 2.8.5, below, and shown on the Illustrative Landscape Plan (application document A2.9) which is submitted separately from this report.

Table 2.8: Designed-in measures.

Measures to be adopted as part of Thurrock Flexible Generation Plant	Justification
Construction phase	
Existing trees that are to be retained will be identified and protected during the construction process in accordance with the requirements of British Standard 5837:2012 Trees in relation to design, demolition and construction.	To protect existing vegetation against damage or loss by construction activities.
Operation and maintenance phase	
The detailed design of Thurrock Flexible Generation Plant will take into account landscape and visual resources and will be agreed with the local planning authority prior to development commencing. This will include agreement of the details of materials, finishes and colours for the proposed development, for which initial proposals are made in the Design Principles Statement (application document A8.4).	To ensure that impacts on landscape and visual resources are minimised during the operation and maintenance phase.
Landscape mitigation will be provided in accordance with a planting scheme that will be based on the Illustrative Landscape Plan (Application document A2.9). Planting will include gapping up and boundary thickening of the hedgerow on the southern boundary of the common land (Zone E) and the hedgerow parallel to the southern boundary of Zone D3. Planting will also be provided along a bund, which runs parallel with the access track from Station Road to Zone A.	To minimise the impacts on landscape and visual resources and receptors and where necessary replace those landscape receptors lost as a result of the proposed development. To strengthen the landscape character in the area.
Landscape planting will used native species. Planting within pipeline easements and proximity to overhead power lines will be in accordance with the National Grid's guidance.	To ensure amenity and nature conservation objectives are fulfilled.

Measures to be adopted as part of Thurrock Flexible Generation Plant	Justification
The landscape mitigation planting will not commence until construction has completed.	To ensure that the landscape planting is not compromised.
The landscape mitigation planting will be maintained and managed in accordance with the measures set out in the Landscape and Ecology Management Plan (LEMP) which will be produced to discharge the DCO requirement pre-construction.	To ensure that the appropriate landscape mitigation proposals are appropriately maintained and managed.

- 2.8.3 The hedgerow which runs parallel with the railway line on the southern boundary of the exchange common land (Zone E) will be gapped up and the boundary thickened with native scrub and specimen tree planting. The detailed proposals for this will be developed in the Landscape and Ecology Management Plan (LEMP) and agreed with Network Rail will be produced to discharge the DCO requirement pre-construction.
- 2.8.4 Native species scrub and tree planting is proposed along a bund which runs parallel with the access track from Station Road to Zone A. This will help provide visual amelioration of the development for dynamic rail users and road users. This also includes 5m wide meadow strips either side of the track.
- 2.8.5 The hedgerow which runs parallel with the southern boundary of Zone D3 where the compound containing the connection to the national grid is made will be gapped up and thickened to provide visual screening of this part of the proposed development. Native scrub and specimen tree planting will be used to further thicken the screening vegetation. All planting within pipeline easements and proximity to overhead power lines will be in accordance with National Grid (n.d.) guidance.

3. Baseline environment

3.1 Current baseline

Site Context

- 3.1.1 North of the River Thames the landscape is drained marshland with small areas of rough grazing land. A railway line bisects this apparently flat landscape. The majority of the industrial land uses lie to the south and residential areas to the north of the railway. Multiple overhead lines cross the landscape, terminating at National Grid's 400kV Tilbury substation. These pylons vary in type and height. Two heights appear common either 46m high for 275kV, L7(C) pylon and 27m high for 132kV L8(c) pylon. These structures and cables dominate the landscape especially from viewpoints near to Zone A.
- 3.1.2 Tilbury Fort, a historic asset with distinctive moats and embankments lies in the western part of the study area on the north bank of the River Thames and is linked to Coalhouse Fort by the Thames Estuary Path/Two Forts Way. This section also forms part of the Sustrans National Cycle route 13. At Tilbury the route joins the highway at Dock Road. A bunded sea wall defines the edge of the estuary and the public rights of way run on, or to the south of, the sea-defences. Other industrial elements and structures immediately to the south and the west of Zone A include a large sewage treatment works.
- 3.1.3 To the west of Tilbury Fort are Tilbury Docks, associated warehouses and the London International Cruise Terminal. The large cranes and wind turbines adjacent to the River Thames, are widely visible from the surrounding landscape.
- 3.1.4 Tilbury lies to the north of the railway line. Three tower blocks, located off Leicester Road, are landmarks in views across this part of Thurrock.
- 3.1.5 Chadwell St. Mary lies to the north-west of the proposed development. It also has three distinctive tower blocks, forming landmarks within the surrounding area.
- 3.1.6 Grays is located approximately 3.5 km to the north-west and is the largest town in the Borough of Thurrock.
- 3.1.7 Small villages and hamlets, including West Tilbury and Low Street, are found on the ridge of higher ground to the north of the development zones.

3.1.8 Beyond the ridgeline to the north and north-east lie the village of Linford and the larger village/small town of East Tilbury, which was originally developed in the 1930s by the Czechoslovakian shoe manufacturer, Bata, to provide homes for its workers.

3.1.9 Part of the fieldwork, undertaken for this LVIA, included photographing and recording the landscape on which the proposed development has been envisaged. The viewpoint locations for these character photographs are set out in Figure 2.4.

Zone A

3.1.10 Zone A is the main development site where the gas fired facility, battery storage facility and customer substation will be located. It has a total area of approximately 20.1 ha and lies immediately north of National Grid's 275/400kV Tilbury Substation (Viewpoints C1, C2, C3, C4, and C12, Figures 3.30, 3.31 and 3.33). Landscape mitigation will be provided within this Zone.

Zone B

3.1.11 Zone B is the access to National Grid's 400kV Tilbury substation, along which an electrical connection will be made. It lies to the north of the site of the demolished Tilbury B Power Station and immediately south-west of Zone A. The total area of the zone is approximately 0.7 ha. It is an area that contains the substation and many electrical components of the substation, including overhead lines and towers. The area also includes a large shed-type, industrial building (Viewpoint C4, Figure 3.31).

Zone C

3.1.12 Zone C is the corridor for the permanent access road, gas pipeline route and construction laydown. It is approximately 23.4 ha in area. Zone C is an area of farmland with a farm track running along the southern side and parallel to the railway and Station Road immediately south of the level crossing. It contains several high voltage overhead electricity lines, supported by eight towers, of different sizes, as well as medium voltage lines on wooden poles (Viewpoint C5, Figure 3.31). Landscape mitigation will be provided within this Zone.

Zone D

3.1.13 Zones D1 and D2 are corridors for the gas pipeline. Zone D2 crosses Station Road, between the level crossing and Readmans Industrial Estate. It also includes a small area of agricultural land to the south of Readmans Industrial Estate, the combined areas are approximately 6 ha. The corridor terminates at Zone D3 which is the National Grid gas connection compound and access zone. It is approximately 2.3 ha in area. It lies to the east of Goshem's Farm, (Viewpoints C8, C9, Figure 3.32). Landscape mitigation will be provided within this Zone.

Zone E

3.1.14 Zone E is exchange common land for the loss of Walton Common (part of Zone A). It has a total area of 11.6 ha. It lies adjacent to the north of the railway line, to the east of Tilbury.

Zone F

3.1.15 Zone F consists of four sub areas, F1, F2, F3 and F4 which are proposed for habitat creation and enhancement zones. Zones F1-3 are located immediately to the north of the railway line and south of Fort Road and Cooper Shaw Road, whilst Zone F4 is located south of Zone A. Zone F has a total area of 9.8 ha (Representative Viewpoints 6, 9 and 11; Figure: 3.9, Figure: 3.12, Figure: 3.14). The area and surrounding fields contain several high voltage overhead power lines crossing it.

Zone G

3.1.16 Zone G includes a causeway to be built out from the north bank of the River Thames and a corridor for a road for construction traffic and abnormal indivisible loads. This zone is 17 ha in area (Representative Viewpoint 15, Figure 3.17).

Zone H

3.1.17 Zone H is the proposed access route from the new section of A1089 (consented for Tilbury2) to Zone A via the corridor in Zone G. It uses existing and consented roads through Tilbury2 and the former Tilbury B Power Station sites.

Zone I

3.1.18 Zone I is a section of highway between Station Road and Princess Margaret Road where the existing traffic regulation order which limits vehicle weight limits would be temporarily lifted for construction traffic to the gas connection compound at Zone D3 (Viewpoint C9, Figure 3.32).

Zone J

3.1.19 Zone J is a temporary right of way for diversion of Footpath 200 during the gas pipeline connection at Zone D. It follows the lane at the corner of Station Road to Buckland and Bowaters Farm.

Topography

3.1.20 The majority of the land in which the proposed development is located is low-lying and relatively flat. Approximately 1 km to the north of the main site, a ridgeline runs west to east, rising to approximately 25 m AOD at Gun Hill. The town of Tilbury lies at the same

level as the site, while the settlement to the north, Chadwell St Mary, sits on the ridgeline, at approximately 30 m AOD.

3.1.21 The low ridge of land to the north of the proposed development is the surface catchment divide. Watercourses to the north of the ridge run east and join the River Thames at The Lower Hope and watercourses south of the ridge run, via a series of ditches, south into the Thames, and join the river at the Gravesend Reach.

Zone A

3.1.22 Zone A lies at approximately 2 m AOD and is very gently undulating. The larger part, Walton Common, is surrounded by ditches. The smallest part of Zone A, located in the eastern part of the site (not part of Walton Common), is also surrounded by ditches, barring the field entrance linking it to Walton Common. Zone C abuts Zone A to the north, while its east, south and west boundaries are marked by ditches. The northern boundary is unmarked as it runs diagonally (south-west to north-east) across an open, flat arable field (Viewpoints C1 and C2, Figure 3.30).

Zone B

3.1.23 Zone B is part of the National Grid's Tilbury Substation. It lies at a similar level to Zone A and has ditches marking its northern and western boundaries (Viewpoints C1, C2 and C3, Figure 3.30).

Zone C

3.1.24 Zone C adjoins the northern part of Zone A and runs parallel to the railway line north-east to Station Road. The land rises gently from approximately 2 m AOD close to Zone A to 5 m AOD close to Station Road. Zone C includes three watercourses/ditches that flow roughly north to south across this part of the proposed development and has ditches marking its western and part of its eastern boundary (Viewpoint C5, Figure 3.31).

Zone D

3.1.25 Zone D1 is a corridor that forms a reverse 'L' shape. The shorter, western section (running north-west to south-east) lies below 5 m AOD and crosses one ditch. The longer, northern section (running south-west to north-east) lies at about 5 m AOD. No ditches are crossed by this section.

3.1.26 Zone D2 is formed of two parts, either side of Station Road. To the north of Station Road the large field is gently undulating. The highest part of the field, in the south-east, is approximately 12 m AOD. The lowest part of the field, in the west, lies approximately 5 m AOD. No watercourses or ditches cross or form boundaries to this field. To the south-west of Station Road Zone D2 comprises three fields to the south and west of

Goshem's Farm. The highest point lies to the south of Goshem's Farm at above 15 m AOD and the lowest point is in the south-west corner at below 10 m AOD.

- 3.1.27 Zone D3 is the southern part of a field to the west of Station Road and some allotments. It is predominantly flat.

Zone F

- 3.1.28 Zone F1 is located north of the railway line, south of Cooper Shaw Road and west of Parsonage Common. It comprises part of a flat arable field that lies below 5 m AOD. No watercourses cross the field, but ditches form the southern and eastern boundaries (Representative Viewpoint 6, Figure 3.9).
- 3.1.29 Zone F2 comprises part of a large arable field east of Parsonage Common that lies below 5 m AOD. Its southern and eastern boundaries are formed by ditches.
- 3.1.30 Zone F3 is a strip of land to the north of the railway which will be used as a wildlife corridor. It lies below 5 m AOD. A ditch marks its eastern boundary.
- 3.1.31 Zone F4 is a 2.2 ha area which abuts the south-east side of Zone A. It lies below 5m AOD, is flat and contains pylons with high voltage cables.

Zone G

- 3.1.32 The proposed causeway area of Zone G lies between the intertidal area of the northern bank of the Thames estuary and extends out into the Thames, below mean low water. The route from the causeway passes through the site of the demolished Tilbury B Power Station and this part of the zone lies at approximately 3 m AOD. The route towards Zone A then splits. One route proceeds north along an existing route to the substation and then to the east of the substation crossing a drainage ditch and is then routed on an area of raised land. The other route heads east, also along an existing track, to the south of a drainage ditch and an area of raised land, the track rises slightly, but remains below 5 m AOD. The track turns north-east and the Zone G route turns north-north-west. It crosses a drainage ditch field boundary and runs on the eastern side of this boundary, beyond which (to the west) is the area of raised land. At the northern point of the raised are, the Zone G route turns west, crossing the drainage ditch, to join the northern area of Zone G, which lies at approximately 2 m AOD at this point.

Zone H

- 3.1.33 Zone H is the proposed flat access route from Fort Road to Zone A via the corridor in Zone G. It lies at a similar height AOD to Zone A.

Zone I

- 3.1.34 Zone I is a stretch of Station Road between Love Lane and Princess Margaret Road which is slightly elevated (15 m AOD) above the Tilbury Marshes to the south.

Zone J

- 3.1.35 Zone J is a temporary public right of way diversion of Footpath 200 during gas pipeline construction near Poultry Farm.

Vegetation

- 3.1.36 The area of land that makes up the East and West Tilbury Marshes, between Tilbury and East Tilbury is mainly drained marshland, divided by reed-filled ditches (see Volume 3, Chapter 9: Onshore Ecology for details of flora and fauna). Some fields are used for grazing. However, many fields, particularly those to the north of the railway, are arable farmland.
- 3.1.37 There are few hedgerows in the flat landscape, where they do exist, species usually include hawthorn (*Crataegus monogyna*), oak (*Quercus robur*), elm (*Ulmus procera*), and occasionally elder (*Sambucus nigra*), blackthorn (*Prunus spinosa*), and dog rose (*Rosa canina*).
- 3.1.38 Tree cover is sparse on the drained marshland and is mainly restricted to the planting associated with the industrial developments, including the sewage works, edges of settlements and hawthorn scrub and small trees either side of the railway line. Scrub and small trees also, intermittently, line roads and paths. Much of the common land is grazed by horses and horse-grazing also takes place on the land at Tilbury Fort and in small fields adjacent to roads. Tree cover and mature and thicker hedgerows are more frequent on the higher land, including on the ridgeline to the north of the proposed development.
- #### **Zone A**
- 3.1.39 The vegetation of the site itself is mown grassland, with reed filled ditches on some of its boundaries. There are a few scrubby bushes, mainly hawthorn associated with the edges of the fields. The eastern field has more hawthorn and other bushes on its boundaries. The northern part is an arable field (Viewpoints C1 and C2, Figure 3.30).
- #### **Zone B**
- 3.1.40 Most of the area is hard-standing. On the boundaries there are some reed filled ditches and scrubby bushes, mainly hawthorn (Viewpoints C3 and C4, Figures 3.30 and 3.31).

Zone C

3.1.41 Zone C comprises the northern parts of four arable fields. It lies immediately to the south of, and parallel to, the railway. The fields are divided by reed-filled ditches, which have some scrub associated with them. The towers for the overhead power lines, have areas of rough grassland at their bases, some areas larger than others. Rough grassland and scrub run to the north of the farm track adjacent to the railway (Viewpoint C5, Figure 3.31). Similarly, there is rough grassland and scrub on the boundary with Station Road. At the eastern end of the area lies an area of woodland and scrub on the site of a disused pit.

Zones D1

3.1.42 Zone D1 runs through an area of rough grassland with scrub and trees before meeting an arable field where it turns north-eastwards and follows the field boundary with thick treed hedgerow on the northern side to its junction with Station Road.

Zone D2

3.1.43 Zone D2 follows Station Road which is lined by treed hedgerows. It turns south-eastwards, south-west of Goshem's Farm and is routed through a pasture before turning north-east parallel and to the north side of a field boundary hedge.

3.1.44 Zone D3

3.1.45 Zone D3 occupies a strip on the south-eastern side of a roughly triangular arable field, the northern and eastern boundaries of which are formed by Station Road. The road is lined with a mature, although relatively thin, hedgerow. The southern boundary of D3 is formed by a mature hedgerow with some hedgerow trees. Allotments lie to the south-east of the southern boundary. It shares its western boundary with the eastern boundary of Zone D2, south of Station Road (Viewpoints C8 and C9, Figure 3.32).

Zone F

3.1.46 Zone F1 is a triangular piece of arable farmland on the southern eastern edge of Parsonage Common which also includes a strip of land following reed-filled ditches linking to the junction of Gun Hill, Fort Road and Cooper Shaw Road. The eastern boundary of the triangular area of land is formed by reed-filled ditches with some scrub vegetation.

3.1.47 Zone F2 is located to the east of Parsonage Common and is roughly rectangular in shape. It is bounded by reed filled ditches on the east and western sides with occasional trees and scrub. The southern boundary is contiguous with the railway line and is formed of trees and shrubs. The northern boundary runs parallel with Cooper Shaw

Road but separated from it by a short strip of land containing a field ditch, barring one short 'linking' section. The arable field contains several pylons.

3.1.48 Zone F3 is located on the edge of an arable field. The narrow strip of land runs parallel to the railway and abuts the scrubby vegetation that marks the northern embankment. It joins scrubland at its eastern and western ends.

3.1.49 Zone F4 is located on the south-east side of Zone A and comprised of rough grassland and scrub vegetation. This small parcel of land contains six pylons.

Zone G

3.1.50 The causeway section of Zone G, to the south of the sea wall, lies within and below the intertidal zone. The route from the causeway crosses the sea wall and traverses an area of rough grassland and scrub, before entering the demolished Tilbury B Power Station site. The route turns north around an area of mature trees, within the site. The arm of the Zone G route that continues north follows an existing road and only diverges from this at Tilbury Substation, where it crosses an area of rough grassland. It follows the eastern boundary of the substation, across rough grassland, where it enters an area of rough grassland and scrub, to the north of Zone F4. The eastern Zone G route follows an existing track to the south of an area of land-raising then turns north-north-west, crossing an area of rough grassland, before entering an arable field. At the northern end of the land-raising site it turns west and joins the area of Zone G that is rough grassland and scrub adjacent to Zones A and F4. Details of the flora can be found in Volume 3, Chapter 9: Onshore Ecology.

Zone H

3.1.51 The alignment of the access route (Zone H) along consented road through Tilbury 2 and the former Tilbury B Power Station site has very little existing vegetation either side. From the former Tilbury B site, the road runs east to west and is lined with a mixture of mature trees, scrub and hedge past the car storage area to the north. The road meets the perimeter access road to the sewage works at a T junction. The perimeter road is lined with mature trees and mature scrub beyond the verge to its junction with Fort Road. Much of the baseline of Zone H is subject to change by the construction of Tilbury2, for which much vegetation has been removed.

Zone I

3.1.52 Zone I follows the alignment of Station Road between Goshem's Farm and Barvills Farm. There are mature roadside hedges on both sides of this stretch of Station Road. The hedge on the southern side of Station road is slightly thinner than the one to the north giving occasional glimpsed and transitional views to the field beyond.

Zone J

- 3.1.53 Zone J is a temporary right of way diversion along an existing track lined with mature trees and thick hedgerow which obscure views of the adjoining landscape.

Public Rights of Way

- 3.1.54 There are a number of areas of Access land in the drained marshland areas, some of which is also Common Land, such as Parsonage Common, to the north of the railway. Promoted paths in the study area include; The Thames Estuary Path/Two Forts Way, routed along the northern bank of the Thames; and, the Saxon Shore Way that runs along the southern bank of the Thames in north Kent. There are few public rights of way crossing either west or east Tilbury Marshes. However, there is a network of footpaths and bridleways on the ridgeline and the plateau to the east of Chadwell St. Mary.

Zone A

- 3.1.55 Part of Zone A is Walton Common, which is Access Land. The eastern field and the arable field are neither common nor Access Land. No public rights of way cross Zone A.

Zone B

- 3.1.56 No public rights of way cross Zone B and it is not Access Land.

Zone C

- 3.1.57 No public rights of way cross Zone C and it is not Access Land.

Zone D

- 3.1.58 Zone D is not Access Land and no public rights of way cross the farmland. However, Footpath 200 runs along part of the route of D1 south-west of its junction with Station Road at Gravelpit Farm.

Zone E

- 3.1.59 No public rights of way cross Zone E and it is not Access Land. However, this is proposed as 'exchange common land' and would allow public access.

Zone F

- 3.1.60 Zone F1, F2, F3 and F4 do not have rights of way crossing them nor are they Access Land. Both F2 and F4 abut Parsonage Common, which is designated Access Land.

Zone G

- 3.1.61 The section of Zone G that connects the causeway in the intertidal zone to the route north, crosses the Thames Estuary Path/Two Forts Way, to the south of the demolished Tilbury B Power Station.

Zone H

- 3.1.62 There are no rights of way or Access Land within this zone.

Zone I

- 3.1.63 There are no rights of way or Access Land within this zone.

Zone J

- 3.1.64 There are no rights of way or Access Land within this zone. However, this zone is proposed as a temporary right of way for the diversion of Footpath 200 during gas pipeline construction.

3.2 Landscape Value

Landscape Designations

- 3.2.1 No part of the proposed development falls within, or is adjacent to, a designated landscape. The closest designated landscape is the Kent Downs Area of Outstanding Natural Beauty (AONB) the closest point of which lies approximately 6 km south-south-east of Zone A.
- 3.2.2 The proposed development falls within the western edge of the Green Belt. The effects on the Green Belt is assessed in application document A8.3.

Scheduled Monuments

- 3.2.3 The assessment of the impacts on Scheduled Monuments (SMs) and Conservation Areas (CAs) are set out in the Historic Environment Volume 3 Chapter 7.
- 3.2.4 There are no SMs which lie within the site area. The nearest SM is Tilbury Fort, approximately 1.5 km to the south-east. Hall Hill, in West Tilbury, lies approximately 1.25 km to the north. Another site within the vicinity of the proposed development is Coalhouse Fort, approximately 2.75 km to the east. All sites lie within the local level study area of 10 km radius and the ZTV indicates that views of the proposed development are available from these sites. The effects on SMs are considered in Volume 3, Chapter 7: Historic Environment.

Conservation Areas

3.2.5 West Tilbury CA lies approximately 1 km to the north of Zone A, with the East Tilbury CA approximately 2 km to the north-east. The Orsett CA lies approximately 5.5 km to the north-east, and the Horndon-on-the-Hill CA approximately 6.5 km to the north. The Corringham CA lies approximately 8 km to the north-east, and the Fobbing CA approximately 9 km to the north-east. The effects on CAs are considered in Volume 3, Chapter 7: Historic Environment.

Landscape Value of the proposed development site

3.2.6 From the desktop study and the field survey, the landscape value can be assessed. People give value to different landscapes which can be measured based on the following criteria:

- Scenic quality;
- Rarity;
- Representativeness;
- Conservation interests;
- Wildness;
- Cultural associations; and
- Tranquillity.

Scenic Quality

3.2.7 This measures the degree to which the landscape appeals to the visual senses. The visual baseline is analysed in more detail in Section 3.5.

3.2.8 The main built site Zone A is located within an area of rough open grassland. There are views of the land associated with the site of the former Tilbury B Power Station and the National Grid 400kV Tilbury Substation to the south. The landscape of the highest scenic value within the wider study area is the nationally important Kent Downs AONB. This ridge of high land on the northern edge of the AONB provides a vantage point for very limited views out from the wooded landscape, over the low-lying coastal plain of the Thames Estuary.

Rarity

3.2.9 This is concerned with the presence of rare features and elements in the landscape of the presence of a rare character type.

3.2.10 There are no rare features or elements found within the main built development zone, Zone A. Within the wider landscape the extensive salt marshes and mudflats are an important characteristic of the Thames Estuary.

Representativeness

3.2.11 This analyses the features or elements within the site, which are worthy of retention.

3.2.12 The main built Zone A is located within a flat, open field bounded by ditches and scrub, these are characterising features of this area.

Conservation Interests

3.2.13 This is concerned with the presence of features of wildlife or earth science found within the zones.

3.2.14 These are detailed in Volume 3, Chapter 9: Onshore Ecology and Volume 3, Chapter 16: Geology Hydrology and Ground Conditions.

Wildness

3.2.15 The zones do not have any qualities of wildness.

Cultural Associations

3.2.16 This is concerned with the presence of archaeological or historical and cultural interest found within the proposed development. These are detailed in Volume 3, Chapter 7: Historic Environment.

Tranquillity

3.2.17 It should be noted that tranquillity is defined differently by different organisations. The Landscape institute defines tranquillity as a “*state of calm and quietude associated with peace*” (Glossary, Guidelines for Landscape and Visual Impact Assessment: Third Edition, 2013) (GLVIA). The Countryside Agency (now Natural England) and Scottish Natural Heritage described it as “*a composite feature related to low levels of built development, traffic, noise and artificial lighting*” (paragraph 7.23, Landscape Character Assessment: Guidance for England and Scotland, 2002). The Campaign to Protect Rural England (CPRE) prefers to define it as “*undisturbed land*”.

3.2.18 The tranquillity mapping provided by the CPRE (2007)¹ is shown on Figure 3.1. In general, the tranquillity of the area increases from west to east. Zone A lies in the lower half of the tranquillity spectrum, whereas Zone D lies slightly above the middle of the

¹ Each 500m by 500m square of England has been given a tranquillity score based on 44 different factors which add or detract from people’s feelings of tranquillity. Scores are colour coded. Ref: CPRE (2006) *Saving Tranquil Places*

spectrum. Zone A's location close to the eastern edge of Tilbury and next to Tilbury Substation, and other large industrial buildings precludes any sense of tranquillity. Visual intrusion, lighting, construction and decommissioning activities, as well as noise associated with these facilities provide a discordant influence in the vicinity of the more rural landscape of the Tilbury Marshes.

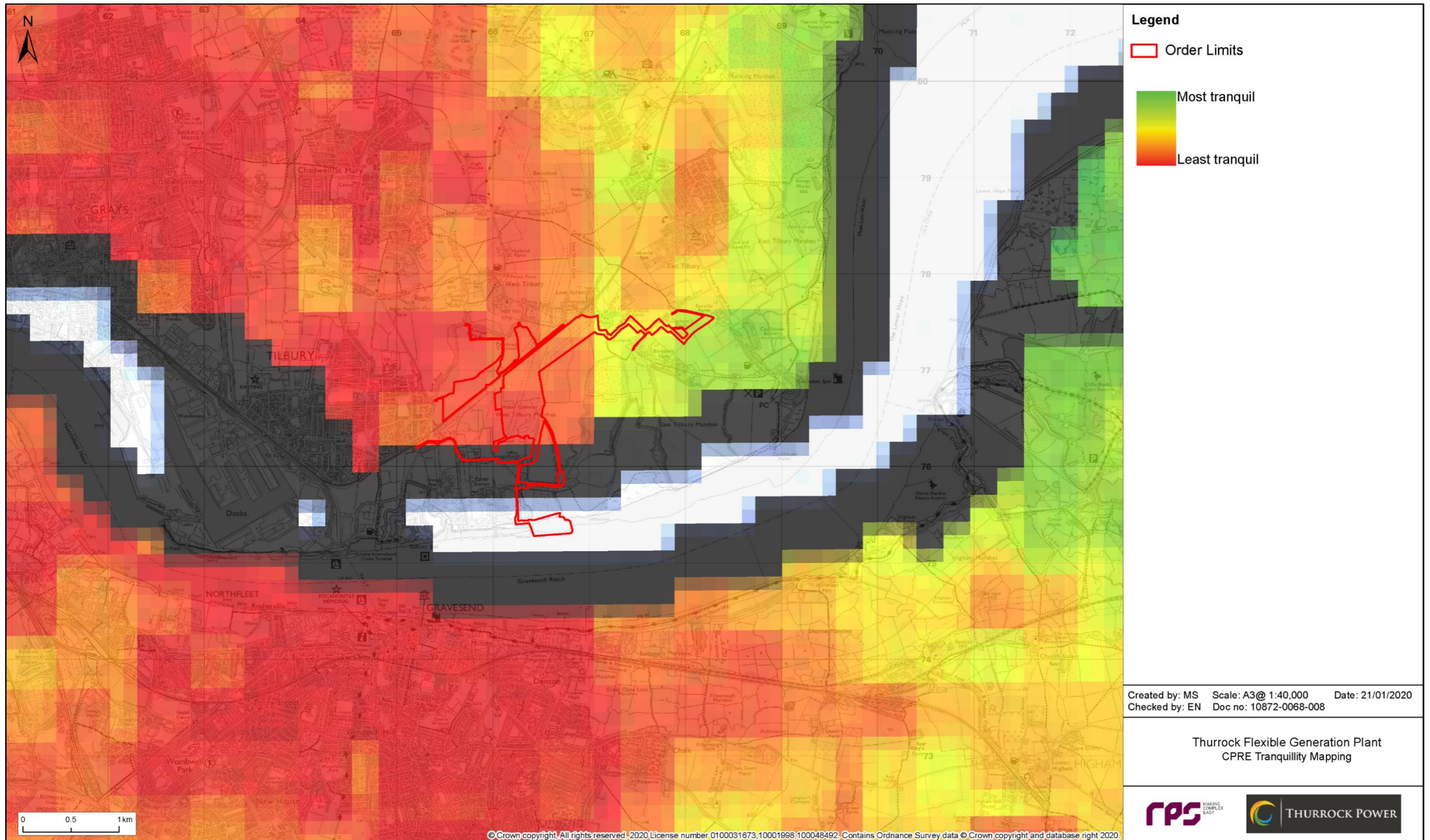


Figure 3.1: CPRE Tranquillity Mapping.

3.3 Published Landscape Character

National Landscape Character

3.3.1 All the Zones lie within wholly or partly within National Character Area (NCA) 81: Greater Thames Estuary, as defined in Natural England's (formerly the Countryside Agency and English Nature) National Character Area Profiles, which divides England into 159 Joint Character Areas. The southern part of Zone G lies within the Greater Thames Estuary, NCA 81. The northern section of Zone F1 falls within NCA 111: Northern Thames Basin. The other NCAs within the 10 km radius study area are NCA 113: North Kent Plain and NCA 119: North Downs. The NCAs are illustrated on Figure 3.2.

3.3.2 The relevant key characteristics of these NCAs are as follows:

NCA 81: Greater Thames Estuary

- Predominantly flat, low-lying coastal landscape where extensive open spaces are dominated by the sky, and the pervasive presence of water and numerous coastal estuaries extend the maritime influence far inland.
- Open grazing pastures patterned by a network of ancient and modern reed-fringed drainage ditches and dykes, numerous creeks and few hedges or fences, with tree cover a rarity.
- Traditional unimproved wet pasture grazed with sheep and cattle combined with extensive drained and ploughed arable land protected from floods by sea walls, with some areas of more mixed agriculture on higher ground.
- Strong feelings of remoteness and wilderness persist on extensive salt marshes, mudflats and reclaimed farmed marshland, which support internationally important plants, invertebrates and populations of breeding and overwintering birds, notably overwintering Brent geese.
- Distinctive landmarks of coastal military heritage including Napoleonic military defences, forts and 20th-century pillboxes.
- Highly urbanised areas within London and on marsh edges subject to chaotic activity of various major developments including ports, waste disposal, marine dredging, housing regeneration, mineral extraction and prominent power stations plus numerous other industry-related activities.
- Increasing development pressures around major settlements and especially towards London, with urban, industrial and recreational sites often highly visible within the low-lying marshes.

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

NCA 111: Northern Thames Basin

- The landform is varied with a wide plateau divided by river valleys. Extensive tracts of flat land are found in the south.
- Areas that have alluvial deposits present are well drained and fertile.
- The pattern of woodlands is varied across the area and includes areas within Essex that are more open in character.
- The field pattern is very varied across the basin reflecting historical activity.
- Mixed farming, with arable land predominating in parts of the London Clay lowlands.
- The medieval pattern of small villages and dispersed farming settlement remains central to the character of parts of Essex. Market towns have expanded over time as have the London suburbs and commuter settlements.

NCA 113: North Kent Plain

- An open, low and gently undulating landscape, characterised by high quality, fertile, loamy soils dominated by agricultural land uses.
- A diverse coastline (both in nature and orientation), made up of cliffs, intertidal sand and mud, salt marshes, sand dunes and shingle beaches. Much of the coastal hinterland has been built on, and the coast itself has been modified through the construction of sea walls, harbours and piers.
- Orchards and horticultural crops characterise central and eastern areas and are often enclosed by poplar or alder shelterbelts and scattered small woodlands.
- Woodland occurs on the higher ground around Blean and in smaller blocks to the west, much of it ancient and of high nature conservation interest.
- The area has rich evidence of human activity from the Palaeolithic period. Key heritage assets include military remains along the coast.
- Large settlements and urban infrastructure (including lines of pylons) are often visually dominant in the landscape, with significant development around Greater London, as well as around towns further east and along the coast. Major rail and road links connect the towns with London.

NCA 119: North Downs

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

- Woodland is found primarily on the areas of the dip slope capped with clay-with-flints. Well wooded hedgerows and shaws are an important component of the field boundaries, contributing to a strongly wooded character. Much of the woodland is ancient.
- Ancient paths, drove roads and trackways, often sunken, cross the landscape and are a distinctive feature of the dip slope. Defensive structures such as castles, hill forts and Second World War installations, and historic parks, buildings and monuments are found throughout.

3.3.3 Due to the nature of the proposed development and the context in which it is located, it is considered that there is not the potential for there to be significant impacts on the Northern Thames Basin, the North Kent Plain and the North Downs NCAs. They are not assessed further in this chapter.

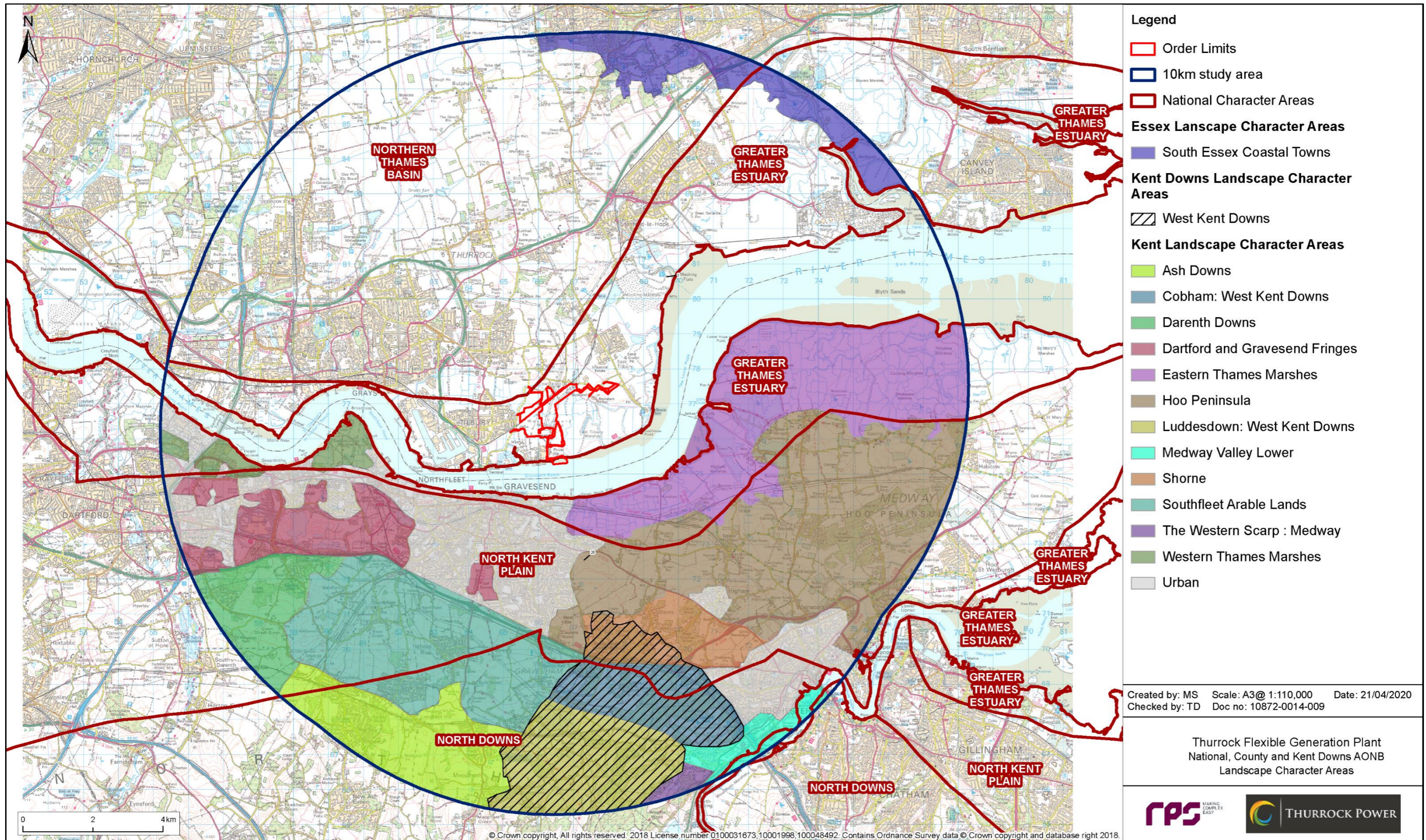


Figure 3.2: National, County and Kent Downs AONB Landscape Character Areas.

Local Landscape Character Assessment

3.3.4 The character of the local landscape within the Borough of Thurrock has been assessed as part of the Thurrock Landscape Character Assessment (undated). This assessment identifies 21 landscape character areas within the Borough. Zones A, B, C (part), E, F2 (part), F4, and G (part) lie within Landscape Character Area (LCA) C5: Tilbury Marshes. Zones C (part) and parts of F1-4, F2, F3, are located within LCA D6: Chadwell Escarpment Urban Fringe or West Tilbury/Chadwell Escarpment. Zones D, I and J are located within LCA D7: West Tilbury Urban Fringe or East Tilbury. The Thurrock LCAs are illustrated on Figure 3.3.

C5: Tilbury Marshes

3.3.5 This character area in the south of the borough comprises a significant area of drained alluvial marshland bounded by the bunded sea wall adjacent to the Thames Estuary,

3.3.6 the port and urban edge of Tilbury to the south, the urban edge of Grays / Little Thurrock to the east, and by the distinctive escarpment of the West Tilbury LCA to the north.

3.3.7 The main characteristics are:

- Mostly flat drained marshland, but localised slight land raising has occurred in the Goshem's Farm area.
- Predominantly arable farmland but with smaller concentrations of rough grazing land around Little Thurrock, Tilbury Fort and Goshem's Farm. Historically the character was wet grazing marsh.
- Medium to large sized fields are bounded by mostly straight ditches and dykes, including reedbeds. Some more winding medieval ditches occur in the West Tilbury Marshes area.
- Lack of hedgerows with a few localised areas of scrub.
- A large-scale landscape with extensive open and exposed land dominated by the sky. Some sense of enclosure is however provided to the north by the West Tilbury escarpment which is a focus for long views, particularly from Fort Road.
- Complete lack of settlement, and relatively few roads especially in the east of the area.
- Historic building and landscape of Tilbury Fort is an important feature in the south of the area with distinctive pattern of moats and embankments.
- Visually detracting influence of the urban edge of Tilbury and associated roads/industrial and port building is significant in the north and west of the area. In the east of the area the large-scale building and bulk of the Tilbury Power Station provides a dramatic contrast to the prevailing flatness of the landscape.

D6: Chadwell Escarpment Urban Fringe or West Tilbury/Chadwell Escarpment

3.3.8 This distinctive area forms a narrow tongue of land running from east to west in the south of the borough, embracing the steep sided sand and gravel escarpment that marks the edge of the lowest part of the Thames Terraces. To the south lies the drained alluvial flat farmland around Tilbury, and to the north the flat to very gently undulating land of the East Tilbury LCA.

3.3.9 The main characteristics are:

- A steep sided south facing escarpment, which despite its relatively low height has a sense of elevation and provides a marked contrast to the flat farmland of the Tilbury Marshes to the south. A few small dry valleys incise the escarpment.
- Small scale field pattern of rough grassland / pasture, with hedgerows, partly also framed by small copses/scrub, strongest in the east of the area around West Tilbury, becoming less distinct in areas to the south of Chadwell. Tree/shrub species include hawthorn, field maples, elm, oak and ash.
- Narrow, winding, enclosed, hedgerow lined lanes and tracks running east-west along the top of the escarpment, or north-south down the escarpment.
- Dispersed pattern of individual historic farmsteads, tending to be strung out along the bottom of the escarpment or along the top of the escarpment.
- A fairly unspoilt, rural character in the east of the area.
- Views of the character area from Fort Road to the south are a positive feature, with the tower of West Tilbury Church a focal point on the skyline, providing a feeling of relative isolation, and a strong sense of place.
- Some visual intrusion caused by power lines in the west of the area. Significant adverse visual impact from major road routes in the west around Chadwell, together with localised urban edge housing, industrial and mineral site intrusion.

D7: West Tilbury Urban Fringe or East Tilbury

3.3.10 This character area forms a broad swathe of farmland between Chadwell St Mary and East Tilbury. Its northern boundary is clearly defined by the Linford/Buckingham Hill escarpment, and its south-western boundary by the West Tilbury/Chadwell escarpment. The lower land of Mucking Flats and Marshes and the Tilbury Marshes lie to the east and south.

3.3.11 The main characteristics are:

- Flat to gently undulating farmland, but landform rises up to the south-west to the edge of the West Tilbury Escarpment and falls gently or imperceptibly to the East Tilbury Marshes around Princess Margaret Road and East Tilbury.

- A generally fairly open landscape, with limited tree cover, primarily due to the loss of hedgerow elm trees. Hedgerows where they have not been lost particularly occur along historic parallel running lanes and tracks. More localised small copses and areas of scrub are found around West Tilbury, Low Street, and east of Princess Margaret Road around Coalhouse battery. Typical species include hawthorn, elm, field maple and ash.
- Mostly large arable fields, but small-medium scale, historic rectilinear pattern of hedge rowed fields of horse grazed grassland occur in the south-east of the area.
- Historic village of West Tilbury and its church to the south and the Linford/Buckingham Hill/Ridge to the north are focal points in some views.
- Cubist influenced buildings of the Bata Industrial Estate provide a dramatic contrast to the general flatness of the landscape.
- Views of the River Thames, and the adjoining marshland to the south are important from some parts of the area.
- Settlement is limited to a small number of dispersed farmhouses.
- Visual intrusion is caused by power lines, and locally by the Readmans' (was Ready Metal/Mayer Parry) Industrial Estate, which also causes noise intrusion. The boundaries with East Tilbury and Chadwell are raw and abrupt in places. Heavy lorry traffic on some of the minor roads causes some noise intrusion.

D4: White Crofts/Orsett Heath Urban Fringe or Orsett/Saffron Gardens

3.3.12 This character area lies in the centre of the district comprising a broad plateau of slightly higher land, and adjacent slopes within the Thames Terraces. Its main characteristics are:

- Very gently rolling to relatively flat landform, with coarse loamy and sandy soils.
- Mixed farmland of rough grazed grassland and intensive arable. Remnant heathland and acid grassland is found at Mucking Heath associated with the Orsett golf course.
- Mostly large fields, with significant areas where the historic field pattern has been lost leaving fragmented hedgerow pattern, although thicker existing hedgerows are found in localised areas, for example to the south of Orsett.
- Generally, fairly open land with only a few small pockets of woodland/plantations land to the north of the A13 provides an underdeveloped context for long views out of the character area to the village of Horndon-on-the-Hill on its ridge, and beyond to the Langdon Hills.
- North to south running hedged historic lanes.
- Dispersed pattern of historic farmsteads.

- A central zone adjacent to the A13 is influenced by intrusive ribbon/suburban development of Southfields, gravel pits, small industrial works and service areas. The A13 causes visual, noise and light intrusion in parts.

3.3.13 Due to the nature of the proposed development, the distance to the proposed development and the high density of overhead power lines and pylons, industrial and dockside context in which it is located, it is considered that there is not the potential for there to be significant impacts on the D4: Whitecrofts/Orsett Heath Urban Fringe LCA. This is not assessed further in this chapter.

Night-Time Landscape Character

LCA C5: Tilbury Marshes

3.3.14 The western half of this character area is very industrial in character and is lit at night, whereas the eastern half comprises fields associated with the drained marshes and is intrinsically much darker at night.

LCA D6: Chadwell Escarpment Urban Fringe

3.3.15 The steep, south facing escarpment is predominantly undeveloped with very little light sources and consequently is a dark landscape at night.

LCA D7: West Tilbury Urban Fringe

3.3.16 This LCA contains the small village of West Tilbury and the edge of the modern, designed settlement of East Tilbury. These settlements, especially the latter provide the main light sources. Otherwise, the night-time character is fairly dark.

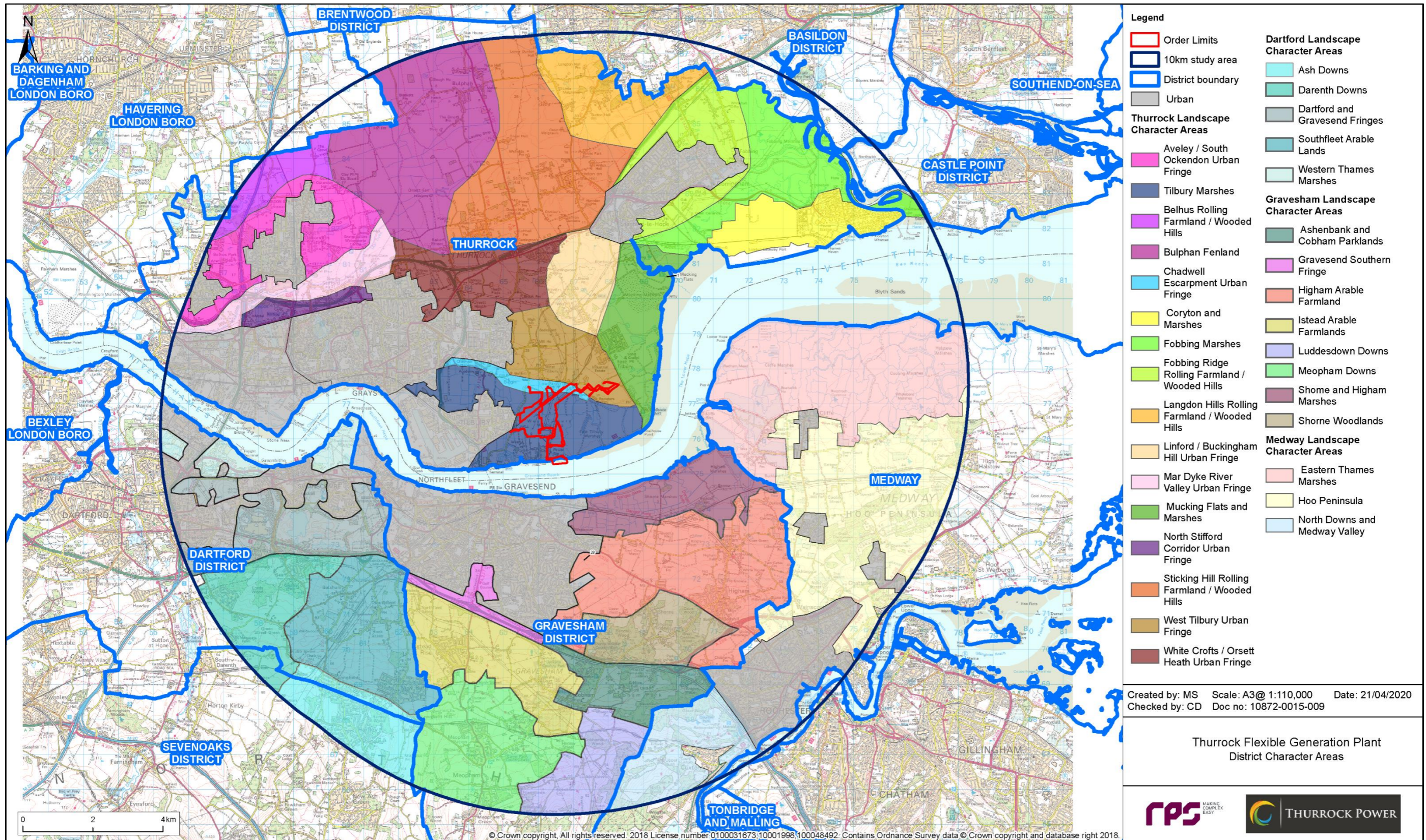


Figure 3.3: Borough and District Landscape Character Areas.

3.4 Visual Baseline

Visual Resources

3.4.1 The Zone of Theoretical Visibility (ZTV) of the development on Zone A is illustrated on Figure 2.6. It is contained to the north-west by landform and settlements. To the east the ZTV extends over marshland arable farmland and land laid to pasture. The town of Gravesend, on the south side of the Thames, screens views from further south within the relatively flat landscape of Higham Arable Farmland LCA and intervening woodland from the Shorne Woodlands LCA. Brummel Hill Wood, in the very north of the Kent Downs AONB, also screens views from the south. Due to the low elevation of Zone A, the escarpment, particularly Chadwell Escarpment Urban Fringe, to the north prevents views from lower-lying land beyond it to the north.

3.4.2 The visual baseline considers the visual effects of the Zone A in more detail than the other zones, as this is the zone in which the majority of the built development is located.

Visual Receptors

3.4.3 Visual receptors have been grouped together for simplification of the assessment. However, where the potential significance of the effects warrants it, individual receptors have been identified and assessed separately. The locations of the representative viewpoint locations are illustrated on Figure 2.2.

Residential Receptors

3.4.4 Residential receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, including properties at Low Street, have varying views dependent on landform, orientation, intervening buildings and vegetation cover close to the receptors. Where vegetation and orientation allow, there are long views across the drained marshland, the industrial facilities and the River Thames into north Kent. Properties on the southern edges of Chadwell St. Mary have the most open, elevated views towards Zone A. This includes the upper floors of the three tower blocks, to the north of the town, as do other residents on the eastern edge of the town. The properties at Low Street have limited views due to a lower elevation, orientation and intervening vegetation.

3.4.5 To the east the views are less elevated, but the residential areas set further north on the gently sloping land at Chadwell St. Mary are further from Zone A. However, these residential areas and farms, such as Gravelpit Farm, Bowsters Farm, Goshem's Farm and Barvills Farm are closer to Zones D1 to 3. The effect on views from some of these properties is not considered to have the potential to be significant because of their

distance from Zone A, the existing and future industrial context, the intervening landform and the existing mature vegetation between these receptors and Zones D1-3 and so not all are not considered further in this assessment.

3.4.6 The ribbon development of houses along the southern end of Princess Margaret Road are also closer to Zone D3. However, the effect on residents within this group of properties is not considered to have the potential to be significant and so they are not considered further in this assessment. Similarly, the effect on residents within East Tilbury is not considered to have the potential to be significant, due to: the distance from and orientation to the development; the existing and future industrial context of the proposed FGP plant; and, the existing vegetation associated with the railway line.

3.4.7 There are few residential receptors on the drained marshland itself. Those properties and residential areas that have been built on lower lying land tend to be to the west of the DCO boundary. Residents whose properties lie on the eastern edge of Tilbury, close to Fort Road, have views across the flat farmland to the north of the railway. Views south, towards Zone A are filtered by the vegetation either side of the railway, but the electrical substation and the overhead power lines and towers are seen against the skyline, (Viewpoint C10, Figure 3.33). Residents on the upper floors of the three tower blocks located in Tilbury, have panoramic views, including of Zones A, B, C, E, F and G (part).

3.4.8 Individual properties along Biggin Lane have varying views dependent on landform, orientation, and vegetation cover close to the properties. Where vegetation and orientation allow, there are long views across the drained marshland, towards Zones E, F1, C (part) and A (part), set against the existing power lines and adjacent to the industrial facilities of the docks and beyond to the River Thames into north Kent. Further east along the farm track the residents of Gun Hill Farm have filtered mid and long-distance views of Zones A, B, C, E and F. The effects on some of these residential receptors do not have the potential to be significant and are not considered further in this assessment.

3.4.9 Residential areas within Gravesend have varying views dependent on landform, orientation, intervening buildings and vegetation cover close to the receptors. Where vegetation and orientation allow, there are long views across the River Thames to the industrial facilities on the northern bank and beyond to the low ridgeline. The residents of more elevated properties have longer views to Horndon-on-the Hill. The effects on the majority of these residential receptors do not have the potential to be significant and are not considered further in this assessment. However, those properties on the riverside, which include low-rise blocks of flats have been assessed.

Access Land and Public Open Space

- 3.4.10 There are several areas of Access Land, some of them Common Land on the flat drained marshland close to and within the application boundary. The general public can gain access to Walton Common from the north (the proposed site of Zone A) (Viewpoint C1, Figure 3.30) via Parsonage Common and via an unprotected-type crossing over the railway. It was observed during the fieldwork that the crossing had not been used for some time, as it was overgrown and appeared inaccessible.
- 3.4.11 Parsonage Common, which lies on the northern side of the crossing is also Access Land. This area is more accessible and can be accessed directly from Cooper Shaw Road. Parsonage Common links to more Access Land either side of Cooper Shaw Road, which in turn links to a ribbon of Access Land either side Gun Hill lane and Fort Road, which links to the east side of Tilbury, via a footpath on Galsworthy Road. There are views of Zone A from all this Access Land, some clearer than others, depending on the vegetation on the road boundaries (Representative Viewpoint 6, Figure 3.9).
- 3.4.12 There is a separate area of Access Land that lies either side of Fort Road to the south of the railway. This is currently used to graze horses. The views from this area of land towards Zone A are much more restricted, due to the scrub and woodland vegetation located between the sewage works and the cars storage area, west of Walton Common. Representative Viewpoint 12 (Figure 3.15) is taken from the south-east corner of this Access Land. Further screening is provided by woodland planting around a small substation immediately south of the railway. Due to the density of the screening of Zone A provided by the woodland and scrub vegetation and the intervening land uses and the distance from other zones of the proposed development such as Zone D3, the effect on views from this location does not have the potential to be significant and so is considered no further in this assessment.
- 3.4.13 To the south of Chadwell St. Mary there is an area of public open space, at Hutts Hill accessed from Thames View. From the highest point of the Open Space, there are long views across the drained marshland and River Thames into north Kent. These views include views of Zones A, C, E, F (Viewpoint 3, Figure 3.6).

Public Rights of Way (PRoW)

- 3.4.14 The Thames Estuary Path/Two Forts Way (FP146) and part of National Cycle Route 13, runs west from Coalhouse Fort. Part of the route has a substantial hedgerow on its northern side and is relatively low-lying. In addition to the vegetation, there is land-raising being undertaken to the north of the path which also helps to screen views in this direction. Viewpoint 16, Figure 3.17 is taken as the path rises up, past the area of land-raising, and Viewpoint 15, Figure 3.17 is the view from the path further to the west. The hedgerow has been removed from this section of the path and the views are

wide and open, incorporating the north Kent side of the estuary, Gravesend, the site of now demolished Tilbury B Power Station, the sewage treatment works, Tilbury Substation, the cranes and turbines of Tilbury docks, as well as close views of the large vessels using the River Thames. Views extend to the low ridgeline of the Chadwell St Mary escarpment to the north.

- 3.4.15 At Tilbury Fort, Byway 98 and FP193 pass to the south of the fort on an elevated walkway. Views towards Zone A are restricted by the landform of the fort, but to the west (Viewpoint 13, Figure 3.15) and to the east (Viewpoint 14, Figure 3.16) the views are more open. The views towards Zone A are partly interrupted by the woodland vegetation around the sewage treatment works, with the overhead power lines and towers seen above the trees.
- 3.4.16 At Tilbury Fort Creek the byway and FP193 meet FP146. This latter footpath runs north around the moats and mounds of the defensive fortifications. This area is grazed by horses. It runs on an embankment to the south of the access road to the sewage treatment works. The roadside is subject to fly-tipping and the condition of the path is poor (Viewpoint 12, Figure 3.15). Views towards Zone A are similar to those from the elevated walkway. Although closer, the views are more restricted, due to the presence of a high earth bund and fence/wall, as well as the vegetation. Only the upper parts of some of the overhead lines and towers are visible.
- 3.4.17 As with other receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, those footpaths located on the ridgeline have varying views dependent on landform, orientation, intervening buildings and vegetation cover close to the receptors. Where vegetation and orientation allow, there are long views across the drained marshland, industrial facilities and the River Thames into north Kent. People using the PRoW in this location have the potential to see parts of Zones A, C, E and F. Examples of views from footpaths, are FP 72 (Viewpoint 4, Figure 3.7) and FP 67, (Viewpoint 5, Figure 3.8).
- 3.4.18 Not all of the views from the PRoW on the ridgeline are expansive and panoramic. Views from many footpaths are restricted by vegetation, the mapped route of FP 200 is particularly overgrown and impassable in places (Viewpoint 10, Figure 3.13). A few footpaths are blocked, or ploughed up, such as FP 60 (Viewpoint 2, Figure 3.5). The effects on views from some of these footpaths where the views are restricted by vegetation and/or intervening landform are not considered to have the potential to be significant and so not all are considered further in this assessment.
- 3.4.19 The only footpath that currently runs along the same alignment as any of the zones, is a section of FP 200 which runs parallel with a short section of D1. This has been diverted to Zone J during the gas pipeline construction.

- 3.4.20 Views from the Saxon Shore Way and the Hoo Peninsular are long and wide. Viewpoint 27, Figure 3.23, illustrates the view from the track north of Cliffe Fort, where the views towards Zone A are partly screened by the vegetation and earthworks around Coalhouse Fort, with only some of the towers carrying the overhead power line visible. As the potential effects on views from this part of the Hoo Peninsular are considered not to be significant they are not considered further in this assessment.
- 3.4.21 Similar views are gained from Cliffe Fort (Viewpoint 26, Figure 3.22) and further west along the Saxon Shore Way at its junction with Footpath NS138 (Viewpoint 25, Figure 3.22) and at Shornmead Fort (Viewpoint 24, Figure 3.21). While it is considered that the potential effect on views from this part of the Saxon Shore Way is not considered to be significant, Gravesham Borough Council has requested assessments of the views from Cliffe Fort and Shornmead Fort and this has been undertaken.
- 3.4.22 Further west towards Gravesend the Saxon Shore Way passes to the north of the industrial estates to the east of the town. The views along this stretch of the promoted path are closer to Zone A. However, they are different in nature, the industrial facilities and activity to the north, and south of the river, being much more apparent and forming a larger part of the views (Viewpoint 23, Figure 3.21).
- 3.4.23 Footpaths NS170 and NS355 join a minor road north of Brummelhill Wood, on the northern edge of the Kent Downs AONB, to the west of Shorne (Viewpoint 29, Figure 3.24).
- Tourist Attractions and Recreation (other than PRow)
- 3.4.24 People can access Tilbury Fort via a car park to the south of The World's End public house, off Fort Road. The car park and the public house are located to the south-west of the fort and do not have views of any of Thurrock Flexible Generation Plant application area. As such, the effect on views from this location is not considered to have the potential to be significant and so are not considered further in this assessment.
- 3.4.25 Tilbury Fort is open to the public five days a week. At ground level there are limited views north-east towards Thurrock Flexible Generation Plant application site, primarily due to the configuration of the fort itself. From the north-eastern side there are more open views, but these are partly screened by the other infrastructure, such as, the sewage treatment works and the woodland planting associated with the works.
- 3.4.26 Coalhouse Fort, lies to the east of Zone A. From the fort itself, views towards Zone A are restricted by vegetation in and around the fort buildings and earthworks (Viewpoint 17, Figure 3.18). However, views are possible from the southern end of Princess Margaret Road and from the car park to the west of the fort. Views are also possible from the path that follows the outer edge of the moat of the fort and links to the Thames Estuary Path/Two Forts Path at Coalhouse Point, e.g. from the World War II defensive structures (Viewpoints 31 and 32, Figures 3.26 and 3.27). The views from Coalhouse Point itself are partly restricted by the hedgerow vegetation lining the northern side of the promoted path. There are views through gaps in the northern perimeter hedge to the open space at Coal House Fort to Zone D3. However, views of the site are obscured by layers of field hedgerows and because the land gradually rises from this point to this zone.
- 3.4.27 As with other receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, those tourist attractions and recreation facilities (other than PRow) located on the ridgeline have varying views dependent on orientation and intervening buildings and vegetation cover close to the receptors. Where vegetation and orientation allow, there are long views across the drained marshland and River Thames into north Kent. These views include views of parts of Zones A, C, E, F.
- 3.4.28 There are views south-west towards Zone A from the publicly accessible route of the Essex Wildlife Trust Visitor Centre at the Thameside Nature Park, Mucking Marshes, across the broad curve of the nature reserve (Viewpoint 1, Figure 3.4).
- 3.4.29 In north Kent, on the southern side of the Thames Estuary there are a series of forts constructed to defend the Thames. Within the study area these include Cliffe Fort, Shornmead Fort and, in Gravesend, New Tavern Fort. Cliffe Fort and Shornmead Fort are located on the undeveloped section of the Saxon Shore Way to the east of Gravesend (Viewpoint 26, Figure 3.22 and Viewpoint 24, Figure 3.21). The views are open and wide, across the Thames Estuary and the drained marshland (including Zone A) to the cranes and turbines around Tilbury Docks.
- 3.4.30 Cliffe Pools RSPB reserve lies inland to the east of Cliffe Fort, on flooded gravel extraction pits. The views along most of the paths and the car park for Cliffe Pools prevent open views towards Zone A. Brett Aggregates gravel extraction facility and the piles of extracted material at Cliffe Fort prevent open views from the majority of this location, as such the potential effect on views available to these receptors, from this location, is not considered to be significant. Therefore, people visiting the RSPB reserve are not considered further in this assessment.
- 3.4.31 Shorne Marshes Nature Reserve (NR) is situated to the south of Cliffe Fort, on the banks of the River Thames, south of Cliffe Fort. Viewpoint 25, Figure 3.22 illustrates the view from the Saxon Shore Way adjacent to Shorne Marshes NR. Due to distance it is unlikely that receptors at this location would experience significant effects, so the impacts on this receptor are not considered further.

3.4.32 Gravesend Waterfront is an area to the south-south-east of Zone A and south of Zone G, in north Kent. It includes Gordon Recreation Ground and gardens, which link to the waterfront and includes New Tavern Fort (Viewpoint 20, Figure 3.19). The waterfront has a café and equipped play area, as well as housing Gravesend rowing and sailing clubs. The views across the River Thames towards the site from Gordon Promenade (Viewpoint 21, Figure 3.20) are wide and the overhead lines and towers of Tilbury Substation are seen beyond the sewage treatment works. The Chadwell St. Mary - West Tilbury - East Tilbury ridge can be seen in the distance.

3.4.33 Windmill Gardens and play area are located on Windmill Hill, a high point in Gravesend. There are views from the gate to the play area towards Zone A. However, the most open views are from a seat adjacent to the beacon (Viewpoint 22, Figure 3.20). The view is wide, from Tilbury Docks to Coalhouse Point, with trees interrupting part of the view. In the direction of Zone A, the long views terminate at Horndon-on-the-Hill. Zone A is barely visible between the overhead power lines and towers associated with Tilbury Substation.

3.4.34 The northern edge of the Kent Downs AONB is raised above the coastal plain landscape of the Thames Estuary. The north facing slopes are well wooded and views over the proposed development are mid to long distance and glimpsed through gaps in the vegetation from dynamic road receptors such as at Harts Hill (See Viewpoint 29 Figure 3.24). Zone A can be discerned but is set behind the site of the former Tilbury B Power Station and in front of the dense array of high voltage power line and pylons. Due these factors it is unlikely that receptors at this location would experience significant effects, so the impacts on this receptor are not considered further.

Community Facilities

3.4.35 As with other receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, those community facilities located on the ridgeline have varying views dependent on orientation, intervening buildings and vegetation cover close to the receptors. Where vegetation and orientation allow, there are long views across the drained marshland and River Thames into north Kent. These views include views of Zones A, C, E and F. Such receptors include people using West Tilbury village hall and those visiting St James' churchyard, West Tilbury (Viewpoint 7, Figure 3.10).

3.4.36 At the eastern end of the ridgeline on slightly lower land allotment holders at the Allotments on Station Road, East Tilbury have views, filtered by a mature hedgerow, into the fields containing Zones D3. Based on the proposals for these two areas, the potential effect on views available to these receptors, from this location, is not considered to be significant. Therefore, this receptor group is not considered further in this assessment.

Commercial and Industrial Facilities

3.4.37 People working at Tilbury Sewage Treatment Works and those working at the car storage areas, to the west of Zone A, have potential views into Zone A, although highly restricted by intervening vegetation. Based on the activity of the receptors the potential effect on available views, at these locations, are not considered to be significant. Therefore, these receptor groups are not considered further in this assessment.

3.4.38 People working at National Grid's 400kV Tilbury Substation (Zone B) have close views into and across Zone A to the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, albeit from the context of an electrical substation.

Dynamic Receptors

3.4.39 As with other receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, those roads located on the ridgeline have varying views dependent on orientation, intervening buildings and vegetation cover close to the receptors. Where vegetation and orientation allow, there are long views across the drained marshland and River Thames into north Kent. These views include views of Zones A, C, F, I and part of H. People using the roads on the flat farmland to the north of the railway line, such as Fort Road, Gun Hill lane and Cooper Shaw Road have open views of Zones A, C, E and F, (Viewpoint 6, Figure 3.9 and Viewpoint 9, Figure 3.12). The potential effect of the Thurrock Flexible Generation Plant facility on people using other roads is not considered to be significant and so these are not assessed further.

3.4.40 The views from crew and passengers of vessels on the River Thames, such as the Gravesend to Tilbury Passenger Ferry, the Tilbury to Göteborg Ferry, people using the London International Cruise Ferry Terminal as well as commercial vessels, will vary considerably according to the tides and weather. The larger commercial vessels, ferries and cruise ships will have more elevated views and even on a low tide, will have views from upper decks, the bridge across the drained marshland. As with the views from the Saxon Shore Way, the context is more rural and the views more open in the east, and more urban/industrial and the views tending to be more enclosed/shorter towards Gravesend and Tilbury. At low tide, people on smaller vessels, such as the Gravesend to Tilbury ferry have more limited views of the flat land on the northern side of the river. Many of these receptors will not experience a significant effect and so have not been considered further in this assessment.

3.4.41 The section of the railway that runs between Tilbury and East Tilbury, crosses the drained marshland on a slightly higher level than the surrounding land (Viewpoint 11, Figure 3.14). The boundary of the railway land is marked by palisade fencing or concrete post and chain-link fencing. Scrub and small trees have grown up within and around these fence lines. Consequently, the views south and north on the middle

section of the route are filtered by vegetation. Views towards Zone A from the western section of railway are screened by scrub and woodland located to the south of the railway. The available views for passengers travelling west on the eastern section of track are constrained by vegetation through Low Street. At the level crossing on Church Road, views south, towards Zone A begin to open up. At this point Zone C lies immediately adjacent to the railway line (Viewpoint 8, Figure 3.11). However, all views are filtered by the trackside vegetation and all will be fleeting glimpses.

Representative Viewpoints

3.4.42 Photographs have been taken from various viewpoints which are representative of views towards Zone A, from a variety of locations and receptors. Other viewpoints were investigated. However, only those with the potential to have a significant effect, or that were requested by Thurrock Borough Council, Gravesham Borough Council or by Essex County Council have been included (Figure 2.2).

3.4.43 Figures 3.4 to 3.26 contain summer photographs taken in September 2018 and 2019 – the latter after Tilbury B Power Station had been demolished and winter photographs from the same locations where vegetation plays a key role in restricting visual impact taken in February 2019. prior to the demolition of the power station. In those viewpoints where vegetation does not play a part in restricting views, no winter photographs have been taken.

Viewpoint 1: View south-west from the roof of the Essex Wildlife Trust Visitor Centre (Figure 3.4)

3.4.44 Viewpoint 1 is an elevated view, 4.82 km from the closest part of Zone A. The views from the roof top are panoramic. The view towards Zone A, is long distance across the East Tilbury Marshes. Some of the upper parts of the pylons which emanate from the substation at Tilbury are visible. There is no potential for significant effects being experienced by receptors at this location, due to their distance from Zone A. The effects on this view are not considered further.

Viewpoint 2: View south-west from the junction of Muckingford Road and Footpath 60 (Figure 3.5)

3.4.45 Viewpoint 2 is a viewpoint from the junction of the ploughed-up FP 60 with the Muckingford Road. Due to the broad dome-shaped landform and the tree cover in the far boundary of this field there are only views of the tops of the pylons and overhead lines at Zone A. There is no potential for significant effects being experienced by receptors at this location and the effects on this view are not considered further.

Viewpoint 3: View south-east from public open space to the south of Chadwell St. Mary (Figure 3.6)

3.4.46 Viewpoint 3 lies 2.05 km from the closest point on Zone A. This is a wide, open, elevated view, experienced by both residents and users of the Public Open Space. There are clear views from this part of the ridgeline across the flat farmland to the high land in north Kent.

Viewpoint 4: View south-south-east from the junction of Footpath 72 and Turnpike Lane, at Gun Hill (Figure 3.7)

3.4.47 Viewpoint 4 lies 1.08 km from the closest point of Zone A. The views to Zone A are oblique and substantially screened by vegetation on the field boundary and by the landform. Consequently, there is no potential for significant effects being experienced by receptors at this location and the effects on this view are not considered further.

Viewpoint 5: View south-south-west from Footpath 67, near the junction with Low Street Lane (Figure 3.8)

3.4.48 Viewpoint 5 lies 0.91 km at the closest point to the boundary to Zone A. It is an open view across a gently domed field. The mature, thick and tall vegetation at the far side of the field screens views to the south even in winter. Despite the proximity, it is considered that there is no potential for significant effects being experienced by receptors at this location, due to the topography and existing vegetation and the effects on this view are not considered further.

Viewpoint 6: View south from the junction of Gun Hill lane, Cooper Shaw Road and Fort Road (Figure 3.9)

3.4.49 Viewpoint 6 is situated 0.68 km from the closest point of Zone A. It is located adjacent to part of Zone F1, part of the habitat creation and enhancement zone. The views south towards Zone A are open, across the flat farmland. The line of the railway is visible as it is marked by the trackside vegetation. The views are long, through the pylons and overhead power lines to north Kent.

Viewpoint 7: View south from the graveyard of St. James' Church, West Tilbury (Figure 3.10)

3.4.50 The viewpoint within the churchyard of St. James' Church, West Tilbury lies 0.57 km from Zone A. The view is elevated, with long views over the drained marshland. The high land of north Kent can be seen through the pylons and overhead lines which emanate to the south of Zone A from the substation at Tilbury and aligned roughly south to north. Wide views are interrupted by the vegetation within the churchyard.

Viewpoint 8: View south-west from junction of Station Road and farm track to the south of the railway line (Figure 3.11)

- 3.4.51 Viewpoint 8 lies 0.47 km from Zone A, but is located on the eastern edge of Zone C, immediately to the south of the level crossing on Station Road. The view is across fields and overhead high voltage power lines are prominent elements in the view.

Viewpoint 9: View east-south-east from Fort Road to the east of Tilbury (Figure 3.12)

- 3.4.52 Viewpoint 9 is located 0.7 km from Zone A. Clear views to Zone A are interrupted by the line of the railway. However, the pylons and overhead lines that cross the zones are clearly visible as is Tilbury Substation. Also seen in this view are Zones E and F that are located in the field immediately to the fore of the railway.

Viewpoint 10: View south-west from Footpath 200, near Buckland House (Figure 3.13)

- 3.4.53 Viewpoint 10 is one of the few locations on FP 200 that views of the drained farmland around Zone A are available. It lies 0.68 km from Zone A. The footpath is very overgrown and impassable in places. Views towards Zone A are partly or completely screened from most of this footpath. Views towards Zone A from this viewpoint would be transitory and seen over vegetation in the foreground and land workings beyond. Despite the proximity to Zone A, it is considered that there is no potential for significant effects being experienced by receptors at this location because of the existing industrial context of the surroundings; consequently, the effects on this view are not considered further.

Viewpoint 11: View east from Fort Road bridge over railway (Figure 3.14)

- 3.4.54 This elevated viewpoint lies 0.85 km from Zone A. Zone E lies to the north of the railway, with Zones F1 and F2 beyond. This elevated location allows views over the woodland to the flat farmland to the south. The pylons and overhead lines cross the landscape to the site of the former Tilbury Power Station which has been demolished, and the small substation can be seen in the foreground.

Viewpoint 12: View north-east from Footpath 146, adjacent to the sewage works (Figure 3.15)

- 3.4.55 FP 146 follows the northern boundary of the Tilbury Fort earthworks. It is in a poor state of repair and this section is particularly badly affected by fly-tipping. Viewpoint 12 is 1.3 km from Zone A. The sewage treatment works dominates the view, as does the high bund and wall that prevent all but the views of the highest structures in the more distant landscape. Despite the proximity, it is considered that there is no potential for significant effects being experienced by receptors at this location due to context of the intervening industrial land use and degraded land.

Viewpoint 13: View north-east from Byway 98 to the south of Tilbury Fort (Figure 3.15)

- 3.4.56 Viewpoint 13 lies 1.94 km from Zone A. It is a view from the walkway to the south of Tilbury Fort. Wide views are available from this location and the views of Zone A are a small part of these wide view, that encompass Tilbury Fort, the river Thames, as well as the industrial development to the east and north-east of this viewpoint. Consequently, it is considered that there is no potential for significant effects being experienced by receptors at this location and the effects on this view are not considered further.

Viewpoint 14: View north-east from Byway 98, to the south of Tilbury Fort (Figure 3.16)

- 3.4.57 Viewpoint 14 is further east on the same walkway and is 1.65 km from Zone A. The change in the angle of the view has opened up views and more of the pylons around Tilbury Substation area visible. Wide views are also available from this location, which include the sewage treatment works and the pylons, the context of the view in this direction is industrial and built up.

Viewpoint 15: View north-north-west from the Thames Estuary Path/Two Forts Way (Figure 3.17)

- 3.4.58 Viewpoint 15, is located 1.27 km from Zone A. It is the closest of the two viewpoints on this section of the path (the other is Viewpoint 16, Figure 3.17) and is located roughly on the same level as Zone A. The expansive views include views along the River Thames in both directions and through the pylons to the low ridgeline. The site of the recently demolished Tilbury Power Station, the sewage treatment works and Tilbury Substation are clearly visible.

Viewpoint 16: View north-west from the Thames Estuary Path/Two Forts Way (Figure 3.17)

- 3.4.59 This viewpoint illustrates the view from the path from further to the east, 1.59 km from Zone A. This viewpoint provides more context than Viewpoint 15 (Figure 3.17) and also illustrates the raised intervening land, from historical marshland reclamation that interrupts views further to the east, and as such this viewpoint is not considered further.

Viewpoint 17: View west from the defensive waterbodies at Coalhouse Fort (Figure 3.18)

- 3.4.60 From the fort itself views towards Zone A are restricted by vegetation in and around the fort buildings and earthworks. This viewpoint is from the 'dam' between the two waterbodies, 2.61 km from Zone A. This view is not considered further as the effects will not be significant.

Viewpoint 18: View north-east from raised seating area, to the west of Town Pier, Gravesend (Figure 3.18)

3.4.61 This viewpoint is from a small, elevated seating area to the west of Town Pier, Gravesend. The distance to Zone A is 2.61 km and as the viewpoint is raised there are views across the flat farmland to the low ridgeline beyond. Due to its location there are also views to higher land to the north-east of Chadwell St. Mary. The industrial and dockside context and existing high number and density of pylons and wires around and between this viewpoint and Zone A will reduce the potential likelihood for the proposed development to be more than a minor change to the view. Therefore, it is considered that there is no potential for significant effects being experienced by receptors at this location and the effects on this view are not considered further.

Viewpoint 19: View north-east from the access ramp to the Gravesend to Tilbury Ferry at Town Pier, Gravesend (Figure 3.19)

3.4.62 Viewpoint 19 is located 2.52 km from Zone A, on the access ramp to the Gravesend to Tilbury Ferry, on Town Pier. Due to distance and the intervening industrial infrastructure and vegetation, the potential effects are not likely to be significant, however, the effects have been explored further including the potential impacts of Zone G and the new causeway and associated impacts of ships/barges servicing the it.

Viewpoint 20: View north-north-east from New Tavern Fort, Gravesend (Figure 3.19)

3.4.63 Viewpoint 20 is taken from a World War II gun emplacement, located on the earthworks of New Tavern Fort, immediately adjacent to Gravesend Rowing Club. Due to distance (2.49 km from Zone A) and the intervening industrial infrastructure and vegetation, the potential effects are not considered to be significant and they are not considered further. However, because of the proposed causeway at the southern end of Zone G and the associated impacts of ships/barges using it Viewpoint 20 is considered further.

Viewpoint 21: View north-north-east from Gordon Promenade, Gravesend (Figure 3.20)

3.4.64 Viewpoint 21 is taken from the waterfront on Gordon Promenade, at the top of a small set of steps down onto the shingle beach. Due to distance (2.48 km from Zone A) and the intervening industrial infrastructure and vegetation, the potential effects are not considered to be significant and they are not considered further. However, because of the proposed causeway at the southern end of Zone G and the associated impacts of ships/barges using it Viewpoint 21 is considered further.

Viewpoint 22: View north-north-east from the beacon on Windmill Hill, Gravesend (Figure 3.20)

3.4.65 This viewpoint is located 3.61 km from Zone A. Due to the elevation of this viewpoint, the view is long, albeit restricted by surrounding trees within Windmill Gardens, and extends out across the drained farmland, the low ridgeline, to Horndon-on-the-Hill beyond. Zone A is seen in the context of the industrial facilities that lie to the west and south of it.

Viewpoint 23: View north-north-west from the Saxon Shore Way, to the north of the police training centre, north Kent (Figure 3.21)

3.4.66 Viewpoint 23 lies 2.57 km from Zone A and 1.18 km from the southern edge of Zone G and the new causeway and associated impacts of ships/barges using the causeway. From this part of the Saxon Shore Way, Tilbury Substation and the pylons and high voltage power lines that lead northwards from it are prominent on the skyline, above Chadwell St Mary to West Tilbury escarpment behind them.

Viewpoint 24: View north-west from the Saxon Shore Way at the junction with Footpath NS318 at Shornmead Fort, north Kent (Figure 3.21)

3.4.67 Shornmead Fort is located on an undeveloped section of the Saxon Shore Way to the east of Gravesend, 3.78 km from Zone A. The views are open and wide, across the Thames Estuary and the drained marshland to the cranes and turbines around Tilbury Docks.

Viewpoint 25: View north-north-west from the junction of the Saxon Shore Way and Footpath NS138, north Kent (Figure 3.22)

3.4.68 This viewpoint is to the east of Shornmead Fort, 4.65 km from Zone A. There are wide, open views along the Thames Estuary. The high voltage pylons, cranes, wind turbines and infrastructure around Tilbury Docks, as well as the Tilbury Substation infrastructure are seen on the coastal plain horizon. Due to the distance from Zone A the effect of the proposed development of views from this location is not considered to be significant and this viewpoint is not considered further in this assessment.

Viewpoint 26: View west-south-west from the Saxon Shore Way at Cliffe Fort, north Kent (Figure 3.22)

3.4.69 The viewpoint at Cliffe Fort is on a section of the Saxon Shore Way that is very overgrown. The Fort itself is also the location for a sand and gravel extraction facility, and many of the views in this location are dominated by the machinery and heaps of gravel. As in Viewpoint 25 (Figure 3.22), the lattice structures of the cranes, wind turbines and pylons are prominent on the horizon, framed on the right by land behind Coalhouse Fort on the opposite side of the river and high ground south of Gravesend

on the left. Due to the distance from Zone A the effects of the proposed development of views from this location are unlikely to be significant.

Viewpoint 27: View west-south-west from the junction of the Mead Wall track with the path around the Hoo Peninsular, north Kent (Figure 3.23)

- 3.4.70 Zone A is located 4.52 km from this viewpoint. The vegetation around Coalhouse Fort screens views to Tilbury substation. The area of low-lying land between Coalhouse Fort and the ribbon development on Princess Margaret Road, is sparsely vegetated and allows views through to the line of pylons running north from the substation. However, due to the distance from Zone A the effect of the proposed development of views from this location is not considered to be significant and this viewpoint is not considered further in this assessment.

Viewpoint 28: View north-north-west from Footpath NG7, to the south of Chalk, north Kent (Figure 3.23)

- 3.4.71 This elevated view is located 4.27 km from Zone A. The view is expansive, Horndon-on-the-Hill can be seen in the distance. The view to the north and west of Zone A is dominated by dockland and industrial waterside uses. Due to the distance from Zone A the effect of the proposed development of views from this location is unlikely to be significant.

Viewpoint 29: View north-north-west from minor road to the north of Brummelhill Wood on the northern edge of the Kent Downs AONB, north Kent (Figure 3.24)

- 3.4.72 The viewpoint on the edge of the Kent Downs AONB is from an even higher location than Viewpoint 28 (Figure 3.23) and more distant (5.88 km from Zone A). The industrial dockland character south of Zone A on the north side of the Thames is visible beyond the fields below and lines of trees and hedges. High voltage power lines cross the view in the foreground. Due to the distance from Zone A the effect of the proposed development of views from this location is not considered to be significant and this viewpoint is not considered further in this assessment.

Viewpoint 30: View north-west and west from the edge of the open space adjacent to the Coalhouse Fort public car park (Figure 3.25)

- 3.4.73 This view through a gap in the hedge on the northern boundary between the open space adjacent to the Coalhouse Fort public car park is over fields and elevated land to the north-west is 0.97 km from Zone D3 (National Grid gas connection site) and 2.36 km from Zone A. The view looks across low lying land to raised farmland and high voltage power lines in the mid distance to the west and across scrub and woodland to the northwest. Due to the distance and raised intervening landform towards Zone A, the effect of the proposed development on views from this location is not considered

to be significant. Due to the raised intervening landform and vegetation between this visual receptor and Zone E, the effect of the proposed development on views from this location will be reduced.

Viewpoint 31: View west from the former radar station on Coalhouse Point (Figure 3.26)

- 3.4.74 This view is taken close to the Thames Estuary Path and National Cycle route 13 (Two Forts Way section). This wide panoramic view includes close views of the disused radar facility and views of the Thames with the backdrop of Gravesend and the hills of the Kent Downs on the left. The central and right hand side of the view is across the foreshore and marsh habitat to the raised bund which is lined with scrub and hedgerow and where the Public Rights of Way Thames Estuary path and Cycle route run. Cranes at Tilbury, pylons and tall structures associated with the Docks are visible in the long distance above the hedge line. Zone A is some 2.43 km from this viewpoint. Due to the distance and raised intervening landform towards Zone A, the effect of the proposed development on views from this location is not considered to be significant and this viewpoint is not considered further in this assessment.

Viewpoint 32: View west from the bund adjacent to the defensive ditch at Coalhouse Fort (Figure 3.27)

- 3.4.75 This viewpoint is in the same direction but slightly more elevated than Viewpoint 30 (Figure 3.25) and includes part of the defensive ditch system associated with the scheduled monument of Coalhouse Fort. It is 2.56 km from Zone A. Tall structures at Tilbury and pylons to the north are slightly more exposed than Viewpoint 30 (Figure 3.25) and there are partial views above the hedgerow on the bund, where the Thames Estuary path runs, towards the Chadwell St Mary to East Tilbury escarpment. Due to the distance from Zone A and views in the context of the industrial / dockland structures, and the hedgerow in the near distance the effect will be reduced.

Viewpoint 33: View south and south-west from Public Bridleway 58 - Coal Road; east of Low Street Lane (Figure 3.28)

- 3.4.76 View across arable fields to thick tall field boundary hedgerow with narrow gaps through to the Thames and Zone A some 1.28 km away. The skyline is dominated by high voltage overhead pylons and cables which cross the field south to north. The pylons become more concentrated in the view through the hedgerow gap towards Zone A. Due to the distance from Zone A from this view in the context with the existing pylons and overhead cables, the effect of the proposed development would be reduced and this viewpoint is not assessed in Section 4.

Viewpoint 34: View south and south-west from Public Bridleway 58 - Coal Road; west of Low Street Lane (Figure 3.29)

3.4.77 This view is from a more elevation position than Viewpoint 33 (Figure 3.28) but views of the drained marshes and land around Zone A are obscured by intervening field boundary hedgerows and the multiple layers of pylons associated with high voltage overhead cables. Zone A is 1.42 km away. Gravesend can be seen in the far distance against the backdrop of the Kent Downs hills. Due to the distance from Zone A and the view in the context with the pylons and overhead cables, the effect of the proposed development from this location is unlikely to be significant.

3.4.78 The remaining representative viewpoints that have not been scoped out, above, are assessed in Section 4 of this chapter.

Night-Time Visual Resources

3.4.79 This section includes an assessment of the existing night-time situation on views. Views from the south side of the river Thames towards the proposed development are generally dark in the foreground over the water. Visual receptors looking north and north-east from this side of the river experience a well-lit nightscape associated with the Docks at Tilbury with warning lights on tall features like the wind turbines and dockside cranes. There is night-time glow in the mid and far distance associated with Tilbury and Grays and Chadwell St Mary. Views looking north-east and eastwards along the Thames estuary are darker in character.

3.4.80 Views from the north side of the River Thames looking south wards across the coastal plain landscape are generally dark in character in the foreground but there is a substantial glow in most mid distance views attributed to light sources of Gravesend. Beyond and to the south of this settlement the Kent Downs is characterised by much darker skies than to the west where there is substantial glow from east London.

3.5 Future baseline

3.5.1 Future changes to the landscape and visual baseline would include the constructed NSIP Tilbury 2 project and the completed land raising to the east of the proposed FGP plant. It may include the Lower Thames crossing, as well as a resubmitted Tilbury Energy Centre. All of which are/would be NSIPS and would increase the industrial nature of the area to the south of the railway line.

3.5.2 It is not anticipated that any of the surrounding landscape will be locally or nationally designated in the future.

3.5.3 Drier, hotter weather in the summer months may lead to a change in plant species and may allow the spread of diseases and pests, as yet unknown in this country, that might change the species mix of the native flora.

3.5.4 No changes in statutory legislation on landscape and visual matters are currently anticipated, although this may change at any time. Additional guidance may be issued by national statutory advisors, or others, including guidance on the assessment process.

Climate change

3.5.5 The Met Office Hadley Centre (MOHC) UK Carbon Projections ('UKCP18') dataset (MOHC, 2018) provides probabilistic projections of change in climatic parameters over time for 25 km grid squares across the UK. Projected changes for a RCP8.5² future global greenhouse gas emissions scenario have been reviewed for the 2050–2069 and 2080–2099 periods, representing changes towards the end of the proposed development's initial 35-year operating lifetime and changes for the period beyond that should operation continue.

3.5.6 The likely ranges of change in climatic parameters including precipitation, temperature, wind speed, humidity and frequency of extreme weather may affect the native flora, as described in paragraph 3.5.3, above. However, this would not increase the sensitivity of receptors. It may affect the magnitude of impact, e.g. the proposed FGP plant may be more visible to people who only have semi-screened views at present, or it may increase the number of receptors, where tree cover loss could enable views not currently possible. As this aspect of the effects of climate change is uncertain, it is difficult to predict the significance of effects.

² RCP8.5 refers to a high-emissions scenario assuming 'business as usual' growth globally with little additional mitigation. This is a conservative (worst-case) approach for the assessment

4. Assessment of Effects

4.1 Construction phase

4.1.1 This section refers to the temporary and often intermittent impacts of the construction works associated with the Thurrock Flexible Generation Plant development, as outlined in Table 2.7 and in Volume 2, Chapter 2: Project Description.

Landscape Effects

National Landscape Character Areas

4.1.2 NCA 81: Thames Estuary will be directly affected by the proposed development of Zones A and D3 (the two above ground installations of the proposed facility and Zone G, which includes the causeway. This part of the NCA is characterised by industrial development, including power infrastructure and the extractive industry. Consequently, the Thames Estuary NCA is considered to have a **medium** sensitivity to the construction of the proposed development. The impact magnitude of the construction on this large character area is **minor**. Therefore, the significance of the temporary effect on the NCA is judged to be **minor** adverse, which is not significant.

Thurrock Landscape Character Areas

4.1.3 LCA C5: Tilbury Marshes, will be directly affected by the construction phase of the proposed development within Zones A, to G including most of Zone C. The sensitivity of the LCA to the proposed construction works is considered to be **medium**. Impact magnitude of the construction works in this area is also considered to be **moderate**. The temporary effect experienced by the LCA will be **moderate** adverse, which is not significant.

4.1.4 LCA D6: Chadwell Escarpment Urban Fringe will be directly affected by the construction works proposed phase of the proposed development of Zone C (north-east part) and F1 and 2 (part). It is also indirectly affected by the construction works within the adjacent Tilbury Marshes LCA. The sensitivity of the LCA to the proposed construction works is considered to be **medium**. The magnitude of change proposed for construction works is considered to be **minor**. The temporary effect experienced by the LCA will be **minor** adverse, which is not significant.

4.1.5 LCA D7: West Tilbury Urban Fringe, will be directly affected by the construction works proposed for Zones D and I. The sensitivity of this LCA to the proposed construction works in these zones is **medium**. The impact magnitude of the proposed works is

considered to be **minor**. The temporary effect experienced by the LCA is judged to be **minor** adverse, which is not significant.

Night-Time Construction Landscape Effects

4.1.6 The proposed construction lighting is described in Table 2.7: Maximum design envelope parameters assessed, of this chapter. The construction operations will not require permanent lighting, the magnitude of the impact on receptors is considered to be no more than **minor**, with a temporary significance of effect of **minor** adverse for those landscape receptors of a **medium** sensitivity, which is not significant.

Visual Effects

4.1.7 Unlike landscape resources and receptors, all visual resources and receptors are directly affected.

Visual Receptors

Residential Receptors

4.1.8 Residential receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, including properties at Low Street, have varying views. These are **high** sensitivity receptors who will experience impact magnitudes ranging from **no change** to **minor**. Those residential receptors predicted to experience a minor change and therefore most affected are residential receptors on the east side of Lea Road in Chadwell with south-east facing elevations, those on the south side of Rectory Road, on Gun Hill with south facing elevations. The temporary effects experienced by these few specific residential receptors are judged to be **moderate** adverse, which is not a significant effect.

4.1.9 Residents of properties along Biggin Lane and the farm track to Gun Hill lane are **high** sensitivity receptors that will experience **negligible** to **minor** impact magnitudes during the construction phase. Those residential receptors predicted to experience a **minor** change and therefore most affected are residential receptors which have south south-east facing elevations with the most open views of the construction which include the short section of terraced properties 1 to 9 Biggin Lane. The temporary effect experienced by these specific receptors is **moderate** adverse, which is not a significant effect.

4.1.10 Residents on the eastern edge of Tilbury are of a **high** sensitivity. The impact magnitude of the construction works on these receptors will vary from **no change** to **minor**. Those residential receptors predicted to experience a **minor** change and therefore most affected are residential receptors on the north end of Fort Road which have rear elevation aspects facing south-eastwards and include nos. 105 to 139 on

the east side of Byron gardens only, rather than those properties with gable ends with no or few windows. The temporary effect experienced by these specific visual receptors is **moderate** adverse, which is not a significant effect.

- 4.1.11 Residents between Low Street and East Tilbury, including individual farms, have a **high** sensitivity, to the proposed construction works. The impact magnitudes will vary from **no change** to **negligible**, depending on location. Those residential receptors predicted to experience a **negligible** change and therefore most affected are two or three residential receptors on the south side of Church Rd east of Candovers Scout Activity Centre with upper floor south facing views but appear to have their views partially obscured by out buildings and garden vegetation. The temporary effect experienced by these specific visual receptors will be **minor** adverse, which is not significant.
- 4.1.12 Those residents in properties that line the waterfront at Gravesend are **high** sensitivity receptors, that due to the elevation of some of the flats may have views of Zone A. However, the impact magnitudes of the proposed construction works will be **negligible** to **minor**, for those that have views. Those residential receptors predicted to experience a **minor** change and therefore most affected are upper floor residential receptors with north facing views along West Street confined to Regents Court retirement home, Marriots Wharf and Melbourne Quays. The temporary effect experienced by these specific visual receptors will be **moderate** adverse, which is not significant.

Access Land and Public Open Space

- 4.1.13 Walton Common and Access Land to the south of the railway will be directly impacted. Users of these areas will no longer be able to gain access. The construction will be seen in the context of the existing industrial land use and high voltage pylons which dominate the current view. The replacement Common Land and Access Land in Zone E will be available to the public, before construction commences, and is more readily accessible to Tilbury residents than Walton Common which will help mitigate the loss. These **high** sensitivity receptors will experience a **minor** impact magnitude. This will result in a temporary **moderate** adverse effect, which is not significant.
- 4.1.14 Areas of Access Land either side of Gun Hill lane, Cooper Shaw Road and Fort Road will remain open for the duration of the construction works, but the **high** sensitivity receptors walking on these areas will experience **minor** (in locations where the visual context is industrial land use) to **moderate** (in places where views contain less industrial land uses and less overhead pylons and cables) impact magnitudes. The temporary effects experienced by these receptors will be **moderate** adverse (in locations where the visual context is already adversely affected by overhead pylons

and cables such as at Parsonage Common) and **major** adverse (in places where the existing view contains less pylon and cable infrastructure off Fort Road) which are not significant to significant respectively. However, there appear to be very few users of these open access land areas.

- 4.1.15 People using the Public Open Space off Thames View, Chadwell St. Mary have a **high** sensitivity. The magnitude of the impact magnitude of the construction works is **minor** from this elevated location. The temporary effect experienced by these receptors will be **moderate** adverse, which is not significant.

Public Rights of Way

- 4.1.16 The footpaths around Tilbury Fort are used by **high** sensitivity receptors, however due to location, orientation and the presence of buildings, bunds, walls and vegetation, the impact magnitudes are considered to be **negligible** to **minor**. Those PRoW receptors predicted to experience **minor** changes and therefore most affected are those to the north of Tilbury Fort where views of the construction are not obscured by the sewage works. The temporary effect experienced by these users is **moderate** adverse which is not significant.
- 4.1.17 The views experienced by people using the Thames Estuary Path/Two Forts Way/FP146 to the east of the site of the former Tilbury Power Station vary depending on distance, for the majority of the path, the location in relation to the land-raising operation, the vegetation and the low elevation results in **no change** to **minor** impact magnitudes for these **high** sensitivity receptors. Those PRoW receptors predicted to experience **minor** changes and therefore most affected are those closest to the construction of Zone G in particular the new causeway. This magnitude of change would be localised and for receptors in the vicinity of Viewpoint 15 (Figure 3.17) the temporary effect experienced by these specific receptors using this part of the path will be **moderate** adverse, which is not significant.
- 4.1.18 For a short section of the path, on or beyond the land raising operations to the screening of Zone A by the buildings of Tilbury substation and the concatenation of wires and pylons, there are slightly elevated views, with no vegetation across open farmland to the proposed development in Zone A and Zone G (the access road), However, the construction works would be seen against a backdrop of the small ridgeline, away from the path. The **high** sensitivity receptors will experience a **minor** impact of change. The temporary effect would be **moderate** adverse for the duration of the construction of the facility, which is not significant.
- 4.1.19 Views gained from footpaths on the Chadwell to East Tilbury ridge vary considerably. Of those footpaths that are still open and that have not been ploughed up or are not impassable, the **high** sensitivity receptors will experience a range of impacts, that vary

in magnitude from **no change** to **minor**. Those PRow receptors predicted to experience **minor** changes and therefore most affected are those from elevated locations with views over the development construction. These include a short section along footpath 72 on Gun Hill, west of Turnpike lane and a specific part of footpath 200, at Viewpoint 10 (Figure 3.13). Other locations on this footpath have their views blocked by intervening thick vegetation and landform. The temporary effects experienced by these users of the PRow in this area are judged to be **moderate** adverse, which is not significant.

- 4.1.20 Users of the Saxon Shore Way are **high** sensitivity receptors that will experience a variety of impacts and impact magnitude. As the views are generally open the degree of impact is generally related to distance from Zone A and Zone G. The more distant viewpoints will experience a **negligible** impact magnitude. Those that are closer will experience **minor** magnitudes of impact. Those PRow receptors predicted to experience **minor** changes and therefore most affected are those that are both closest to Zone G and to the east towards Shornmead, where the experience is more rural than to the west specifically in the vicinity of Viewpoint 23 (Figure 3.21). The temporary effect experienced by these specific visual receptors would be **moderate** adverse, which is not significant.

Tourist Attractions and Recreation (other than PRow)

- 4.1.21 People visiting Tilbury Fort are **high** sensitivity receptors that would experience **no change** to a **minor** impact magnitude, due to the configuration of the fort and the distance from Zone A. Those receptors predicted to experience minor changes and therefore most affected are those that are on elevated parts of the Fort such as on top of the bunds and wall defences. The temporary effects experienced by these specific visual receptors would be **moderate** adverse, which is not significant.
- 4.1.22 People visiting Coalhouse Fort are **high** sensitivity receptors that would experience **no change** to **negligible** impact magnitude, due to the vegetation surrounding the fort, intervening landform, industrial and developed skyline and the distance from Zones A and E. Those tourist receptor views predicted to experience negligible changes and therefore most affected are those that are from elevated locations on the defences facing west, such as Viewpoint 32 (Figure 3.27). The temporary effect experienced by these specific visual receptors would be **minor** adverse, which is not significant.
- 4.1.23 Shornmead Fort and New Tavern Fort. People visiting Shornmead Fort on the Saxon Shore Way and New Tavern Fort are **high** sensitivity receptors. The impact magnitude varies from **negligible** to **minor**. Those tourist receptor views predicted to experience minor changes and therefore most affected are those from New Tavern due to it being situated closer to the construction specifically Zone G and the causeway. The

temporary effect experienced by these specific visual receptors would be **moderate** adverse, which is not significant.

- 4.1.24 The **high** (recreational receptors) and **low** (people at their place of work) sensitivity users of Gravesend Waterfront and Gordon Gardens will experience impact magnitudes between **no change** and **minor**, dependent on location and activity. Those recreational receptors predicted to experience minor changes and therefore most affected are those that are using Gordon Gardens in the localised vicinity of Viewpoint 21 (Figure 3.20) looking northwards over the river. The temporary effect experienced by these specific visual receptors would be **moderate** adverse, which is not significant.

Community Facilities

- 4.1.25 **High** sensitivity receptors visiting St, James' Church graveyard will experience an impact of **moderate** magnitude due to the wide elevated views of construction activities over the drained marshland. The temporary effect would be **moderate** adverse, which is not significant.

Dynamic Receptors

- 4.1.26 Rail users have a variety of sensitivities, depending on the reason for their travel, it might be **low** for people travelling to work, or **high** for people travelling for pleasure. The impact would depend on the orientation of the passenger and the speed at which they are travelling. The overall impact magnitude of the proposed construction works is considered to be **minor**. The temporary effect on rail users travelling for pleasure, which are predicted to experience a **minor** change from the baseline is considered to be **moderate** adverse when the receptor is close to construction activity and there is a break in the vegetation which would allow views to the proposed development construction), which is not significant.
- 4.1.27 Crew and passengers on marine vessels also have a variety of sensitivities depending on their occupations. People working on boats are considered to have a **low** sensitivity to the proposed construction works, whereas people travelling for pleasure will have a **high** sensitivity. The impact on these people will also vary depending on number of factors, including their proximity, orientation and elevation to the proposed construction works. Given the distance of Zone A to the river, the impact magnitude is considered to be **minor** to **negligible**. Those passenger receptor views predicted to experience minor changes and therefore most affected are those from upper decks of large commercial ferries and cruise ships, which are less frequent than smaller craft. The temporary effect on these passenger receptors on the river is judged to be **moderate** adverse (depending on distance and breaks between existing shoreline development to allow views to the construction activities), which is not significant.

Representative Viewpoints

Viewpoint 3: View south-east from public open space to the south of Chadwell St. Mary (Figure 3.6)

- 4.1.28 The people using the Public Open Spaces are considered to have a **high** sensitivity, to the proposed construction works. The magnitude of impact of the construction works within Zone A and the causeway in Zone G on views will be **minor**. The temporary effect experienced by these receptors will be **moderate** adverse, which is not significant.

Viewpoint 6: View south from the junction of Gun Hill lane, Cooper Shaw Road and Fort Road (Figure 3.9)

- 4.1.29 Road users will have a **low** sensitivity to the proposed construction works. The magnitude of change will be **minor**. The temporary effect on people travelling along these roads is considered to be **minor** adverse, which is not significant.
- 4.1.30 Pedestrian receptors at this viewpoint, using the route and Access Land for leisure purposes will have a **high** sensitivity to the construction work and traffic. The impact magnitude will be **moderate**. The temporary effect experienced by these pedestrian users will be **major** adverse, which is significant. However, anecdotal evidence from fieldwork that has been conducted while collecting viewpoint photographs appears to indicate that there are very few pedestrians that use this section of highway and adjacent Access Land on its verge.

Viewpoint 7: View south from the graveyard of St. James' Church, West Tilbury (Figure 3.10)

- 4.1.31 People visiting the graveyard at St. James' Church will have a **high** sensitivity to the construction activities proposed. However, the impact magnitude will be **moderate**, as although it is an elevated viewpoint, the view of the construction works is distant and will be seen in the context of the development either side of the River Thames, as well as being partly screened by vegetation. The temporary effect experienced by these receptors will be **moderate** adverse, which is not significant.

Viewpoint 8: View south-west from junction of Station Road and farm track to the south of the railway line (Figure 3.11)

- 4.1.32 This is primarily a view experienced by road users, either travelling past or waiting at the railway crossing, who will have a **low** sensitivity to the construction activities proposed as their focus will be on the road/railway. The impact magnitude will be **moderate**. The temporary effect experienced at this location will be **minor** adverse, which is not significant.

Viewpoint 9: View east-south-east from Fort Road to the east of Tilbury (Figure 3.12)

- 4.1.33 The road users at this location will have a **low** sensitivity to the proposed construction works, as their focus will be on the road. The impact magnitude will be **moderate**. The temporary effect on people travelling along this road is considered to be **minor** adverse, which is not significant.

- 4.1.34 Pedestrian receptors using the Access Land / road verge for leisure will have a **high** sensitivity to the construction work and traffic. The impact magnitude will be **minor**. The temporary effect experienced by these pedestrian users will be **moderate** adverse, which is not significant.

Viewpoint 11: View east from Fort Road bridge over railway (Figure 3.14)

- 4.1.35 Road users at this location will have a **low** sensitivity to the proposed construction works within Zone A, as they are approaching or navigating the bridge over the railway, and their focus will be on the road/bridge. The impact magnitude will be **moderate**. The temporary effect on people travelling along this road is considered to be **minor** adverse, which is not significant.

Viewpoint 12: View north-east from Footpath 146, adjacent to the sewage works (Figure 3.15)

- 4.1.36 People using this PRoW footpath are **medium** sensitivity receptors due to the location and condition of the footpath. The impact of the construction works from this location will be **no change** (Zone A) to **negligible** (construction route). The temporary effect is judged to be **minor** adverse (Zone A), which is not significant.

Viewpoint 14: View north-east from Byway 98, to the south of Tilbury Fort (Figure 3.16)

- 4.1.37 People using this PRoW will have a **high** sensitivity to the proposed construction works. However, the magnitude of impact of the construction works in Zone A will be **negligible** from this distance. The construction of the causeway, within Zone G will have a **minor** impact. The temporary effect experienced by people at this location will be **minor** adverse for those works in Zone A and **moderate** adverse for the duration of the construction of the causeway in Zone G, neither of which are significant.

Viewpoint 15: View north-north-west from the Thames Estuary Path/Two Forts Way (Figure 3.17)

- 4.1.38 This view is representative of a short section of the path, on or beyond the land raising operations to the screening of Zone A by the buildings of Tilbury substation and the concatenation of wires and pylons, there are slightly elevated views, with no vegetation across open farmland to the proposed development in Zone A. There will be close views of the construction of the causeway in Development Zone G. The **high** sensitivity

receptors will experience a **minor** magnitude impact of the construction works in Zone A and **moderate** magnitude of impact from the construction of the causeway. This results in a **moderate** adverse effect for the duration of the construction of the facility, which is not significant, and a temporary **major** adverse effect during the construction of the causeway in Zone G, which is significant.

Viewpoint 19: View north-east from the access ramp to the Gravesend to Tilbury Ferry at Town Pier, Gravesend (Figure 3.19)

- 4.1.39 People accessing the Town Pier ramp are considered to have a **medium** or **high** sensitivity, depending on the purpose for their visit. The magnitude of impact of the construction works from this location is considered to be **negligible** for Zone A and **minor** for the causeway southern end of Zone G. The temporary effects will be **negligible** to **moderate** adverse respectively, which are not significant.

Viewpoint 20: View north-north-east from New Tavern Fort, Gravesend (Figure 3.19)

- 4.1.40 People accessing the New Tavern Fort are considered to have a **high** sensitivity, as their visit is related to tourism and leisure, some of which will involve views of the river. The impact magnitude of the construction works from this location is considered to be **minor** for Zone G and the causeway. The temporary effect is judged to be **moderate** adverse, which is not significant.

Viewpoint 21: View north-north-east from Gordon Promenade, Gravesend (Figure 3.20)

- 4.1.41 People accessing Gordon Promenade are considered to have a **high** sensitivity, as their visit is related to tourism and leisure, some of which will involve views of the river. The impact magnitude of the construction works from this location is considered to be **minor** for Zone G and the causeway. The temporary effect is judged to be **moderate** adverse, which is not significant.

Viewpoint 22: View north-north-east from the beacon on Windmill Hill, Gravesend (Figure 3.20)

- 4.1.42 People using Windmill Hill gardens have a **high** sensitivity to the proposed construction works. However, from this distance the impact will be **negligible**. The temporary effect is judged to be **minor** adverse, which is not significant.

Viewpoint 23: View north-north-west from the Saxon Shore Way, to the north of the police training centre, north Kent (Figure 3.21)

- 4.1.43 People using the Saxon Shore Way are **high** sensitivity receptors. The magnitude of impact from this location will be **minor** for Zone A and **moderate** for the causeway southern end of Zone G. The temporary effect is considered to be **minor** adverse for

Zone A, which is not significant, and **moderate** adverse for the causeway in Zone G, which is not significant.

Viewpoint 24: View north-west from the Saxon Shore Way at the junction with Footpath NS318 at Shornmead Fort, north Kent (Figure 3.21)

- 4.1.44 People using the Saxon Shore Way are **high** sensitivity receptors. The impact magnitude of the construction works from this location will be **minor** due to distance. The temporary effect is judged to be **moderate** adverse, which is not significant.

Viewpoint 26: View west-south-west from the Saxon Shore Way at Cliffe Fort, north Kent (Figure 3.22)

- 4.1.45 People using the Saxon Shore Way are **high** sensitivity receptors. The impact magnitude of the construction works from this location will be **negligible** due to distance. The temporary effect is judged to be **minor** adverse, which is not significant.

Viewpoint 28: View north-north-west from Footpath NG7, to the south of Chalk, north Kent (Figure 3.23)

- 4.1.46 People using this PRow are **high** sensitivity receptors. The impact magnitude of the construction works from this location will be **negligible** due to distance. The temporary effect is judged to be **minor** adverse, which is not significant.

Viewpoint 30: View north-west and west from the edge of the open space adjacent to the Coalhouse Fort public car park (Figure 3.25)

- 4.1.47 People using the open space adjacent to the car park at Coalhouse Fort are considered to be **high** sensitivity receptors. The impact magnitude of the construction works from this location is considered to be **negligible** due to intervening landform and vegetation. The temporary effect is judged to be **minor** adverse, which is not significant.

Viewpoint 32: View west from the bund adjacent to the defensive ditch at Coalhouse Fort (Figure 3.27)

- 4.1.48 People using the open space adjacent to the moats at Coalhouse Fort are considered to be **high** sensitivity receptors. The impact magnitude of the construction works from this location is considered to be **negligible** due to intervening vegetation. The temporary effect is judged to be **minor** adverse, which is not significant.

Viewpoint 34: View south and south-west from Public Bridleway 58 - Coal Road; west of Low Street Lane (Figure 3.29)

- 4.1.49 People using the PRow Bridleway 58 off Low Street are considered to be **high** sensitivity receptors. The impact magnitude of the construction works from this location

is considered to be **negligible** due to distance and intervening vegetation. The temporary effect is judged to be **minor** adverse, which is not significant.

Night-Time Construction Visual Effects

- 4.1.50 The proposed lighting to be used during the construction phase of the proposed development is outlined in Table 2.7 of this chapter and in Volume 2, Chapter 2: Project Description.
- 4.1.51 The visual receptors which are deemed to experience temporary adverse significant effects during the night-time are considered to be the ones which also have significant adverse effects during the daytime, allowing for night-time construction working. These include pedestrian receptor leisure users of the Access Land close to Viewpoint 6, Figure 3.9 and Viewpoint 9, Figure 3.12. People using the small strips of Access Land either side of Gun Hill lane, Cooper Shaw Road and Fort Road, for leisure as well as those using the larger area of Parsonage Common would experience temporary significant adverse effects. There would be temporary significant adverse effects from Viewpoint 6, Figure 3.9 and Viewpoint 9, Figure 3.12 of the construction at Zone A as well as from Viewpoint 15, Figure 3.17 of the causeway construction in Zone G. However, it is highly likely that there would be very few receptors using these areas at night. Consequently, the night-time impacts will not be considered further in this assessment.
- 4.1.52 The other viewpoints would not be significantly adversely affected and are not considered further in this assessment.

4.2 Operational and maintenance phase

Landscape Effects

National Landscape Character Areas

- 4.2.1 NCA 81: Thames Estuary, will be directly affected by the proposed development of Zones A, D and G (the above-ground installations of the proposed facility and the causeway). This part of the NCA is characterised by industrial development, including power infrastructure and the extractive industry. Consequently, the Thames Estuary NCA is considered to have a **medium** sensitivity to the proposed development. The magnitude of impact on this large character area is **minor**. Therefore, the effect on the NCA is judged to be **minor** adverse, which is not significant.

Thurrock Landscape Character Areas

- 4.2.2 LCA C5: Tilbury Marshes, will be directly affected by the proposed development within Development Zones A, B, C (part), F4. The access road in Zone G will remain in place

but would have very low levels of operational traffic (see Volume 3, Chapter 10: Traffic and Transport), so its presence will have negligible impact. The sensitivity of LCA C5 to the proposed development is considered to be **medium**. The impact magnitude of the development in this area is considered to be **moderate**. The effect experienced by the LCA will be **moderate** adverse, which is not significant.

- 4.2.3 LCA D6: Chadwell Escarpment Urban Fringe will not be directly affected by the proposed development. Although views towards the facility will be possible. Given the industrial context of these views of the facility, LCA D6 is considered to have a **medium** sensitivity to the proposed development. The magnitude of impact on the LCA is **minor**. Therefore, the effect on the NCA is judged to be **minor** adverse, which is not significant.
- 4.2.4 LCA D7: West Tilbury Urban Fringe, will be directly affected by the gas installation in area D. The sensitivity of this LCA to the proposed development in this zone is **medium**. The impact magnitude of the proposed works is considered to be **minor**. The effect experienced by the LCA is judged to be **minor** adverse, which is not significant.

Night-Time Operational Landscape Effects

- 4.2.5 The anticipated lighting used during the operation and maintenance phase of the Thurrock Flexible Generation Plant is outlined in Volume 2, Chapter 2: Project Description.
- 4.2.6 The proposed construction lighting is also described in Table 2.7: Maximum design envelope parameters assessed, of this chapter. The operations will not require permanent lighting and the magnitude of the impact on receptors is considered to be no more than **minor**, with a temporary significance of effect of **minor** adverse for those landscape receptors of a **medium** sensitivity, which is not significant.

Visual Effects

- 4.2.7 Unlike landscape resources and receptors, all visual resources and receptors are directly affected.

Visual Receptors

Residential

- 4.2.8 Residential receptors located on the Chadwell St. Mary - West Tilbury - East Tilbury ridgeline, including properties at Low Street, have varying views. These are **high** sensitivity receptors who will experience visual impact magnitudes ranging from **no change** to **minor**. Those residential receptors predicted to experience a **minor** change

and therefore most affected are residential receptors on the east side of Lea Road in Chadwell with south-east facing elevations, those on the south side of Rectory Road, on Gun Hill with south facing elevations. The effects experienced by these few specific residential receptors are judged to be **moderate** adverse, which is not a significant effect.

- 4.2.9 Residents of properties along Biggin Lane and the farm track to Gun Hill lane are **high** sensitivity receptors that will experience **negligible** to **minor** impact magnitudes during the operation and maintenance phase. Those residential receptors predicted to experience a **minor** change and therefore most affected are residential receptors which have south south-east facing elevations with the most open views of the construction which include the short section of terraced properties 1 to 9 Biggin Lane. The effect experienced by these specific receptors is **moderate** adverse, which is not a significant effect.
- 4.2.10 Residents on the eastern edge of Tilbury are of a **high** sensitivity. The impact magnitudes of the proposed development on these receptors will vary from **no change** to **minor**. Those residential receptors predicted to experience a **minor** change and therefore most affected are residential receptors on the north end of Fort Rd which have rear elevation aspects facing south-eastwards and include 105 -139 on the east side of Byron gardens only, rather than those properties with gable ends with no or few windows. The effect experienced by these specific visual receptors is **moderate** adverse, which is not a significant effect.
- 4.2.11 Residents between Low Street and East Tilbury, including individual farms, have a **high** sensitivity, to the proposed development. The magnitude of impacts will vary from **no change** to **negligible**, depending on the location of the receptor. Those residential receptors predicted to experience a **negligible** change and therefore most affected are 2 or 3 residential receptors on the south side of Church Rd east of Candovers Scout Activity Centre with upper floor south facing views but appear to have their views partially obscured by out-buildings and garden vegetation. The effect experienced by these specific visual receptors will be **minor** adverse, which is not significant.
- 4.2.12 Those residents in properties that line the waterfront at Gravesend are **high** sensitivity receptors, that due to the elevation of some of the flats may have views of the causeway and the main development in Zone A. However, the impact magnitude of the proposed development will be **minor** at worse, for those that have views. The effect will be **moderate** adverse, which is not significant.

Access Land and Public Open Space

- 4.2.13 Walton Common and Access Land to the south of the railway will be directly impacted. Users of these areas will no longer be able to gain access. However, a larger area of

replacement Common Land and Access Land will be provided to the north of the railway in Zone E, in a more easily accessible location. The proposed development from this new access land will be seen in the context of the existing industrial land use and high voltage pylons which dominate the current view. These **high** sensitivity receptors will experience a **minor** impact magnitude at worse. This will result in a **minor** adverse effect, which is not significant.

- 4.2.14 People using the small strips of Access Land either side of Gun Hill lane, Cooper Shaw Road and Fort Road, as well as those using the larger area of Parsonage Common, are **high** sensitivity receptors. They will experience **minor** to **moderate** impact magnitudes. Those visual receptors predicted to experience a moderate change and therefore most affected are those in locations where existing views are less compromised by overhead cables and pylons particularly off Fort Road rather than Parsonage Common, where this existing infrastructure is dominant. The effects experienced by these specific visual receptors will be **major** adverse, which is a significant effect. However, there appears to be very few users of this open access land.
- 4.2.15 People using the Public Open Space off Thames View, Chadwell St. Mary have a **high** sensitivity. The magnitude of the impact the proposed development will have on these receptors is **minor** from this elevated location. The effect experienced by these receptors will be **moderate** adverse, which is not significant.

Public Rights of Way

- 4.2.16 The footpaths around Tilbury Fort are used by **high** sensitivity receptors, due to location, orientation and the presence of buildings, bunds, walls and vegetation, the impacts are considered to be **negligible** to **minor**. Those PRoW receptors predicted to experience **minor** changes and therefore most affected are those to the north of Tilbury Fort where views of the proposed development are not obscured by the sewage works. The effect experienced by these users is **moderate** adverse, which is not significant.
- 4.2.17 The views experienced by people using the Thames Estuary Path/Two Forts Way/FP146 to the east of Tilbury Power Station vary depending on distance, for the majority of the path, the location in relation to the land-raising operation, the vegetation and the low elevation results in **no change** to **minor** impact magnitudes for these **high** sensitivity receptors. Those PRoW receptors predicted to experience **minor** changes and therefore most affected are those closest to Zone G in particular the new causeway development. This magnitude of change would be localised and for receptors in the vicinity of Viewpoint 15, Figure 4.9 (photowirelines a to c) and Figure

4.28 (photomontages a and b) The effect experienced by these specific receptors using this part of the path will be **moderate** adverse, which is not significant.

4.2.18 For a short section of the Thames Path, on or beyond the land raising operations to the screening of Zone A by the buildings of Tilbury substation and the associated wire-scape, there are slightly elevated views, with no vegetation across open farmland to the proposed development in Zone A. The **high** sensitivity receptors will experience **minor** impact magnitude. This results in a **moderate** adverse effect, which is not significant.

4.2.19 Views gained from PRoW on the Chadwell to east Tilbury ridge vary considerably. Of those PRoW that are still open and that have not been ploughed up, or are not impassable, the **high** sensitivity receptors will experience a range of impact magnitudes, that vary from **no change** to **minor**. Those PRoW receptors predicted to experience **minor** changes and therefore most affected are those from elevated locations with the least obstructed views over the development. These include a short section along footpath 72 on Gun Hill, west of Turnpike lane and a specific part of footpath 200, at Viewpoint 10 (Figure 3.13). Other locations on this footpath have their views blocked by intervening thick vegetation and landform. The effects experienced by these users of the PRoW in this area are considered to be **moderate** adverse, which is not significant.

4.2.20 Users of the Saxon Shore Way are **high** sensitivity receptors that will experience a variety of impacts and impact magnitude. As the views are generally open the degree of impact generally relates to distance from Zone A and in particular Zone G, the proposed causeway. The more distant viewpoints will experience **negligible** impact. Those that are closer will experience **minor** magnitudes of impact. The effects range from **minor** for more distant locations to **moderate** adverse at closer locations to the east of Gravesend towards Shornmead Fort, where the experience is more rural than to the west specifically in the vicinity of Viewpoint 23, Figure 4.14 (photowirelines a to c), which are not significant.

Tourist Attractions and Recreation (other than PRoW)

4.2.21 People visiting Tilbury Fort are **high** sensitivity receptors that would experience **no change** to a **minor** impact magnitude, due to the configuration of the fort and the distance from the proposed facility. Those receptors predicted to experience minor changes and therefore most affected are those that are on elevated parts of the Fort such as on top of the bunds and wall defences. The effects experienced by these specific visual receptors would be **moderate** adverse, which is not significant.

4.2.22 People visiting Coalhouse Fort are **high** sensitivity receptors that would experience **no change** to **negligible** impact magnitude from the proposed development, due to

the vegetation surrounding the fort, intervening landform, industrial and developed skyline and the distance from Zones A and E. Those tourist receptor views predicted to experience negligible changes and therefore most affected are those that are from elevated locations on the defences facing west, such as Viewpoint 32, Figure 4.19 (photowirelines a to c). The effect experienced by these specific visual receptors would be **minor** adverse, which is not significant.

4.2.23 People visiting Shornmead Fort on the Saxon Shore Way and New Tavern Fort are **high** sensitivity receptors. Those tourist receptor views predicted to experience **minor** changes and therefore most affected are those from New Tavern due to it being situated closer to the proposed development specifically Zone G and the causeway. The effect experienced by these specific visual receptors would be **moderate** adverse, which is not significant.

4.2.24 The **high** and **medium** sensitivity users of Gravesend Waterfront and Gordon Gardens will experience impact magnitudes between **no change** and **minor**, dependent on location and activity. Those recreational receptors predicted to experience minor changes and therefore most affected are those that are using Gordon Gardens in the localised vicinity of Viewpoint 21 (Figure 4.12 photowirelines a to c) looking northwards over the river. The effect experienced by these specific visual receptors would be **moderate** adverse, which is not significant.

Community Facilities

4.2.25 **High** sensitivity receptors visiting St, James' Church graveyard will experience impacts of **moderate** magnitude on views towards the proposed development, resulting in **moderate** adverse effects, which is not significant.

Dynamic Receptors

4.2.26 Rail users have a variety of sensitivities, depending on the reason for travel, it is **low** for people travelling to work, or **high** for people travelling for pleasure. The impact would depend on the orientation of the passenger and the speed at which they are travelling. The overall impact of the proposed development is considered to be **minor**. The effects on rail users are considered to vary between **minor** to **moderate** adverse, which are not significant. The effects on rail users travelling for pleasure, which are predicted to experience a **minor** change from the baseline is considered to be **moderate** adverse when the receptor adjoins the construction and there is a break in the vegetation which would allow views to the proposed development), which is not significant.

4.2.27 Crew and passengers on marine vessels also have a variety of sensitivities depending on their occupations. People working on boats are considered to have a **low** sensitivity

to the proposed development, whereas people travelling for pleasure will have a **high** sensitivity to the proposed development. The impact on these people will also vary depending on number of factors, including their proximity, orientation and elevation to the facility. Given the distance of the Thurrock Flexible Generation Plant to the river, the impact magnitude is considered to be **minor**. Those passenger receptor views predicted to experience **minor** changes and therefore most affected, are those from upper decks of large commercial ferries and cruise ships, which are also less frequent than smaller craft. The effect on these passenger receptors on the river is considered to be **moderate** adverse (depending on distance and breaks between existing shoreline development to allow views to the proposed development), which is not significant.

Representative Viewpoints

Viewpoint 3: View south-east from public open space to the south of Chadwell St. Mary (Figure 4.1 photowirelines and Figure 4.21 photomontages)

- 4.2.28 People using the Public Open Space and residents of Thames View are considered to have a **high** sensitivity, to the proposed Thurrock Flexible Generation Plant. The magnitude of impact on views will be **minor**. The effects experienced by these receptors will be **moderate** adverse which are not significant.

Viewpoint 6: View south from the junction of Gun Hill lane, Cooper Shaw Road and Fort Road (Figure 4.2 photowirelines and Figure 4.22 photomontages)

- 4.2.29 Road users will have a **low** sensitivity to the proposed Thurrock Flexible Generation Plant facility. The impact magnitude will be **moderate**. The effects on people travelling along these roads is considered to be **minor** adverse, which is not significant.

- 4.2.30 People using the small strips of Access Land on either side of the roads will have a **high** sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be **moderate**. The effect experienced by these pedestrian users will be **moderate** adverse, which is not significant.

Viewpoint 7: View south from the graveyard of St. James' Church, West Tilbury (Figure 4.3 photowirelines and Figure 4.23 photomontages)

- 4.2.31 People visiting the graveyard at St. James' Church will have a **high** sensitivity to the proposed Thurrock Flexible Generation Plant. However, the impact magnitude will be **moderate**. The effect experienced by these receptors will be **moderate** adverse, which is not significant.

Viewpoint 8: View south-west from junction of Station Road and farm track to the south of the railway line (Figure 4.4 photowirelines and Figure 4.24 photomontages)

- 4.2.32 This is primarily a view experienced by road users, who will have a **low** sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be **moderate**. The effect experienced at this location will be **minor** adverse, which is not significant.

Viewpoint 9: View east-south-east from Fort Road to the east of Tilbury (Figure 4.5 photowirelines and Figure 4.25 photomontages)

- 4.2.33 Road users will have a **low** sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be **moderate**. The effect on people travelling along this road is judged to be **minor** adverse, which is not significant.

- 4.2.34 Pedestrian receptors using the Access Land road verge for leisure, will have a **high** sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be **moderate**. The development will be prominent but in the context of the existing industrial river side development and presence of overhead cables and pylons, the change is not major. The effects experienced by these pedestrian users will be **moderate** adverse, which are not significant.

Viewpoint 11: View east from Fort Road bridge over railway (Figure 4.6 photowirelines and Figure 4.26 photomontages)

- 4.2.35 Road users will have a **low** sensitivity to the proposed Thurrock Flexible Generation Plant. The impact magnitude will be **moderate**. The effect on people travelling along this road is judged to be **minor** adverse, which is not significant.

Viewpoint 12: View north-east from Footpath 146, adjacent to the sewage works (Figure 4.7 photowirelines)

- 4.2.36 People using this PRoW footpath for leisure and as part of the long-distance Thames Estuary Path are **high** to **medium** sensitivity receptors. The impact magnitude from this location will be **none** to **negligible**. It has been included as it provides additional information on the effects on the visual resources of the area. The effect is judged to be **none** to **negligible**, which is not significant

Viewpoint 14: View north-east from Byway 98, to the south of Tilbury Fort (Figure 4.8 photowirelines and Figure 4.27 photomontages)

- 4.2.37 People using this PRoW byway will have a **high** sensitivity to the proposed Thurrock Flexible Generation Plant. However, the magnitude of impact will be **minor** from this distance and location. The effect experienced by people at this location will be **moderate** adverse, which is not significant.

Viewpoint 15: View north-north-west from the Thames Estuary Path/Two Forts Way (Figure 4.9 photowirelines and Figure 4.28 photomontages)

- 4.2.38 This view is representative of a short section of the path, on or beyond the land raising operations to the screening of Zone A by the buildings of Tilbury substation and the concatenation of wires and pylons, there are slightly elevated views, with no vegetation across open farmland to the proposed development in Zone A. The **high** sensitivity receptors will experience **minor** impact magnitude, resulting in a **moderate** adverse effect for the duration of the operation of the facility, which is not significant.

Viewpoint 19: View north-east from the access ramp to the Gravesend to Tilbury Ferry at Town Pier, Gravesend (Figure 4.10 photowirelines)

- 4.2.39 People accessing the Gravesend to Tilbury ferry via the Town Pier ramp are considered to have a **medium** or **high** sensitivity, depending on the purpose for their visit. The impact magnitude of the proposed Thurrock Flexible Generation Plant from this location is considered to be **negligible**. The effects on these receptors will be **negligible** to **minor** adverse respectively, which are not significant.

Viewpoint 20: View north-north-east from New Tavern Fort, Gravesend (Figure 4.11 photowirelines)

- 4.2.40 People accessing the New Tavern Fort are considered to have a **high** sensitivity, as their visit is related to tourism and leisure. The impact magnitude of the operational phase from this location is considered to be **minor** for Zone G and the causeway. The effect is judged to be **moderate** adverse, which is not significant.

Viewpoint 21: View north-north-east from Gordon Promenade, Gravesend (Figure 4.12 photowirelines)

- 4.2.41 People accessing Gordon Promenade are considered to have a high sensitivity, as their visit is related to tourism and leisure. The impact magnitude of the of the proposed development from this location is considered to be **minor** for Zone G and the causeway. The effect is judged to be **moderate** adverse, which is not significant.

Viewpoint 22: View north-north-east from the beacon on Windmill Hill, Gravesend (Figure 4.13 photowirelines and Figure 4.29 photomontages)

- 4.2.42 People using Windmill Hill gardens have a **high** sensitivity to the proposed Thurrock Flexible Generation Plant. However, from this distance the impact magnitude will be **negligible**. The effect is judged to be **minor** adverse, which is not significant.

Viewpoint 23: View north-north-west from the Saxon Shore Way, to the north of the police training centre, north Kent (Figure 4.14 photowirelines)

- 4.2.43 People using the Saxon Shore Way are **high** sensitivity receptors. The impact magnitude from this location will be **minor** for Zone A and **minor** to **moderate** for the causeway southern end of Zone G. The effect is judged to be **moderate** adverse for Zone A and **moderate** adverse for the causeway in Zone G, which are not significant.

Viewpoint 24: View north-west from the Saxon Shore Way at the junction with Footpath NS318 at Shornmead Fort, north Kent (Figure 4.15 photowirelines and Figure 4.30 photomontages)

- 4.2.44 People using the Saxon Shore Way are **high** sensitivity receptors. The impact magnitude from this location will be **minor**. The significance of effect is judged to be **moderate** adverse, which is not significant.

Viewpoint 26: View west-south-west from the Saxon Shore Way at Cliffe Fort, north Kent (Figure 4.16 photowirelines)

- 4.2.45 People using the Saxon Shore Way are **high** sensitivity receptors. The impact magnitude from this location will be **negligible**. The significance of effect is judged to be **minor** adverse, which is not significant.

Viewpoint 28: View north-north-west from Footpath NG7, to the south of Chalk, north Kent (Figure 4.17 photowirelines)

- 4.2.46 People using this PRoW are considered to be **high** sensitivity receptors. The impact magnitude from this location will be **negligible**. The significance of effect is judged to be **minor** adverse, which is not significant.

Viewpoint 30: View north-west and west from the edge of the open space adjacent to the Coalhouse Fort public car park (Figure 4.18 photowirelines and Figure 4.31 photomontages)

- 4.2.47 People using the open space adjacent to the car park at Coalhouse Fort are considered to be **high** sensitivity receptors. The impact magnitude for this location is considered to be **negligible**. The effect is judged to be **minor** adverse, which is not significant.

Viewpoint 32: View west from the bund adjacent to the defensive ditch at Coalhouse Fort (Figure 4.19 photowirelines)

- 4.2.48 People using the open space adjacent to the moats at Coalhouse Fort are considered to be **high** sensitivity receptors. The impact magnitude from this location is considered to be **negligible**. The effect is judged to be **minor** adverse, which is not significant.

Viewpoint 34: View south and south-west from Public Bridleway 58 - Coal Road; west of Low Street Lane (Figure 4.20 photowirelines)

- 4.2.49 People using the PRoW Bridleway 58 off Low Street are considered to be **high** sensitivity receptors. The impact magnitude from this location is considered to be **negligible**. The effect is judged to be **minor** adverse, which is not significant.

Night-Time Operational Visual Effects

- 4.2.50 The lighting that might be used on the Thurrock Flexible Generation Plant during the operational phase of the proposed development is outlined at Table 2.7 of this chapter and in Volume 2, Chapter 2: Project Description.
- 4.2.51 Permanent external lighting is not proposed by the applicant. There would be no significant adverse effects experienced by visual receptors

4.3 Decommissioning phase

Landscape Effects

- 4.3.1 The decommissioning and deconstruction of the development requires similar timescale, plant and working methods as the construction phase and assessed after 35 years. The sensitivity of the landscape resource is expected to be similar to the current baseline, but due to the presence of the sewage treatment works, Tilbury substation and the overhead power lines, and in addition the Thurrock Flexible Generation Plant and Tilbury 2 port expansion, the sensitivity of NCA 81: Greater Thames Estuary and LCA C5: Tilbury Marshes remains **medium**, as does that of LCA D7: West Tilbury Urban Fringe, LCA D4: White Crofts/Orsett Heath Urban Fringe and LCA D6: Chadwell Escarpment Urban Fringe (the other character areas that might be directly affected by the decommissioning works). The magnitude of impact of the decommissioning phase is expected to be the same or more likely lower than the magnitude of impact for the construction phase, that is **negligible** to **moderate**. The effects are judged to be **negligible** to **moderate** adverse, which are not significant.

Visual Effects

- 4.3.2 In the future baseline set out in Section 3.5 above, the sensitivity of visual receptors is expected to be the same as it is currently. The magnitude of impact of the commissioning phase is expected to be the same, or more likely lower, than the magnitude of impact for the construction phase, i.e. **negligible** to **moderate**. The effects are judged to be **negligible** to **major** adverse. The receptors which are judged to have a moderate to major adverse and above level of effect are the same as in the construction phase.

Mitigation

- 4.3.3 Before decommissioning commences, a landscape restoration plan will be agreed with the relevant authority, as part of a wider decommissioning strategy. Assuming similar land use policies are in force at the time of decommissioning as now it is anticipated that Zone A would be returned to grassland, with some areas of scrub. In effect, an enhanced landscape to the one that currently exists, but one that remains in keeping with the management objectives for the LCAs.

Extended Operational Lifetime

- 4.3.4 Should the Thurrock Flexible Generation Plant not be decommissioned, the operational effects would continue, with some reduction on impacts, as the landscape mitigation would continue to soften views of the plant from the closest receptors.

4.4 Cumulative effects

- 4.4.1 Cumulative effects are those arising from impacts of the proposed development in combination with impacts of other proposed or consented development projects that are not yet built or operational. An assessment of cumulative effects for landscape and visual resources has been made and is reported in Volume 4, Chapter 19: Landscape and Visual Resources.

4.5 Transboundary effects

- 4.5.1 A screening of transboundary impacts has been carried out and is presented in Volume 6, Appendix 4.1: Transboundary Impacts Screening Note. This screening exercise identified that there was no potential for significant transboundary effects with regard to landscape and visual resources from the Thurrock Flexible Generation Plant upon the interests of other EEA States.

4.6 Inter-related effects

- 4.6.1 Inter-relationships are considered to be the impacts and associated effects of different aspects of the construction, operation or decommissioning of Thurrock Flexible Generation Plant on the same receptor. The following assessments have been made and a description of the likely inter-related effects on landscape and visual resources is provided in Volume 5, Chapter 31: Summary of Inter-Related Effects.

Project lifetime effects

- 4.6.2 Assessment of the potential for effects that occur during more than one stage of the development's lifetime (construction, operation or decommissioning) to interact such

that they may create a more significant effect on a receptor than when assessed in isolation for each stage

Receptor-led effects

- 4.6.3 Assessment of the potential for effects via multiple environmental or social pathways to interact, spatially and temporally, to create a greater inter-related effect on a receptor than is predicted for each pathway (in its respective topic chapter) individually.

4.7 Kent Downs Area of Outstanding Natural Beauty

- 4.7.1 A section of the Kent Downs Area of Outstanding Natural Beauty (AONB) lies within the southern edge of the study area for the proposed development. The Zone of Theoretical Visibility (ZTV) indicates that some part of the proposed development might be visible from the Kent Downs AONB. Subsequent fieldwork indicated that there would be very few locations where the development would be potentially be visible.
- 4.7.2 The special characteristics and qualities of the AONB which distinguish it as a nationally important landscape are set out in the Kent Downs Area of Outstanding Natural Beauty Management Plan 2014-2019 (Second Revision 2014) (Kent Downs AONB Unit, 2014). The list of special qualities includes 'dramatic landform and views'. It notes that there are "*breath-taking, long-distance panoramas are offered across open countryside, estuaries, towns...*" (page 7).
- 4.7.3 The special characteristics and qualities of the landform and landscape character area detailed at section 4.2 of the Management Plan. Views over the Thames from the highest and most open parts of the chalk plateau and dip-slopes are noted under 'The chalk ridge' landscape element (page 31). The 'Expansive open plateaux' landscape element notes that "*north of the chalk scarp the plateaux offer huge open landscapes with a simple structure and sometimes surprising and dramatic views for instance to the Thames Valley*" (page 32).
- 4.7.4 However, while part of the proposed development would be seen from the northern edge of the AONB, the proposed development would be viewed at a long distance and set within the context of the existing, surrounding and intervening industrial development and infrastructure. The proposed development would also not break the skyline.
- 4.7.5 In any event, "proposals which would affect the setting of the AONB are not subject to the same level of constraint as those which would affect the AONB itself and the weight to be afforded to setting issues will depend on the significance of the impact..." (page 24 of the AONB Management Plan).

- 4.7.6 The intensification of the existing industrial related land use development due to the proposed development from existing transient views from the AONB would be **negligible** and affect only a very small part of the north facing side of the AONB. Therefore, although the AONB landscape and visual receptors are **very high** the effect is judged to be **minor to moderate adverse**, at worst and not significant.

5. Conclusion and summary

5.1 Landscape Resources and Receptors

- 5.1.1 The Thurrock Flexible Generation Plant development would be located in a dynamic landscape, and one that is undergoing rapid change. Within LCA C5: Tilbury Marshes character area, to the south of the railway line, vehicles involved in land raising are seen in the farmland to the east of Zone A and plant involved in construction works is busy in the fields immediately to the west of the main Flexible Generation Plant site.
- 5.1.2 To the south of Zone A, the upper decks and bridges of the shipping travelling to and from Tilbury Docks are seen gliding through the landscape on an unseen river. Closer to the Thames, the full size of the commercial shipping is revealed. From the Thames Estuary Path, smaller vessels are also seen, crossing the river and making more local trips. The sight and sound of construction traffic involved in land raising operations south of Zone A, loading material from the wharf to the south of the former Tilbury B Power Station contributes to the industrial character of this area.
- 5.1.3 To the north of Zone A, the railway carries not only passengers, but long freight trains which frequently cross the landscape. The flat farmland is crossed by many pylons carrying the high voltage overhead power lines from National Grid's 400 kV Tilbury Substation. A discordant but interesting variety of towers surround the substation, with several high voltage lines crossing Thurrock Flexible Generation Plant Zone A.
- 5.1.4 The condition of the land to the west of the substation, around the sewage treatment works and either side of Fort Road, is poor. Fly-tipping is common and 'horsiculture' is prevalent on the degraded common land. The area has an industrial fringe character which diminishes the rural character which is experienced further east.
- 5.1.5 There are few trees within the drained marshland to the north south and east of the substation, the land being divided by ditches rather than hedgerows. However, the line of the railway is recognisable in the landscape as there is scrubby, trackside vegetation with some small trees. There are some woodland, scrub and rough grassland areas around the sewage treatment works, extending north to the railway and east towards the power station, within which are areas of hardstanding used for car storage. There are also areas of trees associated with Coalhouse Fort, at the eastern end of the drained marshes. A hedgerow runs along a section of the northern side of the Thames Estuary Path, extending west from Coalhouse Fort.
- 5.1.6 LCA D6: Chadwell Escarpment Urban Fringe rises up from the flat farmland of LCA C5: Tilbury Marshes and the Flexible Generation Plant main development site. Small

villages, hamlets and farmsteads are located here, elevated from what were poorly drained marshes. In contrast to the relative lack of vegetation and open character on the flat farmland to the south, there are trees, copses and hedgerows lining roads and lanes and located around housing on this higher land. This characteristic restricts the intervisibility between the proposed development and LCA D6.

- 5.1.7 The Thurrock Flexible Generation Plant would be situated on a small area of land immediately to the north of Tilbury Substation. Although in part an area of mown grassland, it has two sets of high voltage power lines crossing it and another immediately to the east. There would be a minor adverse effect on NCA 81: Thames Estuary and a moderate adverse effect on LCA C5: Tilbury Marshes, neither of which are significant.
- 5.1.8 It does not lie in or adjacent to the Kent Downs AONB and has no impact on the special qualities of the AONB, nor does it compromise the reasons for its designation.

5.2 Visual Resources and Receptors

- 5.2.1 The visual resources of the area are complex. As the land adjacent to this part of the River Thames is very flat, changes in topography and vertical elements such as buildings, ships and pylons are noticeable, but also more effective as screens. Due to the broad floodplain of the river, wide views are available from north Kent. As the river curves round to the north, the wind turbines and cranes at Tilbury docks are just distinguishable from the Hoo Peninsula. However, although low-lying, the ridgeline that curves south to Coalhouse Fort, with its attendant tree planting, provides an effective screen for views to the north. While the Thurrock Flexible Generation Plant development would be visible in some views looking west from north Kent, the long distance and small percentage of the wide view occupied by the development would mean that the effects from this direction are only negligible to minor adverse, which are not significant.
- 5.2.2 From the waterfront at Gravesend the views north are effectively shortened by a series of industrial infrastructure elements, such as the sewage treatment works, the jetties adjacent to the power station, the electrical substation and the dense wirescape of pylons and overhead power lines. Other locations on the south side of the Thames which have near open views across the river to Zone G are at worst moderately adversely affected. These include tourist and leisure visual receptors for specific locations on the Saxon Shore Way in the vicinity of Viewpoint 23 (Figure 4.14) and Gravesend Waterfront / Gordon Gardens. From higher land in north Kent, be it Windmill Hill in Gravesend or further east from the edge of the Kent Downs AONB, the industrial buildings on the north side of the estuary do not break the skyline and the

backdrop is formed either by the low Chadwell St. Mary – West Tilbury – East Tilbury ridgeline, or in some more elevated hills, Horndon-on-the-Hill. The effects on views from this direction would vary from negligible to minor adverse, which are not significant.

- 5.2.3 From the south-west the views towards the flat farmland are short, curtailed by the sewage treatment works and the woodland that surrounds it, as well as the multitudinous pylons and overhead power lines. Views from Tilbury Fort towards the proposed development will be restricted by these elements in the landscape. The effect on views from this direction would range from negligible to minor adverse, which is not significant.
- 5.2.4 From Fort Road bridge and from the easternmost properties at Tilbury, the Thurrock Flexible Generation Plant development will be seen in the context of the infrastructure and pylons in the foreground. From the residences, the vegetation along the railway will help to screen views of the lower elements of the development. The effects on views vary from minor to moderate, which are not significant.
- 5.2.5 From the flat farmland immediately to the north of the railway line, views are across arable farmland crossed by pylons and overhead powerlines towards Tilbury Substation, and beyond to higher land in north Kent. From the ridgeline the elevation gives views into and across the drained marshland. The full extent of the pylons and power lines are revealed as are the industrial and dockside operations to the west of Zone A. While most views from this direction would only experience a less than or equal to minor adverse effect, elevated views from directly north and close views from the Access Land to the north will experience moderate adverse effects, which are not significant, **to major adverse, from discrete areas of Access Land including those along Fort Road and Cooper Shaw Road, which are significant.** However, these visual effects are not judged to be unacceptable, given the existing industrial and dockside landscape context of the Thurrock Flexible Generation Plant.
- 5.2.6 Views west towards Zone A from locations on the northern side of the River Thames are gained from a few locations at Coalhouse Fort. However, due to distance and intervening vegetation, the effects would be none to minor to negligible adverse, which are not significant.
- 5.2.7 From the Thames Estuary Path/Two Forts Way/Footpath 146, the views are limited until the area of farmland that is being land raised is passed, travelling west along the path. For a short section, the elevation orientation and the lack of vegetation on the northern side of the path would allow views across to the Thurrock Flexible Generation Plant and the causeway, the context of the view being that of the existing substation, powerlines and, for the causeway, the existing jetties and wharfs on the northern bank

of the River Thames. The effect on the views from this direction would be moderate, which are not significant.

Table 5.1: Summary of potential environment effects, mitigation and monitoring.

Description of impact	Measures adopted as part of the project	Magnitude of impact	Sensitivity of receptor	Significance of effect	Additional measures	Residual effect	Proposed monitoring
Construction							
Direct and indirect impacts on landscape resources and receptors	None at the construction phase	Minor to moderate	Medium	Minor to moderate adverse (not significant in EIA terms)	None	Minor to moderate adverse (not significant in EIA terms)	None
Direct impact on visual resources and receptors	None at the construction phase	No change to major	Low to high	Negligible to major adverse (not significant to significant in EIA terms)	None	None to major adverse (not significant to significant in EIA terms)	None
Operation							
Direct and indirect impacts on landscape resources and receptors	Built in landscape mitigation measures will form part of the proposed development (see Table 2.8)	Negligible to moderate	Low to medium	Negligible to moderate adverse (not significant in EIA terms)	None	Negligible to moderate adverse (not significant in EIA terms)	Five-year defects liability period
Direct impact on visual resources and receptors	Built in landscape mitigation measures will form part of the proposed development (see Table 2.8)	No change to major	Low to high	Negligible to major adverse (not significant to significant in EIA terms)	None	Negligible to major adverse (not significant to significant in EIA terms)	Five-year defects liability period
Decommissioning							
Direct and indirect impacts on landscape resources and receptors	None at the decommissioning phase	Negligible to moderate	Medium	Negligible to moderate adverse (not significant in EIA terms)	None	Negligible to moderate adverse (not significant in EIA terms)	None
Direct impact on visual resources and receptors	None at the decommissioning phase	Negligible to moderate	Low to high	Negligible to moderate to major (not significant to significant in EIA terms)	None	Negligible to moderate to major adverse (not significant to significant in EIA terms)	None

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