

**Vattenfall Wind Power Ltd**  
**Thanet Extension Offshore Wind Farm**

**Environmental Statement Volume 3**

**Chapter 2: Onshore Landscape and Visual Impact Assessment**

June 2018, Revision A

Document Reference: 6.3.2

Pursuant to: APFP Reg. 5(2)(a)





Copyright © 2018 Vattenfall Wind Power Ltd  
All pre-existing rights retained

Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Volume 3

Chapter 2: Onshore Landscape and Visual Impact Assessment

June 2018

Drafted By:	Optimised Environments Ltd
Approved By:	Helen Jameson
Date of Approval	June 2018
Revision	A

Vattenfall Wind Power Ltd

First Floor

1 Tudor Street

London

EC4Y 0AH

T +44 207 451 1150

[www.vattenfall.co.uk](http://www.vattenfall.co.uk)

**Table of Contents**

2 LANDSCAPE AND VISUAL ..... 2-1

2.1 Introduction..... 2-1

2.2 Statutory and policy context ..... 2-2

European Landscape Convention..... 2-2

Evidence and Policy..... 2-2

2.3 Consultation and scoping..... 2-6

2.4 Scope and methodology..... 2-16

Relevant guidance ..... 2-16

Study area..... 2-16

Baseline survey methodology ..... 2-16

Desk Study ..... 2-16

Field survey..... 2-17

Elements Scoped Out of Assessment..... 2-17

Categories of Effects ..... 2-17

2.5 Assessment criteria and assignment of significance..... 2-18

Landscape baseline ..... 2-19

Sensitivity to change ..... 2-19

Value of the Seascape/ Landscape Receptor ..... 2-19

Susceptibility to Change ..... 2-19

Sensitivity rating..... 2-20

Magnitude of change ..... 2-21

Size or Scale of Change..... 2-21

Geographical Extent ..... 2-22

Duration and Reversibility..... 2-22

Magnitude of Change Rating..... 2-22

Significance of effects ..... 2-23

Visual effects – assessment criteria ..... 2-23

Visual baseline..... 2-24

Sensitivity to change ..... 2-24

Value of the View ..... 2-24

Susceptibility to Change..... 2-25

Sensitivity Rating ..... 2-25

Magnitude of change ..... 2-26

Size or Scale..... 2-26

Geographical Extent..... 2-27

Magnitude of Change Rating ..... 2-27

Significance of effects ..... 2-29

Nature of effects ..... 2-29

Duration and reversibility ..... 2-30

2.6 Uncertainty and technical difficulties encountered ..... 2-30

Substation Zone of Theoretical Visibility Analysis ..... 2-30

Visualisations..... 2-31

2.7 Existing environment - Landscape ..... 2-31

Introduction ..... 2-31

Physical landscape ..... 2-31

Landscape Character..... 2-32

Landscape Designations..... 2-33

2.8 Existing environment - Visual..... 2-33

Introduction ..... 2-33

Substation ..... 2-33

Onshore cable route and landfall ..... 2-35

2.9 Existing environment: Cumulative ..... 2-35

Existing cumulative context ..... 2-35

Cumulative sites for consideration in the LVIA..... 2-35

2.10 Key parameters for assessment..... 2-38

2.11 Potential Effects ..... 2-39

Potential effects during construction ..... 2-39

Potential effects during O&M..... 2-39

Potential effects during decommissioning ..... 2-39

Potential cumulative effects ..... 2-40

Tier 1 ..... 2-40

Tier 2..... 2-40

Tier 3..... 2-40

Potential Effects Summary ..... 2-40

2.12 Embedded Mitigation..... 2-41

Embedded Mitigation..... 2-41

Construction Phase Mitigation..... 2-41

O&M Phase Mitigation..... 2-42

2.13 Physical Landscape Effects Assessment ..... 2-42

Preliminary Assessment ..... 2-42

2.14 Landscape Character Effects Assessment ..... 2-45

Substation Preliminary Assessment ..... 2-45

Substation landscape character effects assessment ..... 2-46

Cable route and landfall preliminary assessment..... 2-49

Cable route and landfall landscape character effects assessment..... 2-51

2.15 Visual Effects Assessment ..... 2-55

Substation preliminary assessment ..... 2-55

Viewpoints..... 2-55

Principal Visual Receptors ..... 2-55

Summary of substation preliminary assessment of visual receptors ..... 2-59

Substation visual effects assessment..... 2-60

Cable route and landfall preliminary assessment..... 2-66

Viewpoints..... 2-66

Principal Visual Receptors ..... 2-66

Summary of cable route and landfall preliminary assessment of visual receptors..... 2-67

Cable route and landfall visual effects assessment ..... 2-68

2.16 Cumulative Assessment ..... 2-72

Preliminary Assessment ..... 2-72

Summary of Cumulative Assessment..... 2-73

2.17 Inter-relationships..... 2-73

2.18 Summary of Effects ..... 2-73

Landscape..... 2-73

Visual ..... 2-74

2.19 Conclusion ..... 2-74

2.20 Summary effects tables..... 2-75

2.21 References..... 2-81

Table 2.1: Legislation and policy context..... 2-2

Table 2.2: Summary of PEIR consultation relating to LVIA..... 2-6

Table 2.3: Significance of potential effects..... 2-18

Table 2.4: Sensitivity to change – seascape/ landscape receptors ..... 2-20

Table 2.5: Magnitude of change – effects on landscape character ..... 2-22

Table 2.6: Magnitude of change – landscape receptors ..... 2-23

Table 2.7: Sensitivity to change – visual receptors..... 2-25

Table 2.8: Magnitude of change – visual effects ..... 2-27

Table 2.9: Magnitude of change – visual receptors ..... 2-29

Table 2.10: Substation viewpoint Locations..... 2-34

Table 2.11: Onshore Cable route and landfall viewpoint Locations ..... 2-35

Table 2.12: Cumulative developments within the LVIA study area ..... 2-36

Table 2.13: Maximum design scenario considered in the LVIA Rochdale Envelope..... 2-38

Table 2.14: Potential effects summary..... 2-41

Table 2.15: Physical Landscape Effects Assessment..... 2-43

Table 2.16: Substation preliminary assessment - LCAs ..... 2-45

Table 2.17: Substation landscape character effects assessment ..... 2-46

Table 2.18: Cable route and landfall preliminary assessment of LCAs..... 2-49

Table 2.19: Cable route and landfall landscape character effects assessment..... 2-51

Table 2.20: Substation Preliminary assessment of viewpoints ..... 2-55

Table 2.21: Substation Preliminary assessment of settlements ..... 2-56

Table 2.22: Substation Preliminary assessment of transport routes ..... 2-57

Table 2.23: Substation preliminary assessment of recreational routes..... 2-58

Table 2.24: Substation visual effects assessment ..... 2-60

Table 2.25: Cable route and landfall Preliminary assessment of viewpoints..... 2-66

Table 2.26: Cable route and landfall preliminary assessment of settlements ..... 2-66



Table 2.27: Cable route and landfall preliminary assessment of transport routes..... 2-66

Table 2.28: Cable route and landfall preliminary assessment of recreational routes ..... 2-67

Table 2.29: Cable route and landfall visual effects assessment ..... 2-68

Table 2.30: Preliminary assessment of cumulative developments ..... 2-72

Table 2.31: Summary of predicted O&M effects of the onshore substation, cable route and landfall ..... 2-75

Table 2.32: Summary of predicted Construction effects of the onshore substation, cable route and landfall..... 2-77

Table 2.33: Summary of predicted Decommissioning effects of the onshore substation, cable route and landfall ..... 2-79



## 2 LANDSCAPE AND VISUAL

### 2.1 Introduction

- 2.1.1 This chapter of the Environmental Statement (ES) presents the Landscape and Visual Impact Assessment (LVIA) for the onshore elements of the proposed Thanet Extension Offshore Wind Farm (Thanet Extension) during the Construction, Operations and Maintenance (O&M) and Decommissioning phases. The onshore elements of Thanet Extension assessed in the LVIA consist of the proposed onshore substation, onshore cable and landfall (herein referred to as ‘the proposed development’). The LVIA assesses the likely significant effects of the proposed development on landscape and visual amenity, within the defined LVIA study area.
- 2.1.2 The assessment has been undertaken by Chartered Landscape Architects at Optimised Environments (OPEN) on behalf of VWPL. The LVIA has been prepared in accordance with National Policy Statement (NPS) with specific reference to NPS for Energy (NPS EN-1, July 2011). The assessment has been carried out in accordance with the LVIA Methodology set out in Section 12.4.
- 2.1.3 The following elements have been assessed in detail within the LVIA of the onshore elements of Thanet Extension Offshore Wind Farm:
- Proposed substation: the onshore LVIA assesses the potential effects of the proposed substation on landscape character and visual amenity; and
  - Onshore cable route: the onshore LVIA assesses the potential effects of the onshore Cable Route on landscape character and visual amenity including the landfall and cable route options within Pegwell Country Park.
- 2.1.4 Detailed descriptions of these elements are provided in Volume 3, Chapter 1 of the ES (Project Description (Onshore), Document Ref: 6.3.1). Figures relating to this chapter are listed below and are contained in Annex 2-1 of Volume 6 of the ES and include GIS mapping of the study area, Zone of Theoretical Visibility (ZTV) maps, and visualisations.
- This LVIA has been carried out in conjunction with the design iteration of the onshore elements of Thanet Extension as documented in Volume 1, Chapter 4, Site Selection and Alternatives (Document Ref: 6.1.4), and has informed the layout and design of the substation, onshore cable route and landfall options.
- 2.1.5 The remainder of this chapter is structured as follows:
- 2.2 Statutory and policy context – a short summary of legislation and national policy of relevance that has been taken into account in this chapter;

- 2.3 Consultation and scoping – a summary of the consultation with statutory and non-statutory consultees and the principal issues arising from the Planning Inspectorate (PINS) scoping opinion and Evidence Plan;
- 2.4 Scope and methodology – a summary of the scope and methodology used in undertaking the LVIA. The full LVIA methodology is provided in full in Section 12.4 and 12.5 of Chapter 12, Volume 2 of this ES;
- 2.5 Assessment criteria and assignment of significance – outline of the significance criteria used, including thresholds for assessing the sensitivity of the environment and magnitude of change;
- 2.6 Uncertainty and technical difficulties encountered – the main assumptions and limitations for the LVIA;
- 2.7 Existing environment: Landscape – preliminary assessment and description of those aspects of the landscape that are likely to be affected significantly by the onshore elements of Thanet Extension;
- 2.8 Existing environment: Visual – preliminary assessment and description of those aspects of the visual environment that are likely to be affected significantly by the onshore elements of Thanet Extension
- 2.9 Existing environment: Cumulative – description of baseline cumulative influence and cumulative developments within the study area;
- 2.10 Key parameters for assessment – identification of the maximum adverse effect scenario in terms of the landscape and visual environment, defined by the project design envelope of the onshore elements of Thanet Extension;
- 2.11: Potential Effects;
- 2.12 Mitigation – mitigation of the project design envelope that has been included in the project either to specifically mitigate anticipated impacts or to avoid or reduce impacts. The subsequent assessment stage of the Environmental Impact Assessment (EIA) is based on the ‘mitigated’ design;
- 2.13 Physical Landscape Effects Assessment - detailed assessment of likely significant physical landscape effects resulting from the O&M, construction and decommissioning of the onshore elements of Thanet Extension;
- 2.14 Landscape Character effects assessment: – detailed assessment of likely significant landscape character effects resulting from the O&M, construction and decommissioning of the onshore elements of Thanet Extension;
- 2.15 Visual effects assessment: – detailed assessment of likely significant visual effects resulting from the O&M, construction and decommissioning of the onshore elements of Thanet Extension;



- 2.16 Cumulative Assessment;
- 2.17 Summary of effects – a summary of the likely significant seascape, landscape and visual effects of the onshore elements of Thanet Extension;
- 2.19 Conclusion – conclusions of the LVIA and the likely significant seascape, landscape and visual effects of the onshore elements of Thanet Extension;
- 2.20 Summary Effects Tables; and
- 2.21 References - Information sources referred to during the preparation of the LVIA.

2.1.6 The LVIA is supported by plan graphics and visual representations as follows:

- *Volume 6, Annex 2-1 and 2-2: LVIA Figures and Visualisations* (Document Ref: 6.6.2.1 and 6.6.2.2 respectively). Containing map figures, including ZTV maps; and visual representations, including baseline panorama views, wirelines and photomontages.

## 2.2 Statutory and policy context

### European Landscape Convention

2.2.1 The European Landscape Convention (ELC) is devoted exclusively to the protection, management and planning of all landscapes in Europe. Landscape is described as *"an area, as perceived by people, whose character is the result of the action and interaction of natural and/ or human factors"* (ELC, 2000). The definition applies to all urban and peri-urban landscapes, towns, villages, rural areas, the coast and inland areas. In addition, it applies to ordinary or even degraded landscape as well as those areas that are of outstanding value or protected.

2.2.2 The ELC became binding in the UK from 1 March 2007. As a signatory, the UK government has therefore undertaken to adopt general policies and measures to protect, manage and plan landscapes as follows:

- To recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity;
- To establish and implement landscape policies aimed at landscape protection, management and planning through the adoption of the specific measures. These include awareness-raising, training and education, identification and assessment of landscapes, definition of landscape quality objectives and the implementation of landscape policies;
- To establish procedures for the participation of the general public, local and regional authorities, and other parties with an interest in the definition and implementation of the landscape policies mentioned above; and

- To integrate landscape into regional and town planning policies and in cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape.

2.2.3 Landscape policy in the UK is already closely aligned with the Convention, and before UK ratification a Regulatory Impact Assessment had demonstrated that existing procedures and practice (through the work over many years of government agencies, local government and Non-Governmental Organisations (NGOs) such as the National Trust) are compliant with its formal requirements. Given the UK's adoption of the ELC and its aims, the ELC gives an appropriate basis for the importance placed on the UK landscape.

### Evidence and Policy

**Table 2.1: Legislation and policy context**

Policy/legislation	Key provisions	Section where provision addressed
NPS EN-1 National Policy Statement for Energy	Paragraph 5.9.5 of EN-1 advises that the applicant should carry out a landscape and visual assessment and makes reference to the following documents: <ul style="list-style-type: none"> <li>• Landscape Institute and Institute of Environmental Management and Assessment (2002, 2nd edition): Guidelines for Landscape and Visual Impact Assessment; and</li> <li>• Land Use Consultants (2002): Landscape Character Assessment – Guidance for England and Scotland.</li> </ul>	The Guidelines for Landscape and Visual Impact Assessment (GLVIA) (2002, 2nd edition) have been superseded by GLVIA Version 3.  This LVIA has been prepared following the more recent GLVIA 3 as described in section 2.4 and Offshore SLVIA in Section 12.5, Chapter 12 of Volume 2 (Document Ref: 6.2.12).
	Paragraph 5.9.5 of EN-1 advises – <i>'The landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England.'</i>	Character assessments for the onshore study area and policies are referred to in Section 2.7.



Policy/legislation	Key provisions	Section where provision addressed
NPS EN-1 National Policy Statement for Energy (Continued)	Paragraph 5.9.6 of EN-1 advises – <i>‘The applicant’s assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.’</i>	The effect on landscape components and landscape character during construction, O&M and decommissioning are assessed in the LVIA. Sections 2.13, 2.14 and 2.15.
	Paragraph 5.9.8 of EN-1 advises - <i>‘Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. Virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.’</i>	The quality, value and capacity of the landscape to accommodate change is a consideration of the landscape assessment. Sections 2.13 and 2.14. The design of the project has taken into account the potential impact on the landscape in order to minimise harm by mitigation of landscape effects. Section 2.12.
	Paragraph 5.9.12 of EN-1 advises – <i>‘The duty to have regard to the purposes of nationally designated areas also applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints.’</i> ... and paragraph 5.9.13 advises <i>‘The fact that a proposed project will be visible from within a designated area should not in itself be a reason for refusing consent.’</i>	The Kent Downs Area of Outstanding Natural Beauty (AONB) lies beyond 13 km to the south and south-west of the onshore elements of Thanet Extension and over 10 km beyond the agreed onshore study area. There is only 1 Registered Park and Garden (RPG) lying within onshore study area. Section 2.7.

Policy/legislation	Key provisions	Section where provision addressed
NPS EN-1 National Policy Statement for Energy (Continued)	Paragraph 5.9.14 of EN-1 advises – <i>‘Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.’</i>	The value of the local landscape is a consideration within the LVIA. Sections 2.13, 2.14 and 2.15.
	Paragraph 5.9.16 of EN-1 advises – <i>‘The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.’</i>	Volume 1, Chapter 3 Approach to EIA (Document Ref: 6.1.3) and Chapter 4 Site Selection and Alternatives (Document Ref: 6.1.4) set out the iterative process that has influenced the design of the Project. The mitigation of landscape and visual effects has been carefully considered in the LVIA, to minimise ‘harm to the landscape’ where possible. Section 2.12.
	In relation to visual impact, paragraph 5.9.19 of EN-1 advises that <i>‘It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors. This may assist the IPC in judging the weight it should give to the assessed visual impacts of the proposed development.’</i>	The visualisations on Figures 2.11 – 2.23 and reference photography on Figures 2.8a-f include reference to examples of permitted and operational infrastructure within the context of the proposed development including the existing Nemo and TOWF substations and the Nemo cable bund.



Policy/legislation	Key provisions	Section where provision addressed
	Paragraph 5.9.22 of EN-1 advises – <i>‘Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.’</i>	As described in Chapter 1 – Onshore Project Description (Document Ref: 6.3.1) and the Design and Access Statement (Document Ref: 8.16), the refinement of the Red Line Boundary (RLB) in which the proposed development would be built, has been carefully considered alongside the potential for landscape and visual effects, including the position of infrastructure alongside existing infrastructure to limit the spread of effects across the Country Park. Section 2.12.
NPS EN-3 National Policy Statement for Renewable Energy Infrastructure	Paragraph 2.4.2 of NPS EN3 advises – <i>‘Proposals for renewable energy infrastructure should demonstrate good design in respect of landscape and visual amenity, and in the design of the project to mitigate impacts such as noise and effects on ecology.’</i>	The mitigation of landscape and visual effects through good design are considered within the LVIA. Section 2.12.
	Paragraph 2.6.204 of NPS EN3 advises – <i>‘As part of the SVIA, photomontages are likely to be required. Viewpoints to be used for the SVIA should be selected in consultation with the statutory consultees at the EIA Scoping stage.’</i>  Note: SVIA is an anachronism of <i>‘seascape and visual impact assessment’</i> within NPS EN-3.	Viewpoint locations were agreed following the evidence plan consultation meeting and subsequent correspondence that took into account consultee feedback. Section 2.8.

Policy/legislation	Key provisions	Section where provision addressed
NPS EN-5 Electricity Networks Infrastructure	Paragraph 2.8.2 of NPS EN5 advises – <i>‘New substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts. Cumulative landscape and visual impacts can arise where new overhead lines are required along with other related developments such as substations, wind farms and/or other new sources of power generation’.</i>	The proposed grid connection is to be underground. The LVIA has assessed the effects of the underground grid connection during construction and any residual effects that may arise following ground/vegetation reinstatement. The effects of the proposed substation have been assessed in the LVIA. Sections 2.13, 2.14 and 2.15.
	Paragraph 2.8.3 of NPS EN5 advises – <i>‘Sometimes positive landscape and visual benefits can arise through the reconfiguration or rationalisation of existing electricity network infrastructure.’</i>	It is understood that Nemo have designed the above ground infrastructure in collaboration with Kent Wildlife Trust (KWT) to ensure a net gain to the country park and establishment of a chalk grassland habitat. Thanet Extension propose to develop a landscape and ecological mitigation plan in consultation with appropriate stakeholders in which key objectives, inclusive of appropriate landscape enhancement will be explored. Section 2.12.



Policy/legislation	Key provisions	Section where provision addressed
National Planning Policy Framework (NPPF)	Paragraph 115 of NPPF advises – <i>‘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 landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads.’</i>	The Kent Downs AONB lies beyond 13 km to the south and south-west of the onshore elements of Thanet Extension and over 10 km beyond the agreed onshore study area. Section 2.4.
Thanet District Council (TDC) 2006 Local Plan Saved Policies POLICY D7 - Areas of high townscape value	This policy identifies areas of high townscape value and the policy seeks to conserve or enhance these areas stating that <i>‘development will be allowed only where the design, scale of development, separation between buildings, use of materials and landscaping are complementary to the special character of the area.’</i>	The primary aim of this policy is to protect these areas from unsuitable development occurring within them or within neighbouring areas, nevertheless, the higher townscape value has been acknowledged in the LVIA baseline. Section 2.7.
TDC 2006 Local Plan Saved Policies POLICY CC2 - Landscape character areas	Policy principles are outlined for development within the following areas: Pegwell Bay; Wantsum Channel; central Chalk Plateau; Quex Park and the Urban Coast. Most relevant to Thanet Extension are the principles for Urban Coast – <i>‘At the urban coast, development that does not reflect the traditional seafront architecture of the area, maintain existing open spaces and long sweeping views of the coastline will not be permitted’.</i>	The LVIA has assessed the effects on Thanet’s towns and villages within the settlement section of the assessment of principal visual receptors. Section 2.15.

Policy/legislation	Key provisions	Section where provision addressed
Draft Thanet Local Plan 2031 – Preferred Options Consultation (January 2015) Policy SP22 – Protection and Enhancement of Thanet’s Historic Landscapes	<i>‘Development proposals should demonstrate that their location, scale, design and materials will protect, conserve and, where possible, enhance: 1) Thanet’s local distinctiveness including historical, biodiversity and cultural character 2) gaps between Thanet’s towns and villages 3) visually sensitive skylines and seascapes’</i>  Policy principles are then outlined for development within the following areas: Pegwell Bay; Wantsum Channel; central Chalk Plateau; Quex Park and the Urban Coast. Most relevant to Thanet Extension are the principles for Urban Coast – <i>‘At the urban coast, development that does not reflect the traditional seafront architecture of the area, maintain existing open spaces and long sweeping views of the coastline will not be permitted’.</i>	The LVIA has assessed the effects on Thanet’s towns and villages within the settlement section of the assessment of principal visual receptors. Section 2.15.
Draft Thanet Local Plan 2031 – Preferred Options Consultation (January 2015) Policy CC05 – Renewable energy installations	<i>‘Proposals for renewable energy installations incorporated in new developments or existing buildings will be permitted, subject to there being no unacceptable detrimental visual or environmental impact.’</i>	The effect of built onshore elements of Thanet Extension are assessed within the LVIA. Sections 2.13, 2.14 and 2.15.

Policy/legislation	Key provisions	Section where provision addressed
Dover District Council (DDC) LDF Core Strategy 2010 Policy DM 16 - Landscape Character	<i>'Development that would harm the character of the landscape, as identified through the process of landscape character assessment will only be permitted if: i. It is in accordance with allocations made in Development Plan Documents and incorporates any necessary avoidance and mitigation measures; or ii. It can be sited to avoid or reduce the harm and/or incorporate design measures to mitigate the impacts to an acceptable level.'</i>	Landscape character effects are assessed within the LVIA. Section 2.14
DDC LDF Core Strategy 2010 Policy DM 19 - Historic Parks and Gardens	<i>'Permission will not be given for development proposals that would adversely affect the character, fabric, features, setting, or views to and from the District's Historic Parks and Gardens.'</i>	Historic Parks and Gardens are considered within the LVIA. Section 2.7

### 2.3 Consultation and scoping

2.3.1 Consultation and scoping with stakeholders helped to facilitate proportionate and efficient assessment in the LVIA, by focusing on the likely significant issues and effects. Table 2.2 provides a summary of the principal issues from the PINS scoping opinion, further non-statutory consultation with stakeholders during the preliminary environmental information (PEI) stages of assessment and further feedback and consultation following section 42 responses (s42) to the PEI submission. It also describes how issues raised by consultees have been addressed in the LVIA. Full details of consultation and scoping are included in a separate consultation report which will be provided with the final application.

Table 2.2: Summary of PEIR consultation relating to LVIA

Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
February 2017 Scoping Opinion - PINS	The ES should describe the model used, providing information on the area, timings of any survey work and the methodology used. The SoS requests that the ES include more detail on this including, a clear justification for the definition of each of the study areas chosen.	Section 2.4 and 2.1
	The SoS considers it more appropriate for the study area of the onshore cable route to extend from the outer edges of the cable corridor and not from the centre line.	Section 2.4
	Justification for the five viewpoints chosen has not been provided in the Scoping Report, this should be included in the ES. The SoS notes that viewpoints will be agreed with stakeholders, and welcomes this approach. The Applicant should take note of NE's view on their involvement in providing comments in relation to this topic chapter as set out in their consultation response.	Section 2.8
	Cumulative landscape and visual impacts of landfall options are to be scoped out for all stages of the development. The SoS endorses the comments of DDC in their consultation response (Appendix 3 of this Opinion) that cumulative impacts with consented projects at the former power station site and the Richborough Connection Project should be assessed.	Sections 2.9 and 2.16



Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
	<p>It is also noted that landscape and visual (and cumulative impacts) of landfall options and onshore cable route options (outwith one kilometre buffer study area) and onshore substation area of interest (outwith five kilometre radius study area) are to be scoped out for all stages of the development. As a result of the study areas not being shown on a map or explained in terms of typology for example, the SoS deems there to be insufficient information to support this conclusion at this stage. Furthermore, as the projects to be considered in the CIA have not yet been determined, the SoS does not agree that construction phase cumulative impacts can be scoped out as it cannot be certain that other large developments may not be constructed concurrently and in proximity to the Proposed development.</p>	<p>Sections 2.9 and 2.16</p>
	<p>Landscape and visual impacts of landfall options (within one kilometre radius study area and onshore cable route options (within one kilometre buffer study area) should be scoped out for O&amp;M and decommissioning. The SoS agrees with this approach as minimal work will be required during O&amp;M and the works outlined are to remain in situ and not be decommissioned.</p>	<p>Sections 2.4 and 2.1</p>
	<p>LVIA should also include an assessment of any permanent access roads and other infrastructure required at the landfall and the substation.</p>	<p>Sections 2.4 and 2.1</p>

Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
	<p>Landscape Strategy to mitigate the impacts of the project. SoS will expect any landscaping strategy to be developed so as to ensure it is not contradictory to any measures that may be included in any ecological management plans. This should be developed with relevant statutory bodies and secured through the DCO. Lighting Strategies and other mitigation outlined in other topic chapters of the ES may also relate to the LVIA assessment and these should be clearly referenced in the ES</p>	<p>Section 2.12</p>
<p>02/02/2017 Scoping Opinion– DDC</p>	<p>Onshore cable route would appear to necessitate a 2 km buffer for survey coverage.</p>	<p>Section 2.4 and 2.1</p>
	<p>Bespoke landscape character assessment might be needed if published assessments are insufficient</p>	<p>Section 2.7</p>
	<p>Any landscape strategy would need to take into account consented proposals for other projects at the former power station site and the Richborough DCO currently awaiting decision.</p>	<p>Sections 2.9 and 2.16 provide further consideration of the Richborough connection project, noting that it has since been consented (2017).</p>
	<p>The ES should identify where there will be any loss of landscape features as a result of landfall at Sandwich Bay beach and the 7 km onshore cable route and whether the landscape will be subject to reinstatement. An outline landscape strategy should be prepared for the landfall sites and onshore cable route options, and also for the proposed onshore substation.</p>	<p>Volume 1, Chapter 3 Approach to EIA (Document Ref: 6.1.3) and Chapter 4 Site Selection and Alternatives (Document Ref: 6.1.4) set out the iterative process that has influenced the design of the Project.</p>

Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
02/02/2017 Scoping Opinion– DDC	It is assumed that a separate LVIA will be prepared for the onshore area. Viewpoints will need to be agreed with DDC to represent the impacts from the onshore elements, including onshore substation, onshore cable route and landfall site. Principal receptor for southern option is the England Coast Path and persons engaged in recreational activities on River Stour.	Section 2.8 presents further information with regards the viewpoints that were agreed under the Thanet Extension EIA Evidence Plan.
	The cumulative landscape and visual impacts of the landfall option and onshore cable route should be scoped in.	Sections 2.9 and 2.16
02/02/2017 Scoping Opinion – TDC	Onus is on the applicant to ensure the cumulative impact assessment identifies and assesses all relevant projects as defined in the advice note. A list of projects for the inter project cumulative effects that should be considered include - Manston Airport; Application for 785 dwellings; Application for 120 dwellings.	Sections 2.9 and 2.16
02/02/2017 Scoping Opinion – Natural England (NE)	NE welcomes intention to use landscape character assessment as it provides a sound basis for guiding, informing and understanding the ability of any location to accommodate change.	Section 2.7
	NE supports the proposed use of GLVIA3.	Section 2.1 and 2.4
	NE declined invitation to be involved in further consultation on LVIA methodology because NE only provides detailed advice on those proposals likely to have a significant adverse impact on nationally designated landscapes such as AONBs, none of which are close enough here to be the case.	Section 2.4
28/03/2017 Evidence Plan Meeting – TDC	Confirmed that the Thanet District Seascape/ Landscape Character Assessment (LCA) was currently at draft stage and was likely to be going to members over the coming weeks. TDC took an action to update on this and provide a copy of the Thanet LCA when available.	Section 2.7

Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
28/03/2017 Evidence Plan Meeting – Dover District Council, TDC and Kent County Council (KCC)	5 km study area for the onshore substation was proposed, based on the visibility shown in the ZTV (generated using a model of the onshore substation area of interest at the 16m maximum height) and also based on site survey work which has confirmed that vegetation and other built environment features limit views to relatively close locations. Approach agreed.	Section 2.4 and 2.8
	1 km study area from the final cable trench route was proposed. Approach agreed, but would need to remain flexible to allow for the micrositing of the cable trench as appropriate.	
28/03/2017 Evidence Plan Meeting – TDC	Viewpoint locations agreed as appropriate for assessment of onshore substation - <ul style="list-style-type: none"> <li>Richborough Castle (on footpath just to west of Castle)</li> <li>Thorne Hill</li> <li>Saxon Shore Way (south of bridge)</li> <li>A256, Richborough Way</li> <li>Sevonscore crossing – considered more appropriate than country park viewpoints but may require micrositing as the project design process develops.</li> </ul> Agreed that viewpoints for the onshore cable route as being based on the principles of two viewpoints per onshore cable route option, one at the landfall and one on the eventual route.	Section 2.7
	Confirmed that the Thanet District Seascape/ Landscape Character Assessment (LCA) was currently at draft stage and was likely to be going to members over the coming weeks. TDC took an action to update on this and provide a copy of the Thanet LCA when available.	



Date and consultation phase/ type	Consultation and key issues raised	Section where comment addressed
28/03/2017 Evidence Plan Meeting – KCC	In relation to viewpoint selection - confirmed that there is also a heritage site at Ebbsfleet Hill that should also be considered when refining the viewpoints but Sevenscore looked appropriate.	Section 2.8
28/03/2017 Evidence Plan Meeting – DDC	Additional viewpoint requested on Saxon Shore Way - more northerly VP on the path, in proximity to the railway bridge.  Additional viewpoint requested on A257 near Ash – requested to represent views from the south that was also used in assessments of Richborough Connection.	Section 2.8

Table 2.2a: Summary of S42 consultation relating to LVIA

Date and consultation phase/ type	Consultation and key issues raised	Response / section where comment addressed
12/01/2018 S42 responses – Dover District Council	<p>In respect of landscaping, again limited information has been provided at this stage. Further details could be provided and consideration should be given to the timing of any identified mitigation works, the mechanism for securing landscape works and whether these could be implemented at the early stages of construction to allow for proposals to become established.</p>	<p>Outline landscape mitigation proposals included in ES. See Section 2.12 and Figure 2.10</p>
	<p>Para. 2.8.6 describes how certain viewpoints agreed with the DDC were rejected when the final substation location was fixed. It is unfortunate that the DDC was not re-consulted on viewpoints in the light of the entirely new location of the proposed substation. The 5km buffer zone was agreed prior to the re-siting of the substation and was adjacent to existing structures.</p>	<p>The change in circumstances of a changed substation location resulted in some of the earlier agreed viewpoints having no potential view of proposed development and are therefore no longer required. Additional viewpoints, where the changed substation location would potentially be visible, were presented at the time of finalising the design, during Evidence Plan Meeting on 3/10/17. See also the Evidence Plan Report (Document Ref. 8.5) and Site Selection and Alternatives (Document Ref: 6.1.4). The 5 km study area buffer was established using the substation location area presented at PEI which only slightly varies in extent when compared to the 5 km study area buffer presented during earlier consultations when the substations proposed location was within the site of the old Richborough Power Station. There is very little difference in the bare ground potential visibility of a proposed substation located at either of these locations, however, the current Richborough Port location is less visible when intervening vegetation and other built structures are taken into consideration. See section 2.4</p>
	<p>Para. 2.10.1 states that the LVIA is based on the Rochdale Envelope and the parameters relevant to the LVIA are set out in compliance with EIA regulations, the likely significant effects of a worst-case scenario are assessed and illustrated in the LVIA. This is not entirely the case. The lack of winter views is illustrative of this, as is the substation building location in Viewpoint 1. A worst-case scenario would be having the building closest to the corner by the roundabout.</p>	<p>The assessment considers a worst-case situation for all landscape and visual receptors included in the Onshore LVIA with the assumption that the substation could be positioned anywhere within the maximum parameter block. See section 2.6.6. It is acknowledged, however, that an additional visualisation showing the substation building as closest to the view from Richborough Port Roundabout may assist DDC in the review of the visual effects from viewpoint 1 at the roundabout. For this reason, an additional visualisation showing this alternate substation building location has been included in the LVIA chapter of the ES for viewpoint 1. See Figure 2.11.  In relation to DDC comments on winter vegetation and seasonality, additional visualisations showing winter vegetation have been provided in the LVIA chapter of the ES for viewpoints 1, 3 and 4, as agreed with DDC. See Figures 2.11, 2.13 and 2.14. The maximum parameter block of the substation area also formed the basis for ZTV production. See section 2.4 and Figure 2.6</p>
	<p>Para. 2.12.1 considers that primary mitigation in respect of the proposed substation, onshore cable route and landfall has involved the sensitive siting and design of the onshore infrastructure during site selection, to ensure the potential impacts are avoided or reduced. The LPA considers that without better LVIA considerations from the England Coast Path at ‘Sandwich Flats’ and the Stour Valley Walk at Shellness such an assertion by the applicant is weak, particularly given the reasoning for choosing this site over the original Para 4.10.4.</p>	<p>As described in previous comment, there is very little difference in the bare ground potential visibility of a proposed substation located at either the proposed substation location within the site at Richborough Port or the previous location to the west within the Energy Park. However, the current Richborough Port location is less visible when intervening vegetation and other built structures are taken into consideration. In relation to LVIA considerations from Sandwich Flats See sections 2.8.6 to 2.8.7. The LVIA therefore supports the selection of the Richborough Port proposed substation site when compared to the previous location within the Energy Park, although both locations are on brownfield sites within an industrial context and are considered to have capacity to accommodate development of this type. No significant effects have been identified for walkers on recreational routes within Sandwich Flats.</p>



Date and consultation phase/ type	Consultation and key issues raised	Response / section where comment addressed
		Other reference photographs are also provided on Figures 2.8a-f, Context Photo Sheets 1-6, including views from the section of Stour Valley Walk that runs along the east coast of Sandwich Flats, the Saxon Shore Way adjacent to the Richborough Energy Park and views of existing industrial context from The England Coast Path.
12/01/2018 S42 responses – Dover District Council	Para. 2.12.5 states that “existing tree planting around the proposed substation area is substantial and together with other vegetation and built elements in the wider landscape provide visual screening for the majority of visual receptors in the area. No further landscape mitigation is therefore considered required to mitigate landscape and visual effects.” Viewpoint (1) illustrates clearly that additional tree planting on the northern boundary of the proposed substation boundary would assist in screening views from the A256. It may also be the case that views from Shellness which are probably unscreened may be filtered by planting on the NE boundary of the proposed substation site.	Outline Landscape Strategy described in Section 2.12. Substation Landscape Mitigation Planting Plan shown on Figure 2.10. See also See sections 2.8.6 to 2.8.7 in relation to Shellness views.
	Table 2.17 there is an assessment of effect on the Sandwich Bay LCA. The commentary relates primarily to visibility, which has been questioned above. DDC wishes to reserve the right to comment until there is more information relating to visual impact on ‘Sandwich Flats’ and Shellness.	In relation to LVIA considerations from Sandwich Flats See sections 2.8.6 to 2.8.7
	Table 2.21 considers trees and vegetation north of the substation site area would intervene between the substation site and Ramsgate, however, from the northeast of the site there is a view cone along the estuary and over mudflats which may encompass Pegwell village and Ramsgate Harbour.	Additional Viewpoint included. Viewpoint 9 - Pegwell, promenade. See Figure 2.19.
	Table 2.23 has erroneous nomenclature. There is no adopted Kent Coastline Walk. The DDC considers the preliminary assessment weak in respect of the England Coastal Path (Viewpoint 4) given a closer view of the proposed substation is available.	Recreational route names identified in the PEI have been checked against these comments and the LVIA chapter of the ES updated accordingly. In relation to the sections of England Coast Path that are closer to the proposed substation location than viewpoint 4, the view is substantially restricted by small trees within the intervening area of nature reserve that coalesce to screen the view towards Richborough Port (this is the case even in winter months, as established during visual survey in winter months). As a result it is considered that viewpoint 4 still represents the worst-case view from this path and from Sandwich Flats (winter vegetation view), this is due to a combination of elevation on the flood berm with enough set back from nature reserve trees to allow a clearer line of site to Richborough Port. See Figure 2.14.
Table 2.23 views from the Stour Valley Walk have been scoped out: “The Stour Valley Walk is a walking route that follows the river Stour between Pegwell Bay and Bagham via Canterbury. There would be no visibility of the proposed substation from this route and as a result is not included in the detailed assessment”. DDC consider this an unreasonable opinion without any viewpoint analysis from route near Shellness.	In relation to LVIA considerations from Sandwich Flats See sections 2.8.6 to 2.8.7. See also Stour Valley Walk Preliminary Assessment in Table 2.23	

Date and consultation phase/ type	Consultation and key issues raised	Response / section where comment addressed
12/01/2018 S42 responses – Dover District Council	Section 2.16: Cumulative impact: This appears confused in respect of activities at Richborough Energy Park, where the Nemo Link (DOV/16/00109) is a standalone application distinct from the Richborough Connection (PINS EN020017), yet has not been considered as such. The Nemo Link involves the construction of a large interconnector building. There will be potential cumulative visual impacts of this building and the proposed substation in views from the A256 south of the roundabout (View 1). This was never considered relevant in the original consultation, as the preferred location of the substation was within the Richborough Energy Park. It is recommended that this is reviewed.	The Nemo link and Substation (Interconnector building) is considered within the LVIA baseline as it forms part of the existing environment. See section 2.9
	Summary: DDC considers that the visual impact assessment is incomplete in respect of the substation and recommends the selection of further viewpoints, to include winter views. A fuller visualisation of the contents of the proposed substation is also recommended. DDC viewpoints for the LVIA for the revised location of the substation have not been subject to consultation prior to the submission of the Draft PEIR.	Additional winter photography has been provided for VPs 1, 3 and 4. An alternative substation building location is also represented in VP1. See section 2.4 and Figures 2.11, 2.13 and 2.14.
	The proposed bunds have not been modelled in the LVIA as the location is not known; therefore these have not been assessed through this process and need to be included to offer an accurate representation of the likely impact of all the works and their cumulative impact.	The photographs and other graphic material such as wirelines, photomontages and ZTVs used in this assessment are for illustrative purposes only and are not a substitute for the written LVIA. The assessment parameters for the LVIA are described in Section 2.10. The proposed cable route option for a NEMO crossing has now been discounted as an option for the onshore cable route and the NEMO crossing bund is therefore not required to be modelled.
	There is very little reference to the impact on the use and users of the country park or the changes to the shoreline that will have a significant impact on the character of the landscape, coast lines and views of it. This needs to be addresses in much greater detail throughout. Table 2.19 does not address the impact at landfall and changes to the coast line being proposed.	Whilst impact on the recreational use of the park is not the subject of an LVIA, the use and users of the Country Park are acknowledged in the sensitivity assessment of landscape and visual receptors. Effects to the coastline of the Country Park as a result of the proposed Cable Route and Landfall options are assessed within Physical Landscape Effects Section 2.13 and Landscape Character Effects Section 2.14.
	The timescale to reinstate vegetation and landscaping has not been fully taken into consideration or the impact of the construction works nor the medium term impact on the country park/NNR. A fuller consideration of the landscape reinstatement and restoration works is necessary and what these works will comprise. An outline landscape strategy should be prepared for the landfall sites and cable route options.	Outline Landscape Strategy described in Section 2.12 of the LVIA. Substation Landscape Mitigation Planting Plan shown on Figure 2.10. See also Landscape and Ecological Management Plan (LEMP) Document Ref: 8.7.
12/01/2018 S42 responses – Dover District Council	The proposed onshore cable route enters Dover District on the northern boundary of Bay Point (Fig 2.6b). This is private land and is well-screened from public views, although the England Coast Path which has two variants, one of which is along Richborough Port, runs close by. It is expected that visual effects would be restricted to the construction and decommissioning periods and that these would not be significant. A similar scenario is envisaged for the cable run along Richborough Port (Fig 2.6c) although here there would be a greater visual effect on users of the River Stour and England Coast Path (if variant open), who would predominantly be recreational users (high sensitivity receptors). The effect would, however, be dwarfed by that due to the construction of the substation.	The LVIA has assessed the effects on the variant of the England Coast Path that is currently open.



Date and consultation phase/ type	Consultation and key issues raised	Response / section where comment addressed
	<p>Figure 2.4a – Principal Visual Receptors – is confusing. The nomenclature of certain paths is wrong. It is uncertain what the selection of receptors is based upon. In Guidelines for Landscape and Visual Impact Assessment, 3rd Ed. (GLVIA3) it is stated that visual receptors are all people (Chapter 6.31), the more sensitive receptors, which could be considered the principal receptors, are those more susceptible to change, which the GLVIA indicates are likely to be people using the landscape for recreational purposes. For that reason, people using ‘A’ roads are usually considered less sensitive than people using public rights of way, yet the latter have not been included. It would help understanding what constitutes ‘principal’.</p>	<p>Path names in LVIA checked and amended. See Figure 2.4. In areas where the landscape and visual receptors are of much lower sensitivity this does not mean there no 'Principal Visual Receptors' but simply that they are of lower sensitivity. They are nevertheless 'Principal' receptors in relation to potential effects for the development in question. GLVIA3 states on page 112, section 6.26 - 'Predicting and describing visual effects' - '<i>Preparation of the visual baseline is followed by the systematic identification of likely effects on the potential visual receptors. Considering the different sources of visual effects alongside the <b>principal visual receptors</b> that might be affected, perhaps by means of a table, will assist in the initial identification of likely significant effects for further study.</i>' Principal visual receptors are identified in section 2.8 'Existing Environment - Visual', of the LVIA and assessed in section 2.15 'Visual Effects Assessment'.</p>
	<p>Figures 2.8a and 2.8b are slightly inaccurate in that permission for development of the 5 MW Solar Farm under 13/00794 has lapsed.</p>	<p>Cumulative data updated in ES. See Figure 2.9.</p>
<p>12/01/2018 S42 responses – Dover District Council</p>	<p>Para 3.6 - 'The line of the existing Nemo cables needs to be shown on the plans in respect of the proposed crossing. A more detailed plan with all the proposed height changes shown is required. Existing levels should also be provided and an assessment of the differences proposed. Without this detailed information it is difficult to assess the impact and the difference between the two cable options.'</p>	<p>Route of existing Nemo cable added to landscape and visual aerial maps. See Figures 2.7a-i Note - proposed Nemo crossing described in the PEIR submission not progressed in the ES.</p>
	<p>Para 3.11 - 'Details of the cofferdam are required, its visual impact assessed and included in the cumulative impact assessment.'</p>	<p>Cofferdam area shown on Aerial Maps Figures 2.7a-i</p>
	<p>Paras 3.12 &amp; 3.16 - More detailed plans of various elements should be provided.</p>	<p>Cable route and landfall options shown on Aerial Maps Figures 2.7a-l and described in detail in Chapter 1 – Onshore Project Description (Document Ref: 6.3.1).</p>
	<p>Para 3.20 - substation design details 'Limited information has been submitted on the design of the substation and due to its size there is the potential to raise landscape and visual impact concerns, which are addressed below. EN-1 para. 4.5.3 refers to good design with regard to substations where there may be more opportunity to influence the design and siting compared to the energy infrastructure and use of it.'</p>	<p>Substation design described in detail in Chapter 1 – Onshore Project Description (Document Ref: 6.3.1) and the Design and Access Statement (Document Ref: 8.16). The assessment has assessed a worst-case Rochdale Envelope for all landscape and visual receptors, with the assumption that the infrastructure that forms the onshore substation could be positioned anywhere within the maximum parameter block shown in the visualisations. See section 2.6.6.</p>
	<p>Para 3.21 - Substation landscaping mitigation 'In respect of landscaping, again limited information has been provided at this stage. Further details could be provided and consideration should be given to the timing of any identified mitigation works, the mechanism for securing landscape works and whether these could be implemented at the early stages of construction to allow for proposals to become established.'</p>	<p>More details of proposed landscape mitigation for the onshore substation is provided in the Outline Landscape Strategy described in Section 2.12. Substation Landscape Mitigation Planting Plan shown on Figure 2.10.</p>
<p>The material presented diverges from best practice guidance (GLVIA3, Chapter 8.15) in that onshore viewpoints of the preferred substation location were not discussed or agreed with DDC. (The viewpoints previously agreed on were based on the options presented at that time, i.e. the substation being within the Richborough Energy Park); seasonal effects have not been accounted for.</p>	<p>Additional viewpoints were presented at the time of finalising the preferred substation location, during Evidence Plan Meeting on 3/10/17. LVIA guidance (GLVIA3) does not require production of winter views/seasonal assessments, however it does encourage agreement in approach with determining authority. Winter photographs for substation visualisations were not requested by consultees at previous Evidence Plan meetings ahead of PEIR submission. In order to address s42 response, additional winter photography for VPs 1,3&amp;4 has been included in this LVIA as shown in Figures 2.11, 2.13 and 2.14.</p>	

Date and consultation phase/ type	Consultation and key issues raised	Response / section where comment addressed
	The uncertainty of the proposed substation location and associated infrastructure increases the difficulty in assessing visual effect. There is no knowledge of what the infrastructure associated with the substation consists of.	The assessment has assessed a worst-case Rochdale Envelope for all landscape and visual receptors, with the assumption that the infrastructure that forms the onshore substation could be positioned anywhere within the maximum parameter block shown in the visualisations. See section 2.6.6.
12/01/2018 S42 responses – Dover District Council	Viewpoint 1: depending on its precise location within the proposed site, the substation building could dominate the local landscape. However, far more information is needed on the associated infrastructure and how much of the proposed site is occupied by that and the connection to the National Grid, before the significance of effect can be assessed. It should be noted that one variant of the England Coast Path runs along the foreground, together with Regional Cycle Route 15;	The assessment has assessed a worst-case Rochdale Envelope for all landscape and visual receptors, with the assumption that the infrastructure that forms the onshore substation could be positioned anywhere within the maximum parameter block. See section 2.6.6.
	Viewpoint 2: Against the foreground of the inert waste recycling site, the proposed substation would not be significant;	Noted. See Figure 2.12
	Viewpoint 3: The site was photographed in May 2017 and shows the whole site screened by tree vegetation. The density of the vegetation is such that it is difficult to estimate what a winter view may reveal. As in Viewpoint 1, one variant of the England Coast Path runs along the foreground, together with Regional Cycle Route 15;	In order to illustrate and assess visual effects in winter, the LVIA in this ES has included additional winter photography for VP3. See Figure 2.13.
	Viewpoint 4. DDC considers this to be a rather weak viewpoint. The viewpoint is taken from the England Coast Path at 1.15 km. On the ‘Sandwich Flats’ the path runs much closer to the site, as close as 0.6 km at one point over a length of 1200 m which is within 1 km distance. As in other viewpoints, summer vegetation assists in screening the proposed site.	In order to illustrate and assess visual effects in winter, the LVIA in this ES has included additional winter photography for VP4. See Figure 2.14. In relation to the sections of England Coast Path that are closer to the proposed substation location than viewpoint 4, the view is substantially restricted by small trees within the intervening area of nature reserve that coalesce to screen the view towards Richborough Port (this is the case even in winter months, as established during visual survey in winter months). As a result it is considered that viewpoint 4 represents the worst-case view from this path and from Sandwich Flats (winter vegetation view), this is due to a combination of elevation on the flood berm with enough set back from nature reserve trees, which allow a clearer line of site to Richborough Port.
	Viewpoint 6: The photography here dates from March 2017. The distant trees appear to be ‘breaking bud’, but this has low screening effect and the photograph could be representative of a winter view. Consequently, the effect on the sensitive visual receptors (visitors) at Richborough Castle is considered insignificant.	Noted. See Figure 2.16.
	Viewpoint 8: Despite being another summer view, it is considered that any visual effect here would be perceived within the context of the other features on the horizon and be insignificant.	Noted. See Figure 2.18.
	Omitted Viewpoints: Apart from the position of Viewpoint 4, which the LPA considers weak, an omission from the ‘Sandwich Flats’ is from the NE, near Shellness, on the Stour Valley Walk, a County Trail. Visual receptors should also include users of Pegwell Bay Country Park.	Visual receptors are included within the Pegwell Bay Country Park at viewpoints 10-13 (Assessed in section 2.15 and shown on Figures 2.20 – 2.13). Additional reference photos are provided for landscape context throughout the Country Park as shown on Figures 2.8a-f



Date and consultation phase/ type	Consultation and key issues raised	Response / section where comment addressed
	Has the visual and landscape impact during construction been considered, with particular reference to Pegwell Bay and Pegwell Bay Country Park. This needs to also be addressed in the cumulative impact as limited details have not been provided at this stage.	Construction effects are considered throughout the LVIA.
12/01/2018 S42 responses – Dover District Council	It is not considered that the impact of the changes at landfall that will change the coastline or changes in heights and form as a result of the cables routes and associated structures are reversible or are short-term (Table 2.32). The proposed works will be permanent features and changes in the land and the resultant landscape character.	Table 2.32 provides a summary of the construction impacts, which are considered to be short-term. Table 2.31 describes the O&M impacts to these same receptors as 'long-term'.
12/01/2018 S42 responses – Kent County Council	The optimal colonisation of the berm with chalk species can take several hundred years and KCC advises that neither the chalk berm nor the chalk habitats are significantly beneficial to the overall Park or its landscape and habitat. KCC is of the view that the applicant should be seeking to install the cables below the surface of the Park and not to follow the Nemo Link as a best practice guide. Analysis following the installation of the Nemo Link has shown that the Park and its customers have not positively benefited from the above ground cables.	For Outline Landscape Mitigation Strategy see section 2.12. See also Landscape and Ecological Management Plan (LEMP) Document Ref: 8.7.
12/01/2018 S42 responses – Kent County Council	After construction, even with mitigation, the site would visually change from a coastal flat park to one with undulating ground levels, crossings and reduced views resulting from the berm. The proposed crossing of the Nemo Link would create an artificial hill on the Sustrans Path and would require the diversion of the path, reducing the attractiveness of the route. Alternatively, users would be required to traverse the hill at significant gradients. The business success of the Park relies on positive customer experiences and reviews. KCC recommends that for the majority of the parks users, the changed experience would not be positive and that the park would suffer in the short and long-term. It takes a long time to build a reputation and a customer base and to recover from a negative change takes even longer, as a lot of work is required to remarket and rebuild customer confidence.	The proposed cable route option for a NEMO crossing has now been discounted as an option for the onshore cable route. See also Landscape and Ecological Management Plan (LEMP) Document Ref: 8.7.
12/01/2018 S42 responses – Thanet District Council	The proposal will result in a visual impact and change in landscape from key viewpoints from within the District. We welcome the recognition of the sensitivity of this stretch of coastline in the PEIR.	Noted comments relating to sensitivity of coastline.
	We are therefore satisfied with the way in which the visual impacts, in terms of the landscape and historic environment, have been assessed.	Noted comments that TDC satisfied with the approach / assessment of landscape and visual effects.

## 2.4 Scope and methodology

- 2.4.1 The project characteristics for the proposed development (proposed substation, onshore cable route and landfall) are set out in Volume 3, Chapter 1 – Onshore Project Description (Document Ref: 6.3.1).
- The proposed substation area is assumed to have a footprint of up to 215 x 160 m, within which there would be substation buildings with an assumed maximum worst-case height of 14 m, and outdoor electrical equipment compounds up to the height of 13.5 m; and
  - The onshore cable route is identified for landfall at Pegwell Bay Country Park and has three landfall options to connect to the proposed substation. For each of these options, the onshore export cables will be trenched between Stonelees Nature Reserve and the Substation, with variation in the cable construction occurring within Pegwell Bay Country Park as a result of the following 3 Landfall Options;
    - For Option 1, cables are trenched through the Pegwell Bay Country Park and intertidal HDD pits are used to make landfall by drilling underneath the existing rock armour;
    - For Option 2, cables may be laid in an artificial berm above ground through the section that runs through the Pegwell Bay Country Park. For this option the existing rock armour would be replaced and extended to connect to sub-sea cable; and
    - For Option 3, cables are trenched through the Pegwell Bay Country Park with cofferdam used to enable connection to sub-sea cable.

### Relevant guidance

- The Landscape Institute with the Institute of Environmental Management and Assessment (2013). Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3). Routledge;
- An Approach to Landscape Character Assessment (2014). Natural England;
- Landscape and Seascape Character Assessments published by Natural England and the Department for Environment, Food and Rural Affairs (2014);
- Landscape Institute (2017). Visual Representation of Development Proposals;
- Scottish Natural Heritage (2014) Siting and Designing Wind Farms in the Landscape Version 2; and
- Scottish Natural Heritage (March 2012) Assessing the Cumulative Impact of Onshore Wind Energy Developments.

### Study area

- 2.4.2 The initial step in the LVIA is the establishment of the study area for the assessment. The onshore LVIA study areas for the proposed development extends to define a limit beyond which professional judgement considers it would be unlikely for significant effects to arise. This judgement is based on knowledge of similar projects, an understanding of the character of the local landscape and scale of the construction and development of the onshore components of Thanet Extension.
- 2.4.3 The proposed study area for the LVIA of the onshore cable route and landfall extends to a 1 km buffer around the onshore cable route RLB. The proposed study area for the LVIA of the substation extends to a 5 km radius around the substation area. Together, these form the onshore LVIA study area for the onshore elements of Thanet Extension (Volume 6, Annex 2-1, Figure 2.1).
- 2.4.4 ZTV analysis has been carried out for a maximum parameter model based on the maximum height of 14 m applied to the substation area in order to establish the worst-case theoretical visibility of the proposed substation. The extent of theoretical visibility shown on this maximum parameter ZTV supports the identified 5 km study area as it illustrates that the extent of visibility is contained within this 5 km area to the north and south. Although theoretical visibility is predicted further west along the Wantsum Channel and along the coast to the south, views of the existing infrastructure close to the proposed substation site are restricted by intervening vegetation and settlement from these areas.
- 2.4.5 The onshore LVIA study areas are not intended to provide a boundary beyond which the proposed development would not be seen, but rather to define the area within which there is potential for significant landscape or visual effect. It is considered that a significant effect is, in reality, very unlikely to occur towards the edges of the onshore LVIA study areas.

### Baseline survey methodology

#### Desk Study

- 2.4.6 The assessment is initiated through a desk study of the site and 5 km radius onshore LVIA study area. This study identifies aspects of the landscape and visual resource that may need to be considered in the LVIA, including landscape-related planning designations, landscape character typology, potential cumulative developments, views from routes (including roads, railway lines, National Cycle Routes and long distance walking routes), and settlements.
- 2.4.7 The desk study also utilises Geographic Information System (GIS) to explore the potential visibility of the proposed development. The resultant ZTV diagrams provide an indication of which landscape and visual receptors are likely to be key in the assessment.

### Field survey

- 2.4.8 Field survey work has been undertaken during periods of clear visibility between February and July in 2017 and February in 2018. This has allowed the landscape character and the visual amenity of the study area to be experienced in a range of different conditions and seasonal variation. Field surveys are carried out throughout the 5 km radius study area. For the proposed substation, the focus is on the areas shown on the ZTV (Figure 2.6) to have theoretical visibility of the proposed substation. For the proposed onshore cable route and landfall the focus of the field survey is on the landscape which is physically affected, although visibility of these elements are also considered in the 1 km onshore LVIA study area as part of the wider field survey analysis. The field survey allows the assessors to judge the likely scale, distance, extent and prominence of the onshore elements of Thanet Extension directly.
- 2.4.9 The landscape of the proposed development has been assessed for any particular features that contribute to landscape character or that are important to the wider landscape setting. The landscape character areas for the onshore LVIA study area were reviewed and the key characteristics of the landscape were identified. The field surveys provided an experience of the character areas of the onshore LVIA study area and verification of how these areas might be affected by the proposed development.
- 2.4.10 The visual amenity of the onshore LVIA study area was surveyed from receptors representative of the range of views and viewer types likely to experience the onshore elements of Thanet Extension. Views from a variety of distances, aspects, elevations and extents were included. Receptor types include properties and settlement; main transport routes; main visitor locations; areas of cultural significance; the range of landscape character areas within the onshore LVIA study area; and the cumulative effects in combination with other existing or proposed developments in the onshore LVIA study area.

### Elements Scoped Out of Assessment

- 2.4.11 This LVIA includes a 'Preliminary Assessment' which identifies those aspects of the landscape and visual resource that do not have potential to undergo a significant effect as a result of the proposed development. These aspects of the landscape and visual resource are then scoped out of the detailed assessment. The Scope Assessment is presented in Sections 2.13, 2.14, 2.15 and 2.16 of this report.

### Categories of Effects

- 2.4.12 The LVIA is intended to determine the effects that the proposed development would have on the landscape and visual resource. For the purpose of assessment, the potential effects on the landscape and visual resource are grouped into the following four categories.

- 2.4.13 **Physical effects** are restricted to the area within the proposed RLB and are the direct effects on the existing fabric of the site, such as alteration to ground cover. This category of effects is made up of landscape elements, which are the components of the landscape such as hedgerow, trees or pasture that may be directly and physically affected by the proposed development.
- 2.4.14 **Effects on landscape character:** Landscape character is the distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and the way that this pattern is perceived. Effects on landscape character arise either through the introduction of new elements that physically alter this pattern of elements, or through visibility of the proposed development, which may alter the way in which the pattern of elements is perceived. This category of effects is made up of landscape character receptors, which fall into two groups; landscape character areas and landscape-related designated areas.
- 2.4.15 **Effects on views:** the assessment of effects on views is an assessment of how the introduction of the proposed development would affect views throughout the onshore LVIA study area. The assessment of effects on views is carried out in two parts:
- An assessment of the effects that the proposed development would have on a series of viewpoints around the onshore LVIA study area; and
  - An assessment of the effects that the proposed development would have on views from principal visual receptors, which are relevant settlements and routes found throughout the onshore LVIA study area.
- 2.4.16 GLVIA3 states on page 112, section 6.26 - 'Predicting and describing visual effects' - 'Preparation of the visual baseline is followed by the systematic identification of likely effects on the potential visual receptors. Considering the different sources of visual effects alongside the principal visual receptors that might be affected, perhaps by means of a table, will assist in the initial identification of likely significant effects for further study.'
- 2.4.17 **Cumulative effects** are considered where the presence of other developments of a similar type and scale within the onshore LVIA study area may have an impact on the perception of the landscape character of that area, or on views from visual receptors. In accordance with guidance (SNH, 2012), the LVIA assesses the effect arising from the addition of the proposed development to the cumulative situation, and not the overall effect of multiple developments.



## 2.5 Assessment criteria and assignment of significance

- 2.5.1 The objective of the assessment of the proposed development is to predict the likely significant effects on the landscape and visual resource. In accordance with the EIA Regulations the LVIA effects are assessed to be either significant or not significant. The LVIA does not define intermediate levels of significance as the EIA Regulations do not provide for these. The significance of effects is assessed through a combination of two considerations: the sensitivity of the landscape receptor or view; and the magnitude of change that would result from the addition of the proposed development.
- 2.5.2 OPEN’s methodology requires the application of professional judgement in accordance with the Landscape Institute’s GLVIA3. Although it is not reliant on the use of a matrix, the following matrix in Table 2.3 has been included to illustrate how combinations of the ratings for sensitivity and magnitude of change can give rise to significant effects, as well as to give an understanding of the threshold at which significant effects may arise.
- 2.5.3 Effects that are assessed within the red boxes in the matrix are assessed to be significant in terms of the requirements of the EIA Regulations. Those effects that are assessed within the orange boxes may be significant, or not significant, depending on the specific factors and effect that is assessed in respect of a particular landscape or visual receptor. In accordance with the GLVIA3, experienced professional judgement is applied to the assessment of all effects and reasoned justification is presented in respect of the findings in each case.
- 2.5.4 Significant effects occur where the proposed development will provide a defining influence on a landscape character receptor, visual receptor or view; or where changes of a lower magnitude occur on a landscape character receptor, visual receptor or view that is of particularly high sensitivity.
- 2.5.5 A Not Significant effect occurs where the effect of the proposed development is not material, whereby the baseline characteristics of the landscape character receptor, visual receptor or view continue to provide the definitive influence, or where the small scale of change experienced by a high sensitivity receptor is such as to be considered not significant.
- 2.5.6 Significant effects may also occur where the proposed development contrasts with the scale or design of an operational/ under-construction development; or where the introduction of the proposed development leads to development becoming the prevailing or defining landscape and visual characteristic, with the landscape or view becoming defined by the presence of multiple developments.

Table 2.3: Significance of potential effects

Magnitude of Change \ Sensitivity	High	Medium-High	Medium	Medium-Low	Low	Negligible
High	Significant	Significant	Significant	Significant or not Significant	Not Significant	Not Significant
Medium-High	Significant	Significant	Significant or not Significant	Significant or not Significant	Not Significant	Not Significant
Medium	Significant	Significant or not Significant	Significant or not Significant	Not Significant	Not Significant	Not Significant
Medium-Low	Significant or not Significant	Significant or not Significant	Not Significant	Not Significant	Not Significant	Not Significant
Low	Significant or not Significant	Not Significant	Not Significant	Not Significant	Not Significant	Not Significant

- 2.5.7 The methodology for the assessment of effects on landscape character involves the undertaking of a baseline study, evaluation of sensitivity, magnitude of change and an assessment of significance.

### Landscape baseline

- 2.5.8 The landscape baseline provides an understanding of the landscape in the area that may be affected – its constituent elements, its character, distinctiveness, condition and value, and the way this varies spatially. The landscape baseline describes aspects of the landscape that may be significantly affected, as defined in The Infrastructure Planning (EIA) Regulations 2017. Establishing the landscape baseline will, when reviewed alongside the description of the proposed development, form the basis for the identification and description of the landscape effects of the proposed development. The baseline description of the landscape that may be affected is primarily determined by the physical footprint of the proposed development components and their ZTV (Figure 2.6).
- 2.5.9 An overview of the landscape baseline is described and a preliminary assessment identifies landscape receptors that may experience significant effects, which require to be assessed in full. A detailed description of the baseline is provided for each landscape receptor that may experience significant effects, allowing the full baseline to be described for receptors that may be significantly affected. Those receptors which are identified as not having the potential to undergo significant effects and significant cumulative effects, are not included in the subsequent detailed assessment, but are considered in the preliminary assessment.
- 2.5.10 The baseline study of each landscape character receptor collates and presents information relevant to the assessment drawn from a combination of desk study and field-work. The baseline study utilises descriptions of landscape character receptors from the relevant published seascape or landscape character assessment or citations in respect of landscape designations. Field work has also been undertaken to verify the documented landscape character area descriptions and boundaries. The key characteristics and value of each relevant landscape receptor are set out, covering key features and patterns of the landform, land-cover and land-use which make the landscape of these areas distinctive.
- 2.5.11 The landscape baseline also describes current pressures that may cause change in the landscape in the future, in particular drawing on information for wind energy developments that are not yet present in the landscape, but are at other stages in the consenting process. Operational and under construction developments, are regarded as part of the baseline landscape character of the area. Any changes resulting from the proposed development are assessed within this context in the assessment of landscape and visual effects.

### Sensitivity to change

- 2.5.12 The sensitivity of a seascape/ landscape character receptor is an expression of its ability to accommodate the Proposed development as part of its own character or as part of the visual setting or context of the character receptor. This is dependent on the value of the seascape/ landscape receptor and its susceptibility to change.

#### *Value of the Seascape/ Landscape Receptor*

- 2.5.13 The value of a landscape character receptor is a reflection of the value which society attaches to that landscape. The assessment of the landscape value is classified as high, medium-high, medium, medium-low or low and the basis for this assessment is made clear using evidence and professional judgement, based on the following range of factors:

- **Landscape designations:** A receptor that lies within the boundary of a recognised landscape related planning designation will be of increased value, depending on the proportion of the receptor that is covered and the level of importance of the designation; international, national, regional or local. The absence of designations does not preclude value, as an undesignated landscape character receptor may be valued as a resource in the local or immediate environment.
- **Landscape quality:** The quality of a landscape character receptor is a reflection of its attributes, such as scenic quality, sense of place, rarity and representativeness and the extent to which attributes have remained intact. A landscape with consistent, intact, well-defined and distinctive attributes is considered to be of higher quality and, in turn, higher value, than a landscape where the introduction of elements has detracted from its character.
- **Landscape experience:** The experience of the landscape character receptor can add to its value and relates to a number of factors including the perceptual responses it evokes, the cultural associations that may exist in literature or history, or the iconic status of the landscape in its own right, the recreational value of the landscape, and the contribution of other values relating to the nature conservation or archaeology of the area.

#### *Susceptibility to Change*

- The susceptibility of a landscape character receptor to change is a reflection of its ability to accommodate the changes that will occur as a result of the addition of the proposed development. The assessment of the susceptibility of the landscape receptor to change is classified as high, medium-high, medium, medium-low or low and the basis for this assessment is made clear using evidence and professional judgement, based on the following criteria:

- **The specific nature of the proposed development:** The susceptibility of landscape receptors is assessed in relation to change arising from the specific development proposed, including the specific components and features of the proposed development, its size, scale, location, context and characteristics.
- **Landscape character:** The key characteristics of the existing landscape character of the receptor is considered in the evaluation of susceptibility as they determine the degree to which the receptor may accommodate the influence of the proposed development. A landscape that is of a particularly wild and remote character may have a high susceptibility to the influence of development, due to the contrast that it would have with the landscape, whereas a developed, industrial landscape, where built elements and structures are already part of the character may have a lower susceptibility.
- **Landscape association:** The extent to which the proposed development will influence the character of the landscape receptors across the study area, relates to the associations that exist between the landscape receptor within which the proposed development is located and the landscape receptor from which the proposed development is being experienced. In some situations, this association will be strong where the landscapes are directly related and in other situations weak where the landscape association is weak.

*Sensitivity rating*

2.5.14 An overall sensitivity assessment of the landscape receptor is made by combining the assessment of the value of the landscape character receptor and its susceptibility to change. An overall level of sensitivity is applied for each landscape receptor – high, medium-high, medium, medium - low and low – by combining individual assessments of the value of the receptor and its susceptibility to change. The basis for the assessments is made clear using evidence and professional judgement in the evaluation of sensitivity for each receptor. Criteria that tend towards higher or lower sensitivity are set out in Table 2.4 below.

**Table 2.4: Sensitivity to change – seascape/ landscape receptors**

Criteria tending towards higher or lower sensitivity					
	High	→	Medium	→	Low
<b>Value</b>	Designated landscapes with national policy level protection or defined for their natural beauty. Higher quality landscapes with consistent, intact and well-defined, distinctive attributes. Rare or unique landscape character types or features. Aesthetic or perceptual aspects of designated wildlife, ecological or cultural heritage features that contribute to landscape character. Evidence that the landscape is valued or used substantially for recreational activity. Landscape with perceptual qualities of wildness, remoteness or tranquillity. Landscape with strong cultural associations that contribute to perceptions of scenic quality.		Landscapes without formal designation. Despoiled or degraded landscape with little or no evidence of being valued by the community. Lower quality landscapes with indistinct elements or features that detract from its inherent attributes. Widespread or 'common' landscape character types or features. Limited or no wildlife, ecological or cultural heritage features, or limited contribution to landscape character. No evidence that the landscape is used for recreational activity. Landscape with inherent character has been changed by human activity. Landscape with few cultural associations.		
	High	→	Medium	→	Low



Criteria tending towards higher or lower sensitivity		
<b>Susceptibility to change</b>	Landscape which is likely or liable to be influenced by the proposed development. Landscape vulnerable or fragile to change through the loss or addition of features that would alter key landscape characteristics. Landscape which lacks the ability to resist/ accommodate the change that is likely to occur as a result of the proposed development. Aesthetic or perceptual aspects of landscape are susceptible to changes associated with features of proposed development. Strong or direct association between proposed development and the landscape receptor. Landscape which is directly exposed to the proposed development and has highest degree of exposure.	Landscape which is unlikely or not liable to be influenced by the proposed development. Robust landscape, able to accommodate change or loss of features without altering key characteristics. Landscape which has the ability to resist/ accommodate the change that is likely to occur as a result of the proposed development. Aesthetic or perceptual aspects of landscape may accommodate changes associated with features of proposed development. Weak and indirect association between proposed development and the landscape receptor. Landscape which is not directly exposed to the Proposed development and has degree of concealment/ screening.
<b>Sensitivity to change</b>	High → Medium → Low	

**Magnitude of change**

2.5.15 The magnitude of change on landscape receptors is an expression of the scale of the change that will result from the proposed development, and is dependent on a number of variables regarding the size or scale of the change. An assessment is also made of the geographical extent of the area over which this will occur and the duration and reversibility of such changes. The basis for this assessment is made clear using evidence and professional judgement, based on the following criteria.

*Size or Scale of Change*

- 2.5.16 This criterion relates to the size or scale of change to the landscape that will arise as a result of the proposed development, based on the following factors:
- The degree to which the pattern of elements that makes up the seascape/ landscape character will be altered by the proposed development, by removal or addition of elements in the landscape. The magnitude of change will generally be higher if the features that make up the landscape character are extensively removed or altered, and/ or if many new components are added to the landscape;
  - The extent to which the effect of the proposed development changes, physically or perceptually, the key characteristics of the landscape as identified in the baseline study and which may be important to the distinctive character of the landscape. This may include, for example, the scale of the landform, its relative simplicity or irregularity, the nature of the landscape context, the grain or orientation of the landscape, the degree to which the receptor is influenced by external features and the juxtaposition of the proposed development in relation to these key characteristics;
  - The degree to which landscape character receptors will be changed by the addition of the proposed development to baseline wind energy developments that are already present in the landscape. If the proposed development is located in a landscape receptor that is already affected by other wind energy development, this may reduce the magnitude of change if there is a high level of integration and the developments form a unified and cohesive feature in the landscape.
  - The landscape context in which the proposed development and other developments are located. If developments are located in a similar landscape context, the magnitude of change is likely to be lower as they relate consistently to key landscape characteristics. If developments are located in different landscape settings, this can lead to a perception that development is unplanned and uncoordinated, affecting a wide range of landscape characters and blurring the distinction between them;
  - The scale of the landscape, landform and patterns of the landscape. A large-scale landscape can provide a more appropriate receiving environment than a more intimate, small-scale setting where development may result in uncomfortable scale comparisons and increase the magnitude of change.
  - The distance between the landscape character receptor and the proposed development. Generally, the greater the distance, the lower the scale of change as the proposed development will constitute a less apparent influence on the landscape character; and

- The amount of the proposed development that will be seen. Visibility of the proposed development may range from some or all of the proposed development; generally the greater the extent of the proposed development that can be seen, the higher the scale of change.

*Geographical Extent*

2.5.17 The geographic extent over which the landscape effects will be experienced is also assessed, which is distinct from the size or scale of effect. This evaluation is not combined in the assessment of the level of magnitude, but instead expresses the extent of the receptor that will experience a particular magnitude of change and can therefore affect the geographical extents of the significant and non-significant effects.

2.5.18 The extent of the effects will vary depending on the specific nature of the proposed development and is principally assessed through analysis of the extent of visibility of physical change to the landscape or the extent to which the landscape character will change through visibility of the proposed development.

*Duration and Reversibility*

2.5.19 The duration and reversibility of landscape effects are based on the period over which the proposed development is likely to exist and the extent to which the proposed development will be removed and its effects reversed at the end of that period. Duration and reversibility are not incorporated into the overall magnitude of change, and are stated separately in relation to the assessed effects.

*Magnitude of Change Rating*

2.5.20 An assessment of the magnitude of change resulting from the proposed development on the landscape receptor is made by assessing the size or scale of change. The geographical extent over which this change takes place is also assessed. The basis for the assessment of magnitude for each receptor is made clear using evidence and professional judgement. The levels of magnitude of change that can occur are defined in Table 2.5 as follows.

**Table 2.5: Magnitude of change – effects on landscape character**

Magnitude of change	Description/ reason
<b>High</b>	The proposed development will result in a major alteration to the baseline characteristics of the landscape, providing the prevailing influence and/or introducing elements that are uncharacteristic in the receiving landscape. The addition of the proposed development will result in a major incremental change, loss or addition to the baseline context.
<b>Medium</b>	The proposed development will result in a moderate alteration to the baseline characteristics of the landscape, providing a readily apparent influence and/ or introducing elements potentially uncharacteristic in the receiving landscape. The addition of the proposed development will result in a moderate incremental change, loss or addition to the baseline context.
<b>Low</b>	The proposed development will result in a minor alteration to the baseline characteristics of the landscape, providing a slightly apparent influence and/ or introducing elements that are characteristic in the receiving landscape. The addition of the proposed development will result in a minor incremental change, loss or addition to the baseline context.
<b>Negligible</b>	The proposed development will result in a negligible alteration to the baseline characteristics of the landscape, providing a barely discernible influence and/ or introducing elements that are substantially characteristic in the receiving landscape. The addition of the proposed development will result in a negligible incremental change, loss or addition to the baseline context.
<b>None</b>	The proposed development will result in no change to the baseline characteristics of the landscape.

2.5.21 There may also be intermediate levels of magnitude of change, such as medium-high and medium-low, where the change falls between definitions. Criteria that tend towards higher or lower magnitude of change are set out in Table 2.6 below.

**Table 2.6: Magnitude of change – landscape receptors**

Criteria tending towards higher or lower magnitude			
	High → Medium → Low → Negligible		
<b>Size or scale of change</b>	<table border="1"> <tr> <td>                     Major loss of existing landscape elements which contribute to the landscape character.                      Major alteration to pattern of elements, or perception of landscape pattern, through removal or addition of new elements.                      Major change to key characteristics which define the distinctive character of the landscape.                      the proposed development located within or close to landscape receptor and results in large scale change to its character.                      Large amount of the proposed development visible resulting in higher scale of change.                 </td> <td>                     Minor or negligible loss of existing landscape elements.                      Minor alteration to pattern of elements, or perception of landscape pattern.                      Minor change to key characteristics, or changes to characteristics which are not part of inherent distinctiveness.                      The proposed development located at long distance outside landscape receptor and results in small scale change to its landscape character.                      Small amount of the proposed development visible resulting in lower scale of change.                 </td> </tr> </table>	Major loss of existing landscape elements which contribute to the landscape character. Major alteration to pattern of elements, or perception of landscape pattern, through removal or addition of new elements. Major change to key characteristics which define the distinctive character of the landscape. the proposed development located within or close to landscape receptor and results in large scale change to its character. Large amount of the proposed development visible resulting in higher scale of change.	Minor or negligible loss of existing landscape elements. Minor alteration to pattern of elements, or perception of landscape pattern. Minor change to key characteristics, or changes to characteristics which are not part of inherent distinctiveness. The proposed development located at long distance outside landscape receptor and results in small scale change to its landscape character. Small amount of the proposed development visible resulting in lower scale of change.
Major loss of existing landscape elements which contribute to the landscape character. Major alteration to pattern of elements, or perception of landscape pattern, through removal or addition of new elements. Major change to key characteristics which define the distinctive character of the landscape. the proposed development located within or close to landscape receptor and results in large scale change to its character. Large amount of the proposed development visible resulting in higher scale of change.	Minor or negligible loss of existing landscape elements. Minor alteration to pattern of elements, or perception of landscape pattern. Minor change to key characteristics, or changes to characteristics which are not part of inherent distinctiveness. The proposed development located at long distance outside landscape receptor and results in small scale change to its landscape character. Small amount of the proposed development visible resulting in lower scale of change.		
<b>Magnitude of change</b>	High → Medium → Low → Negligible		

**Significance of effects**

2.5.22 The significance of the effect on each landscape character receptor is dependent on all of the factors considered in the sensitivity of the receptor and the magnitude of change resulting from the proposed development. These judgements on sensitivity and magnitude are combined to arrive at an overall assessment as to whether the proposed development will have an effect that is significant or not significant on the landscape character receptor. An assessment of the factors considered in the evaluation of the sensitivity of each landscape character receptor and the magnitude of the change resulting from the proposed development are presented in the assessment in order that the relevant considerations which have informed the significance can be considered transparently. The matrix shown in Table 2.3 helps to inform the threshold of significance when combining sensitivity and magnitude to assess significance.

2.5.23 A significant effect will occur where the combination of the variables results in the proposed development having a defining effect on the landscape character receptor, or where changes of a lower magnitude occur on a landscape character receptor that is of particularly high sensitivity.

2.5.24 A not significant effect will occur where the effect of the proposed development is not definitive, and the landscape character of the receptor continues to be characterised principally by its baseline characteristics, or where the small scale of change experienced by a high sensitivity receptor is such as to be considered not significant. A major loss or irreversible effect over an extensive area, on elements and/ or perceptual aspects that are key to the character of nationally valued seascapes/ landscapes are likely to be of greatest significance. Reversible effects, over a restricted area, on elements and/ or perceptual aspects that contribute to but are not key characteristics of the character of landscapes that are of lower value, are likely to be of least significance.

**Visual effects – assessment criteria**

2.5.25 The assessment of visual effects is an assessment of how the introduction of the proposed development will affect the views available to people and their visual amenity. The assessment of visual effects is carried out in two parts:

- An assessment of the effects that the proposed development will have on a series of viewpoints that have been selected to represent the views available to people from representative or specific locations within the study area; and
- An assessment of the effects that the proposed development will have from principal visual receptors, including residents of settlements, motorists using roads and people using recreational routes, features and attractions throughout the study area.

2.5.26 The objective of the assessment of effects on visual receptors is to determine what the likely effects of the proposed development will be on the people experiencing views across the study area, and whether these effects will be significant or not significant. The methodology for the assessment of visual effects involves the undertaking of a baseline study, evaluation of sensitivity, magnitude of change and an assessment of significance.



### Visual baseline

2.5.27 The visual baseline establishes the area in which the proposed development may be visible, the different groups of people who may experience views of the proposed development, the viewpoints where they will be affected and the nature of the views at those points. The visual baseline describes aspects of the visual environment that may be significantly affected, as defined in Schedule 4 of the EIA Regulations (UK Government, 2017). The baseline description of the groups of people (referred to as visual receptors) and viewpoints that may be affected is primarily determined by the ZTV of the proposed development (Figure 2.6).

2.5.28 An overview of the visual baseline is described and a preliminary assessment identifies visual receptors that may experience significant effects, which require to be assessed in full. A full description of the baseline is provided for each visual receptor that may experience significant effects, allowing the full baseline to be described for visual receptors that may be significantly affected. Those receptors which are identified as not having the potential to undergo significant effects are not included in the subsequent detailed assessment, but are considered in the preliminary assessment.

2.5.29 The baseline study establishes the visual baseline, including the area from which the proposed development may be visible, the different groups of people who may experience views of the proposed development (visual receptors), the viewpoints where they will be affected and the nature of views at these points. The baseline study establishes the visual baseline in relation to the following issues:

- The area from which the proposed development may be visible, that is land from which it may potentially be seen, is established and mapped using a ZTV of the proposed development;
- The location, type and number of visual receptors experiencing visibility of the proposed development are identified using the ZTV. Their likely views and activity are considered;
- Selection of viewpoints from within the ZTV, including representative viewpoints selected to represent the experience of different types of visual receptor and specific viewpoints because they are key/ promoted viewpoints in the landscape;
- The location, character and type of each viewpoint with an indication of the type of visual receptor likely to be experiencing the view from each viewpoint;
- The nature of the existing view in towards the proposed development as well as the wider available view, making reference to the principal orientation, focal features, and visible extents in terms of horizontal spread and distance;

- The character of the view in terms of its content and composition, its horizontal and vertical scale as well as depth and sense of perspective, important attributes such as prominent skylines and focal points and ultimately identifying the defining patterns and features which characterise the view; and

- The influence of human intervention and how the addition of artefacts and modification through land use affect the baseline situation. This may include operational developments where they are a feature of the baseline landscape and visual context.

2.5.30 Operational and under construction developments, are regarded as part of the baseline visual context. Any changes resulting from the proposed development are assessed within this context in the assessment of landscape and visual effects.

### Sensitivity to change

2.5.31 The sensitivity of visual receptors is determined by a combination of the value of the view and the susceptibility of the visual receptors to the change that the proposed development will have on the view.

#### *Value of the View*

2.5.32 The value of a view or series of views is a reflection of the recognition and the importance attached either formally through identification on mapping or being subject to planning designations, or informally through the value which society attaches to the view(s). The value of a view is classified as high, medium-high, medium, medium-low or low and the basis for this assessment is made clear using evidence and professional judgement, based on the following criteria:

- **Formal recognition:** The value of views can be formally recognised through their identification on Ordnance Survey (OS) or tourist maps as formal viewpoints, sign-posted and with facilities provided to add to the enjoyment of the viewpoint such as parking, seating and interpretation boards. Specific views may be afforded protection in local planning policy and recognised as valued views. Specific views can also be cited as being of importance in relation to landscape or heritage planning designations, for example the value of a view will be increased if it presents an important vista from a designed landscape or lies within or overlooks a designated area, which implies a greater value to the visible landscape.
- **Informal recognition:** Views that are well-known at a local level and/ or have particular scenic qualities can have an increased value, even if there is no formal recognition or designation. Views or viewpoints are sometimes informally recognised through references in art or literature and this can also add to their value. A viewpoint that is visited or used by a large number of people will generally have greater importance than one gained by very few people.

- **Scenic quality:** The value of the view is a reflection of the scenic qualities gained in the view. This relates to the content and composition of the landscape, whereby certain patterns and features will increase the scenic quality and others will reduce the scenic quality. The value of the view will also be increased if the condition of the landscape is near to the optimum for its type.

*Susceptibility to Change*

2.5.33 Susceptibility relates to the nature of the viewer experiencing the view and how susceptible they are to the potential effects of the proposed development. A judgement to determine the level of susceptibility therefore relates to the nature of the viewer and their experience from that particular viewpoint or series of viewpoints, as follows:

- **Nature of the viewer:** The nature of the viewer is described by the occupation or activity which they are engaged in at the viewpoint or series of viewpoints. The most common groups of viewers considered in the visual assessment include residents, motorists, people taking part in recreational activity or working. Viewers whose attention is focused on the landscape, or with static long-term views, are likely to have a higher sensitivity. Viewers travelling in cars or on trains will tend to have a lower sensitivity as their view is transient and moving. The least sensitive viewers are usually people at their place of work as they are generally less sensitive to changes in views.
- **Experience of the viewer:** The experience of the visual receptor relates to the extent to which the viewer’s attention or interest may be focused on the view and the visual amenity they experience at a particular location. The susceptibility of the viewer to change arising from the proposed development may be influenced by the viewer’s attention or interest in the view, which may be focused in a particular direction, from a static or transitory position, over a long or short duration, and with high or low clarity. For example if the principal outlook from a settlement is aligned directly towards the proposed development, the experience of the visual receptor will be altered more notably than if the experience relates to a glimpsed view seen at an oblique angle from a car travelling at high speed. The visual amenity experienced by the viewer varies depending on the presence and relationship of visible elements, features or patterns experienced in the view and the degree to which the landscape in the view may accommodate the influence of the Proposed development.

*Sensitivity Rating*

2.5.34 An overall level of sensitivity is applied for each visual receptor or view – high, medium-high, medium, medium-low, low – by combining individual assessments of the value of the receptor and its susceptibility to change. Each visual receptor, meaning the particular person or group of people likely to be affected at a specific viewpoint, is assessed in terms of their sensitivity. The basis for the assessments is made clear using evidence and professional judgement in the evaluation of each receptor. Criteria that tend towards higher or lower sensitivity are set out in Table 2.7 below.

**Table 2.7: Sensitivity to change – visual receptors**

Criteria tending towards higher or lower sensitivity					
	High	→	Medium	→	Low
<b>Value</b>	Specific viewpoint identified in OS maps and/or tourist information and signage. Facilities provided at viewpoint to aid the enjoyment of the view. View afforded protection in planning policy. View is within or overlooks a designated landscape, which implies a higher value to the visible landscape. View has informal recognition and well-known at a local level, as having particular scenic qualities. View or viewpoint is recognised through references in art or literature. View has high scenic qualities relating to the content and composition of the visible landscape.			Viewpoint not identified in OS maps or tourist information and signage. No facilities provided at viewpoint to aid enjoyment of the view. View is not afforded protection in planning policy. View is not within, nor does it or overlook, a designated landscape. View has no informal recognition and is not known as having particular scenic qualities. View or viewpoint is not recognised in references in art or literature. View has low scenic qualities relating to the content and composition of the visible landscape.	
	High	→	Medium	→	Low

Criteria tending towards higher or lower sensitivity		
<b>Susceptibility to change</b>	<p>Viewer who is likely or liable to be influenced by the proposed development.</p> <p>Viewers such as walkers, or tourists, whose main attention and interest is on their surroundings.</p> <p>Residents that gain static, long-term views of the proposed development in their principal outlook.</p> <p>Viewpoint is visited or used by a large number of people.</p> <p>A view that is focused in a specific directional vista, with notable features of interest in a particular part of the view.</p> <p>A view of an undeveloped landscape with little or no built development and/ or human influence.</p> <p>Existing elements, features or patterns in view that will contrast with the proposed development.</p>	<p>Viewer who is unlikely or not liable to be influenced by the proposed development.</p> <p>Viewers whose main attention is not focused on their surroundings, such as people at work, or specific forms of recreation.</p> <p>Viewers whom are transient and dynamic, such as those travelling in cars or on trains, where the view is of short duration.</p> <p>View is visited or gained by very few people.</p> <p>Open views with no specific point of interest.</p> <p>A view of a developed, industrial landscape where built elements and structures are present.</p> <p>Existing elements, features or patterns in view that may assist with integration of the proposed development.</p>
<b>Sensitivity to change</b>	<p>High → Medium → Low</p>	

**Magnitude of change**

2.5.35 The magnitude of change on views is an expression of the scale of the change that will result from the proposed development, and is dependent on a number of variables regarding the size or scale of the change. A separate assessment is also made of the geographical extent of the area over which this will occur and the duration and reversibility of such changes.

*Size or Scale*

2.5.36 An assessment is made about the size or scale of change in the view that is likely to be experienced as a result of the proposed development, based on the following criteria:

- *The distance between the visual receptor/ viewpoint and the proposed development.* Generally, the greater the distance, the lower the magnitude of change, as the proposed development will constitute a smaller scale component of the view.
- *The amount and size of the proposed development that will be seen.* Generally, the larger the proposed development appears in the view, and the more of the proposed development that can be seen, the higher the magnitude of change.
- *The scale of the change in the view,* with respect to the loss or addition of features in the view and changes in its composition.
- *The field of view available and the proportion of the view that is affected by the proposed development.* Generally, the more of a view that is affected, the higher the magnitude of change will be. If the proposed development extends across the whole of the open part of the outlook, the magnitude of change will generally be higher as the full view will be affected. Conversely, if the proposed development covers just a part of an open, expansive and wide view, the magnitude of change is likely to be reduced as the proposed development will not affect the whole open part of the outlook.
- *The scale and character of the context within which the proposed development will be seen* and the degree of contrast or integration of any new features with existing landscape elements, in terms of scale, form, mass, line, height, colour, luminance and motion.
- *The consistency of image of the proposed development in relation to other developments.* The cumulative magnitude of change of the proposed development is likely to be lower if its height, arrangement and layout design are broadly similar to other developments in the landscape, as they are more likely to appear as relatively simple and logical components of the landscape.
- *The uniformity of appearance of the proposed development in different views.* If the proposed development appears relatively uniform and consistent in appearance from different viewpoints and viewing angles, in a similar setting and familiar form, this tends to reduce the magnitude of change. If, on the other hand, it appears inconsistent in image, scale and appearance, or from a variety of different angles, and is seen in a different form and setting, the magnitude of change is likely to be higher as it will be a variable and less familiar component of views.



- *The extent of the wind energy developed skyline.* If the proposed development will add notably to the wind energy developed skyline in a view, extending the lateral spread of development or increasing the perceived connection between other wind farms, the cumulative magnitude of change will tend to be higher;
- *The number and scale of developments seen simultaneously or sequentially.* Generally, the greater the number of clearly separate developments that are visible, the higher the cumulative magnitude of change will be, whereas an extension to an existing wind farm would tend to result in a lower magnitude of change than a separate, new development;
- *The scale and form comparison between developments.* If the proposed development is of a similar scale and form to other visible developments, particularly those seen in closest proximity to it, the cumulative magnitude of change will generally be lower as it will have more integration with the other sites and will be less apparent as an addition to the cumulative situation.

*Geographical Extent*

2.5.37 The geographic extent over which the visual effects will be experienced is also assessed, which is distinct from the size or scale of effect. The extent of the effects will vary depending on the specific nature of the proposed development and is principally assessed through analysis of the extent of visibility of the proposed development from visual receptors, to assess the geographical extent of the receptor that will be affected, based on the following criteria:

- The extent of the visual receptor (a road, footpath or settlement for example) that will experience changes through visibility of the proposed development; and
- The extent to which the change affects views, whether this is unique to the viewpoint or if similar changes occur over wide areas represented by the viewpoint.

*Magnitude of Change Rating*

2.5.38 An assessment of the magnitude of change resulting from the proposed development on each visual receptor and viewpoint is made by assessing the size or scale of change. The geographical extent over which this change takes place is also assessed. The basis of the assessment is made clear using evidence and professional judgement. The levels of magnitude of change that can occur on views are defined in Table 2.8 as follows:

**Table 2.8: Magnitude of change – visual effects**

Magnitude of change	Visibility level	Magnitude of Change Definition
High	The proposed development will be the prevailing feature in the view and will form the major focus of visual attention due to its large vertical scale and lateral spread, filling a large proportion of the field of view. Contrasts in form, line, colour, texture, luminance or motion may contribute to the prevailing influence. The visual prominence of the proposed development will detract noticeably from views of other landscape elements.	The proposed development will result in a high level of alteration to the existing view, forming the prevailing influence and/ or introducing elements that are substantially uncharacteristic in the baseline view. The addition of the proposed development will result in a major incremental change, loss or addition to the baseline view.
Medium-high	The proposed development will strongly attract the visual attention of viewers, either due to its large vertical scale or lateral spread in the view, or due to contrasts in form, line, colour, or texture, luminance, or motion. Will form a major-moderate focus of visual attention, drawing viewer attention immediately and tending to hold that attention. The visual prominence of the proposed development interferes noticeably with views of nearby landscape elements.	The proposed development will result in a medium-high level of alteration to the existing view, forming a prominent influence and/ or introducing elements that are uncharacteristic in the baseline view. The addition of the proposed development will result in a moderate to major incremental change, loss or addition to the baseline view.

Magnitude of change	Visibility level	Magnitude of Change Definition
Medium	Plainly visible, so will not be missed by casual observers, but does not strongly attract visual attention or dominate the view because of its apparent size. The proposed development is obvious and will have sufficient size to contrast with other landscape elements, but with insufficient visual contrast to strongly attract visual attention and insufficient size to occupy most of an observer’s field of view.	The proposed development will result in a medium level of alteration to the baseline view, forming a readily apparent influence and/ or introducing elements that are potentially uncharacteristic in the receiving view. The addition of the proposed development will result in a moderate incremental change, loss or addition to the baseline view.
Medium-low	The proposed development will be visible after a brief glance in its general direction and is unlikely to be missed by casual observers. Will be easily detected after a brief look and will be visible to most casual observers, but without sufficient size or contrast to compete with the main landscape elements in the view.	The proposed development will result in a medium-low level of alteration to the existing view, forming an apparent influence and/ or introducing elements that may be characteristic in the baseline view. The addition of the proposed development will result in a medium-low incremental change, loss or addition to the baseline view.
Low	The proposed development will be visible when scanning in its general direction proposed development; otherwise it may be missed by casual observers. Very small and/ or faint, but when the observer is scanning the horizon or looking more closely at an area, can be detected and sometimes noticed by casual observers; however, most people would not notice it without some active looking.	The proposed development will result in a low level of alteration to the baseline view, providing a slightly apparent influence and/ or introducing elements that are characteristic in the receiving view. The addition of the proposed development will result in a low incremental change, loss or addition to the baseline view.

Magnitude of change	Visibility level	Magnitude of Change Definition
Negligible	Visible only after extended viewing. The proposed development is near the limit of visibility. It would not be seen by a person who was unaware of it in advance and looking for it. Even under those circumstances, it can be seen only after looking at it closely for an extended period.	The proposed development will result in a negligible alteration to the existing view, forming a barely discernible influence and/ or introducing elements that are substantially characteristic in the baseline view. The addition of the proposed development will result in a negligible incremental change, loss or addition to the baseline view.
None	The proposed development is not visible.	The proposed development will result in no change to the existing view or its baseline characteristics.

2.5.39 There may also be intermediate levels of magnitude of change, such as medium-high or medium-low, where the change falls between the definitions. Criteria that tend towards higher or lower magnitude of change are set out in Table 2.9 below.

**Table 2.9: Magnitude of change – visual receptors**

Criteria tending towards higher or lower magnitude							
	High	→	Medium	→	Low	→	Negligible
<b>Size or scale of change</b>	Large scale change in the view resulting from loss and/ or addition of features and changes in its composition. proposed development located in close proximity to the viewpoint and will form large scale component of the view. All or majority of the proposed development will be visible in the view			Small-scale change in the view resulting from loss and/ or addition of features and changes in its composition. The proposed development is located at long distance from the viewpoint and will form small scale component of the view. Limited amount of the proposed development will be visible in the view			
	The proposed development affects large proportion of available field of view. The proposed development has high degree of contrast/ low degree of integration with existing landscape elements, in terms of scale, form, mass, line, height, colour and texture. The proposed development appears inconsistently, in a different setting and/ or form each time it is visible.			The proposed development affects small proportion of available field of view. The proposed development has low degree of contrast/ high degree of integration with existing landscape elements, in terms of scale, form, mass, line, height, colour and texture. The proposed development appears consistent, in a similar setting and/ or form each time it is visible.			
<b>Magnitude of change</b>	High	→	Medium	→	Low	→	Negligible

**Significance of effects**

2.5.40 The significance of the effect on each view is dependent on all of the factors considered in the sensitivity of the view and the magnitude of change resulting from the proposed development. These judgements on sensitivity and magnitude are combined to arrive at an overall assessment as to whether the proposed development will have an effect that is significant or not significant on the visual receptor. The matrix shown in Table 2.3 helps to inform the threshold of significance when combining sensitivity and magnitude to assess the significance of effect.

2.5.41 A significant effect will occur where the combination of the variables results in the proposed development having a defining effect on the view or where changes of a lower magnitude occur on a view or visual receptor that is of particularly high sensitivity.

2.5.42 A not significant effect will occur where the appearance of the proposed development is not definitive, and the view continues to be defined principally by its baseline characteristics or where the small-scale of change experienced by a high sensitivity receptor is such as to be considered not significant.

2.5.43 Irreversible, long-term effects on people who are particularly sensitive to changes in views and visual amenity are more likely to be significant, as are effects on people at recognised viewpoints with high scenic quality. Large-scale changes which introduce new, non-characteristic or discordant elements into the view are also more likely to be significant than small changes or changes involving features already present within the view.

2.5.44 The assessment of visual effects assumes clear weather and optimum viewing conditions. This means that effects that are assessed to be significant may be not significant under different, less clear conditions. Viewing conditions and visibility tend to vary considerably and therefore the likelihood of effects resulting from the proposed development will vary greatly dependent according to the prevailing viewing conditions.

**Nature of effects**

2.5.45 The nature of effects refers to whether the landscape and/ or visual effect of the proposed development is positive or negative (herein referred to as ‘beneficial’ and ‘adverse’).

2.5.46 The EIA Regulations 2017 state that the Environmental Statement (ES) should cover ‘the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development’.

2.5.47 Guidance provided by the Landscape Institute in GLVIA3 on the nature of effect (i.e. beneficial or adverse) states that ‘thought must be given to whether the likely significant landscape and visual effects are judged to be positive (beneficial) or negative (adverse) in their consequences for landscape or for views and visual amenity’, but it does not provide guidance as to how that may be established in practice. The nature of effect is therefore one that requires interpretation and, where applied, this involves reasoned professional opinion.



2.5.48 In relation to many forms of development, the LVIA will identify ‘beneficial’ and ‘adverse’ effects by assessing these under the term ‘Nature of Effect’. The landscape and visual effects of wind farms are difficult to categorise in either of these brackets as, unlike other disciplines, there are no definitive criteria by which the effects of wind farms can be measured as being categorically ‘beneficial’ or ‘adverse’. In some disciplines, such as noise or ecology, it is possible to quantify the effect of a wind farm in numeric terms, by objectively identifying or quantifying the proportion of a receptor that is affected, and assessing the nature of that effect in justifiable terms. However, this is not the case in relation to landscape and visual effects where the approach combines quantitative and qualitative assessment.

2.5.49 Generally, in the development of ‘new’ wind farms, a precautionary approach is adopted by OPEN, which assumes that significant landscape and visual effects will be weighed on the adverse side of the planning balance. Unless it is stated otherwise, the effects considered in this assessment are considered to be adverse. Beneficial or neutral effects may, however, arise in certain situations and are stated in the assessment where relevant, based on the following definitions:

- Beneficial effects contribute to the landscape and visual resource through the enhancement of desirable characteristics or the introduction of new, beneficial attributes. The development contributes to the landscape by virtue of good design, even if it contrasts with the existing character. The removal of undesirable existing elements or characteristics can also be beneficial, as can their replacement with more appropriate components;
- Neutral effects occur where the development fits with the existing landscape character or visual amenity. The development neither contributes to nor detracts from the landscape and visual resource and can be accommodated with neither beneficial or adverse effects, or where the effects are so limited that the change is hardly noticeable. A change to the landscape and visual resource is not considered to be adverse simply because it constitutes an alteration to the existing situation;
- Adverse effects are those that detract from the landscape character or quality of visual attributes experienced, through the introduction of elements that contrast, in a detrimental way, with the existing characteristics of the landscape and visual resource, or through the removal of elements that are key in its characterisation.

#### Duration and reversibility

2.5.50 GLVIA3 advises that duration and reversibility should be a consideration in the assessment of magnitude of change. The majority of the changes to views that occur in relation to wind farm development are reversible, however, following the construction stage they are also generally long-term (over a 30 year O&M period). OPEN’s methodology does not include duration and reversibility as part of magnitude of change, as there is the potential that the reversibility aspect could alter or reduce

potentially significant effects even though they are long-term. The duration and reversibility of the effects is instead determined separately and recorded alongside significance rather than being a factor of it.

2.5.51 The effects of the proposed development are of variable duration, and are assessed as short-term or long-term, and permanent or reversible. It is anticipated that the O&M life of the proposed wind farm development will be 30 years. The onshore substation, cable route and landfall are assumed to have the same O&M period as the offshore wind farm, noting that for the purposes of flood risk assessment an assumed 40 year life span for the substation has been considered. The substation and above ground sections of bundled cable, should Option 2 be the final design taken forward, will be apparent during this time, and these effects are considered to be long-term.

2.5.52 Other infrastructure such as the trenched sections of cable route and operations such as the construction processes and plant movement (including cranes, earth moving plant and delivery vehicles) will be apparent only during the initial construction period of the proposed development and are considered to be short-term effects.

2.5.53 The reversibility of effects is variable. The most apparent effects on the landscape and visual resource, which arise from the presence of the above ground structures and infrastructure, are reversible as they will be removed on decommissioning. The effects of the tall cranes, vessels and heavy machinery used during the construction and decommissioning periods are also temporary and reversible.

2.5.54 In order to avoid repetition, the duration and reversibility of effects are not reiterated throughout the assessment.

## 2.6 Uncertainty and technical difficulties encountered

### Substation Zone of Theoretical Visibility Analysis

2.6.1 There are limitations in the theoretical production of the ZTV, and these should be borne in mind in its consideration and use:

- The ZTV illustrates the ‘bare ground’ situation, and does not take into account the screening effects of vegetation, buildings, or other local features that may prevent or reduce visibility.
- The ZTV does not indicate the decrease in visibility that occurs with increased distance from the proposed substation. The nature of what is visible from 1 km away would differ markedly from what is visible from 5 km away, although both are indicated on the ZTV as having the same level of visibility.
- There is a wide range of variation within the visibility shown on the ZTV. For example, an area shown as having visibility of the proposed substation may only gain views of the smallest extremity rather than all of it as may be the case elsewhere.

2.6.2 These limitations mean that while the ZTV is used as a starting point in the assessment, providing an indication of where the proposed substation would theoretically be visible, the information drawn from the ZTV is not completely relied upon to accurately represent visibility of the proposed substation.

### Visualisations

2.6.3 The viewpoint assessment is illustrated by a range of visualisations, including photographs, annotated photographs and block model photomontages, which are in line with current best practice and the guidance provided in Landscape Institute, 2017 – Visual Representation of Development Proposals and SNH’s Visual Representation of Wind Farms Version 2.2 (SNH, 2017). Visualisations have a number of limitations when using them to form a judgement on a proposed development. These include:

- A visualisation can never show exactly what the proposed development will look like in reality due to factors such as: different lighting, weather and seasonal conditions which vary through time and the resolution of the image.
- The images provided give a reasonable impression of the scale of and distance to the proposed development, but can never be 100% accurate.
- The viewpoints illustrated are representative of views in the area, but cannot represent visibility at all locations.
- To form the best impression of the impacts of the proposed development these images are best viewed at the viewpoint location shown.
- The visualisations must be printed at the right size to be viewed properly (A1 width) and viewed at a comfortable viewing distance.

2.6.4 The photographs used to produce the photomontages have been taken using Canon EOS 5D and 6D Digital SLR cameras, with a fixed lens and a full-frame (35 mm negative size) CMOS sensor. The photographs are taken on a tripod with a pano-head at a height of approximately 1.5 m above ground.

2.6.5 To create the baseline panorama, the frames are individually cylindrically projected and then digitally joined to create a fully cylindrically projected panorama (with a 90-degree field of view) using Adobe Photoshop or PTGui software. This process avoids the wide-angle effect that would result should these frames be arranged in a perspective projection, whereby the image is not faceted to allow for the cylindrical nature of the full 360-degree view but appears essentially as a flat plane. Tonal alterations are made using Adobe software to create an even range of tones across the photographs once joined.

2.6.6 The proposed substation has been modelled as a maximum parameter block model to define the worst-case building height within the maximum potential footprint of the site area. In these block model substation photomontage views, the substation area is shown as a grey transparent block model with a maximum height of 14 m as this is the maximum height of the substation building (and maximum height of any structure proposed within the substation area). Using the maximum footprint of the substation building, a more solid grey block is shown to represent the scale of the substation building within the substation area. Where the proposed substation area is screened by intervening elements in the view a white outline has been applied to show the location of the substation area not visible in the view.

2.6.7 The photographs and other graphic material such as wirelines and photomontages used in this assessment are for illustrative purposes only and, whilst useful tools in the assessment, are not considered to be completely representative of what will be apparent to the human eye. The assessments are carried out from observations in the field and therefore may include elements that are not visible in the photographs.

## 2.7 Existing environment - Landscape

### Introduction

2.7.1 This section describes the baseline condition of the landscape resource of the onshore LVIA study area for the proposed development. The baseline conditions are the existing conditions of the site and onshore LVIA study area prior to the introduction of the proposed development. Establishing the baseline conditions develops an understanding of the important components or characteristics, as well as how these are changing in response to existing forces for change. A preliminary assessment of the baseline conditions helps to define the scope of the assessment by identifying those receptors which will require detailed assessment.

2.7.2 The baseline conditions are presented under the following headings:

- Physical landscape
- Landscape character; and
- Landscape related designations.

### Physical landscape

2.7.3 The RLB for the onshore cable route and landfall is largely coastal in nature. The majority of the Cable Route and landfall options would cross coastal grassland within the Pegwell Bay Country Park, and Stonelees Nature Reserve. Further south the onshore cable route crosses recreation grounds before following the western banks of the Stour to connect with the proposed substation site area.

- 2.7.4 The landscape of the Country Park and Nature Reserve is divided into irregular shaped compartments some with restricted access due to sensitive wildlife or during periods of seasonal grazing. The grassland within these compartments is fenced throughout and grassland tends to be much longer within these compartments. Along the onshore cable route and within the Country Park and Nature Reserve there are some small stands of trees near the access to Sandwich Road and at the boundary between the Country Park and Nature Reserve. Other vegetation along the onshore cable route within the Country Park and Nature Reserve includes occasional smaller groupings or isolated small trees and shrubs and the shrubs and trees that separate the Country Park and Nature Reserve from Sandwich Road.
- 2.7.5 Potential physical effects could also occur as a result of disruption to the grass pitches and MUGA (Multi Use Games Area) and surrounding trees of the recreation grounds or tree and shrubs located along the western banks of the River Stour.
- 2.7.6 The proposed substation area is currently used as a storage area and does not have any distinct landscape elements within it which could be physically affected by the construction of the proposed substation. There are large trees and shrubs that follow the River Stour to the east and that follow the A256 road corridor to the west, although it is anticipated that the construction works would be contained between these strips of trees and shrubs, which would be protected during construction and remain *in situ* during the O&M period.
- 2.7.7 The proposed open trenching, bunding, Transition Joint Bays (TJB) and creation of construction compounds would have physical landscape effects on the grassland, trees, shrubs and grass pitches that it crosses. These effects are described in detail in Section 2.13.

#### Landscape Character

- 2.7.8 There is a hierarchy of published Landscape Character Assessments that describe the baseline landscape character of the onshore LVIA study area, at the National, County and District level. These publications categorise the landscape into LCAs; areas which share a distinct and recognisable set of characteristics and pattern of components.
- 2.7.9 The English Landscape is classified at the national level by National Character Areas (NCAs). The 159 NCAs, which cover the country, were originally identified by the Countryside Agency (See Volume 2, Figure 12.10). This mapping and the associated descriptions have been revised and developed by Natural England into NCA profiles which provide a recognised, national, spatial framework. The onshore LVIA study area is located within the *North Kent Plain* NCA (NCA 113). The North Kent Plain NCA is an open, low and gently undulating productive agricultural area, characterised by arable use, significant areas of ancient woodland and characteristic shelterbelts. The NCA meets the sea between Whitstable and Deal, where there is a diversity of coastal habitats, including chalk cliffs around Thanet; soft cliffs between Herne Bay and areas

of intertidal sand and mud, saltmarshes, sand dunes, shingle beaches, brackish lagoons and maritime grasslands. The area has a strong urban influence, with several built-up areas, including coastal towns such as Whitstable, Herne Bay and the towns of Margate, Broadstairs and Ramsgate around the Thanet coastline. Development pressures (and the associated infrastructure) are likely to present significant challenges as the area responds to an increasing population and the demands of economic development and a changing climate. Offshore wind farms are visible from the coastline, particularly TOWF, Kentish Flats and London Array.

- 2.7.10 At the County level, as defined in the Landscape Assessment of Kent (Kent County Council, 2004), the substation, onshore cable route and landfall are located within the Wantsum and Lower Stour Marshes LCA (15). Areas to the north of the onshore LVIA study area are defined by the Thanet LCA (12) (See Volume 2, Figure 12.10).
- 2.7.11 A more local and detailed level of landscape classification has been carried out at a District Level by local authorities. In respect of the onshore elements of Thanet Extension, the following district level landscape character assessments cover the onshore LVIA study area and form the basis against with the onshore elements of Thanet Extension have been assessed (Figure 2.2):
- Thanet District Council Landscape Character Assessment (Thanet District Council, 2017); and
  - Dover District Landscape Character Assessment (Dover District Council, 2006).
- 2.7.12 The landscape character of Thanet is defined by the former limits of the island that was cut off from the mainland by the Wantsum Channel; until it silted up around 1000 years ago. The island quality is preserved in the way that Thanet rises out of the marshes to a modest height of about 50 m. The landscape falls into two distinct types, based on the local landform – the flat plateau top (above 40 m) and the sloping backdrop to the marshes (between 20 - 40 m). The plateau top of the LCA provide long views, both to the 'island' and back from it over the Chislet Marshes. On the seaward side, Thanet is characterised by steep chalk cliffs and small sandy bays. Since the 1960's there has been a marked increase in the extent of urban land, notably in the coalescence of Ramsgate with both Broadstairs and Margate, which now form a large conurbation.
- 2.7.13 The landscape of the onshore cable route is primarily coastal in character around Sandwich Bay, Pegwell Bay and the River Stour. Much of the route passes through Pegwell Bay Country Park until it reaches the industrial landscape context of Richborough Port and the Richborough Energy Park (the site of the former Richborough power station). There are existing and proposed energy developments within this context, including the existing TOWF substation, anaerobic digestion plant on St Nicholas Court Farm, Ebbsfleet Farm Solar Park, Nemo substation and banded cable route through the Pegwell Country Park, proposals for the National Grid Interconnector and replacement Richborough Wind Turbine.



2.7.14 The proposed substation area and the southern part of the onshore cable route are located within the Sandwich Corridor LCA (4) and LCA 6 – Sandwich Bay as defined within the Dover District Landscape Character Assessment (DDC, 2006). The remaining parts of the onshore cable route and landfall are located either exclusively within the Pegwell Bay LCA (F1) for the proposed Option 2 cable route or within a combination of the Pegwell Bay LCA (F1) and Stour Marshes LCA (E1) for the proposed cable route Option 1 as defined in the Thanet District Council Landscape Character Assessment (TDC, 2017) and shown in Figure 2.2. These effects are described in detail in section 2.13.

### Landscape Designations

2.7.15 There are no international, national or regional landscape designations within the onshore LVIA study area. There is only one Registered Park and Garden (RPG) in the onshore LVIA study area, located at the Salutation, within the village of Sandwich as shown in Figure 2.3.

2.7.16 The Salutation is a restored garden designed by Edwin Luytens. It is set within walls and mature tree planting within the centre of Sandwich and as such there are no views towards the proposed development. No effects are predicted at this location as a result of the proposed development. The effect of the onshore elements of Thanet Extension on landscape designations are therefore assessed as not significant and effects on landscape designations are not considered any further in this LVIA.

## 2.8 Existing environment - Visual

### Introduction

2.8.1 This section describes the baseline condition of the visual resource of the onshore LVIA study area for the proposed development. The baseline conditions are the existing conditions of the site and onshore LVIA study area prior to the introduction of the proposed development. Establishing the baseline conditions develops an understanding of the existing visual resource and how it is changing in response to existing forces for change. A preliminary assessment of the baseline conditions helps to define the scope of the assessment by identifying those receptors which will require detailed assessment.

2.8.2 Principal visual receptors which occur within the LVIA Study Areas of the proposed development are shown on Figure 2.4. These principal visual receptors include roads, settlements, recreational routes and other features from which visual receptors would experience views. The relatively discreet nature of the onshore cable route and landfall location means that only the views of close range receptors would be affected and that impacts would be most likely to occur during construction, when machinery, spoil heaps and stored materials would, in most cases, form a more visible feature than the onshore cable route once restored. The substation is a larger scale development with a greater

extent of visibility and therefore visual receptors over a wider area would potentially be affected, with impacts likely to occur during O&M, as well as construction and decommissioning. Visual effects are described in detail in section 2.15 Visual Effects Assessment

### Substation

2.8.3 The proposed substation location is proposed within industrial land at Richborough Port, next to the British Car Auctions (BCA) car auction site on the mouth of the River Stour near Sandwich. The substation is located within the visual context of the existing and proposed energy developments within Richborough Energy Park (a site of low carbon renewable energy generation and site of the former Richborough power station), including the existing TOWF substation, Nemo Substation, the anaerobic digestion plant on St Nicholas Court Farm, Ebbsfleet Farm Solar Park, National Grid Interconnector and peaking plant.

2.8.4 Due to the amount of vegetation surrounding local settlements, and the proposed substation area itself, views towards the proposed development are relatively restricted. Settlements within the onshore LVIA study area include Minster, Sandwich, Cliffsend and Ramsgate with scattered properties and farmsteads on the north and south facing slopes of the Stour Valley including to the west of Richborough Castle and between Cliffsend and Minster. The viewpoints identified for assessment of the substation have been selected to cover a variety of landscape character areas; roads; recreational routes; points from different directions and distances; and to inform the definition of the likely extent of significant visual effects arising from the proposed development.

2.8.5 Viewpoints for the substation landscape and visual assessment have been selected in consultation with statutory consultees. Feedback from consultees has included comments within the scoping consultation, through discussions with the Thanet Extension LVIA topic group at the evidence plan meetings held in March and October 2017, and formally through the submission of the Preliminary Environmental Information Report for consultation between November 2017 and January 12<sup>th</sup> 2018 as recorded in Table 2.2a.

2.8.6 During the ES assessment, the substation location has been repositioned from within the Richborough Energy Park (as identified during scoping) to its current location at Richborough Port. As a result of this revised location, there are no potential views of the proposed substation from some of the locations agreed during earlier consultation discussions including the proposed viewpoint at Sevenscore Railway crossing and viewpoints along less elevated sections of the Saxon Shore Way. These locations were therefore not progressed within the ES assessment. For the ES therefore, the viewpoint locations were finalised based on site survey and potential visibility of the proposed substation, following the design fix for the substation location (as presented to the Thanet Extension LVIA topic group in October 2017).

2.8.7 Following s42 responses (see Table 2.2a) to the onshore LVIA PEI report, an additional viewpoint has been added in line with DDC comments and further email consultation to represent a potential view from the Pegwell area of Ramsgate looking along the Stour Estuary towards Richborough Port. DDC also requested that a viewpoint at Shellness Point be included in the LVIA, however, this area has restricted public access and is not possible and given the access restrictions the area would not have any visual receptors. Other reference photographs are also provided on Figures 2.8a-f, Context Photo Sheets 1-6, this includes views from the section of Stour Valley Walk that runs along the east coast of Sandwich Flats, the Saxon Shore Way adjacent to the Richborough Energy Park and views of existing industrial context from The England Coast Path.

2.8.8 Representative viewpoints proposed for the visual assessment of the proposed substation are therefore identified in Table 2.10 below and mapped on Figure 2.6.

**Table 2.10: Substation viewpoint Locations**

Viewpoint	Grid Ref	Landscape Character Area	Visual Receptor Type	Elevation (AOD m)	Distance to substation (km)	Direction
1. A256 (Richborough Port Roundabout)	633441, 161948	4. The Sandwich Corridor	Road Users	4.48	0.06	South-east
2. Saxon Shore Way (South)	633249, 161662	4. The Sandwich Corridor	Walkers	3.36	0.23	East
3. A265 (Stevens Carlotti)	633408, 161482	4. The Sandwich Corridor	Road Users	4.30	0.27	North-north-east
4. Sandwich Flats (England Coast Path)	634654, 161117	6. Sandwich Bay	Walkers	2.22	1.15	West
5. A256 (Cycle Path)	633261, 163117	B1. Wanston North Slopes	Cyclists/ walkers/ road users	7.18	1.23	South
6. Richborough Castle	632291, 160223	5. Richborough Castle	Visitor	14.05	1.92	North
7. A299, Thorne Hill	632736, 165479	A1. Manston Chalk Plateau	Road Users	47.72	3.65	South
8. A257 near Ash	628881, 159235	2. Preston & Ash Horticultural Belt	Road Users	21.11	5.23	North-east
9. Pegwell, Promenade	636837, 164081	G1. Ramsgate & Broadstairs Cliffs	Resident / visitor	20.99	3.83	South-West

2.8.9 Visualisations of the LVIA Rochdale Envelope for the proposed substation are provided on Figures 2.11 – 2.19, in order to illustrate the potential visual envelope within which the proposed substation would occupy within the view from each of the agreed viewpoint locations.

*Onshore cable route and landfall*

- 2.8.10 As each of the options follow the same route alignment the principal visual receptors are the same for each option and include: walkers on the Thanet Coastal Path and England Coast Path long distance routes; walkers on local path network within Pegwell Bay Country Park and Stonelees Nature Reserve; bird watchers; cyclists on Regional Cycle Route 15; visitors to the recreation grounds and adjacent Baypoint Club; and road users on Sandwich Road where construction activity could be experienced through site access points.
- 2.8.11 Representative viewpoints proposed for the visual assessment of the onshore cable route and landfall options are identified in Table 2.11 below and mapped on Figure 2.6. Panorama photography has been provided for these locations in Figures 2.20 – 2.23. Other reference photographs along the onshore cable route are also provided on Figures 2.8a-f, Context Photo Sheets 1-6.

**Table 2.11: Onshore Cable route and landfall viewpoint Locations**

Viewpoint	Grid Ref	Landscape Character Area	Visual Receptor Type	Elevation (AOD m)	Distance to onshore cable route (km)	Direction
10. Pegwell Bay Country Park near the bird hide	634326, 163238	F1 Pegwell Bay	Walkers/ cyclists	3.84	0	North/ south
11. Cycle route and path adjacent to Sandwich Road	633871, 162900	F1 Pegwell Bay	Walkers	4.57	0	North/ south
12. Cycle route and path near Sandwich Road access	634077, 163237	F1 Pegwell Bay	Walkers/ cyclists	4.42	0	North/ south
13. Sandwich Road	634048, 163288	E1 Stour Marshes	Road Users	3.33	0	North/ south

**2.9 Existing environment: Cumulative**

**Existing cumulative context**

- 2.9.1 As described in the existing environment sections for landscape and visual there is an established industrial landscape context that surrounds the site of the former Richborough power station. Other existing energy related developments include Richborough Energy Park, Richborough Port, the existing TOWF substation, anaerobic digestion plant on St Nicholas Court Farm, Ebbsfleet Farm Solar Park, Nemo substation and Richborough Wind Turbine. The existing industrial landscape context however also includes existing masts and overhead lines within and surrounding the Richborough Energy Park and the industrial units along the A256 extending to the Discovery Park industrial estate at Great Stonar. See also Figure 2.5 Landscape and Visual Context.
- 2.9.2 The proposed substation is in close proximity to the recently constructed Nemo Substation and the proposed onshore cable route is in close proximity to the chalk capped Nemo Cable bund. Due to this close proximity the proposed substation and onshore cable route would often be viewed in combination with the Nemo development and is therefore influenced by its addition to the baseline.
- 2.9.3 Operational and under construction developments as described above are included in the baseline for both the landscape and visual effects assessments. These developments have an existing influence on the baseline landscape and visual environment.
- 2.9.4 Adjacent developments may complement one another, or may be discordant with one another, and it is the increased or reduced level of significance of effects which arises as a result of this change that is assessed. Where this occurs, the magnitude of change varies according to cumulative effect factors such as its consistency of image and degree of contrast or integration with the proposed substation, onshore cable route and landfall, as well as other ‘non-cumulative’ factors, such as its distance, lateral spread and amount of visibility.

**Cumulative sites for consideration in the LVIA**

- 2.9.5 A comprehensive list of projects that have the potential to contribute to cumulative impacts of the proposed substation, onshore cable route and landfall has been compiled and this list and the approach to compiling it is described in Volume 4, Annex 3-3. Those cumulative projects listed within Volume 4, Annex 3-3 that lie within the LVIA onshore LVIA study area are listed below in Table 2.12 and shown on Figure 2.9.



Table 2.12: Cumulative developments within the LVIA study area

Reference	Description/ Location	Type	Description
Consented			
Dover District Council 13/00701, (15/00788, 15/01205)	Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	Energy	<i>'Erection of a biomass combined heat and power plant with fuel storage and associated works'</i>
Dover District Council 14/00058	Discovery Park, Ramsgate Road, Sandwich, CT13 9ND	Commercial/ Residential	<i>'Outline application for the redevelopment of site to include: demolition of some existing buildings (and associated infrastructure); change of use of some existing buildings (from B1 to use classes: B2, B8, Sui Generis (Energy) and D1 uses); the provision of new commercial (use classes: A3/4, B1, B2, B8, C1, D1 and Sui Generis) and residential (use class: C3) development; associated site preparation/enabling, infrastructure, and landscaping works; and provision of car parking (with some matters reserved)'</i>
Dover District Council 14/00091	Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND	Energy	<i>'The use of land for additional log storage processing area and wood chip store in association with biomass combined'</i>
Dover District Council 16/00045	Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND	Energy	<i>'Erection of a 4,230 m<sup>2</sup> research, development and manufacturing building, ancillary office floorspace (Class B2), car park and servicing area'</i>
PINS EN020017	Richborough Energy Park to Canterbury East substation, Kent	Grid	<i>'Richborough Connection: Proposed 400 kV electricity transmission connection between Richborough and Canterbury in Kent to connect the proposed new UK to Belgium interconnector (known as the Nemo Link).'</i>
Application			
Dover District Council 17/00280	Former Kumor Nursery and 121 Dover Road, Sandwich, CT13 0DA	Housing	<i>'Erection of 67 no. dwellings, single and double garages, new vehicular access, associated parking'</i>
Thanet District Council F/TH/17/ 0321	Pegwell Road RAMSGATE Kent CT11 0JE	Housing	<i>'Change of use and conversion to 7 no. self-contained flats, erection of 5 no. 3-storey terraced houses and erection of 2 no. 3-storey semi-detached houses'</i>
Thanet District Council OL/TH/16/ 1715	Land South Of Manston Road RAMSGATE Kent	Housing	<i>'Outline application for 48 dwellings including access with all other matters reserved'</i>
Thanet District Council OL/TH/16/ 1374	St Stephens Haine Road RAMSGATE Kent CT12 5ES	Housing	<i>'Application for outline planning permission for 95 dwellings with all matters reserved and full planning permission for 5 dwellings on land at St Stephens Bungalow and adjoining land.'</i>
Thanet District Council OL/TH/16/ 0967	Land Adjacent 15 Southall Close Minster RAMSGATE Kent	Housing	<i>'Outline Application for the erection of 12 detached dwellings, with access via Southall Close including access, layout and scale'</i>
Thanet District Council OL/TH/16/ 1752	Land At Haine Lodge Spratling Lane RAMSGATE Kent CT12 5LL	Housing	<i>'Outline application for the development of 14 houses and retention of existing dwelling with access from Spratling Lane including details of access with all other matters reserved'</i>
Thanet District Council F/TH/16/ 0914	Land South Of Invicta Way Ramsgate Kent	Housing	<i>'Erection of 12 No. general industrial units'</i>

## 2.10 Key parameters for assessment

2.10.1 The LVIA is based on the Rochdale Envelope described in Volume 3, Chapter 1: Onshore Project Description. The parameters relevant to the LVIA are set out in this section. In compliance with EIA regulations, the likely significant effects of a worst-case scenario are assessed and illustrated in the LVIA.

2.10.2 The assessment of construction, O&M and decommissioning effects is based on the following key parameters for the LVIA set out in Table 2.13.

**Table 2.13: Maximum design scenario considered in the LVIA Rochdale Envelope**

Description	Parameter
<b>Substation</b>	
Substation area maximum footprint	215 x 160 m
Substation external infrastructure maximum height	13.5 m
Substation building maximum footprint	60 x 30 m
Substation building maximum height	14 m
Temporary Construction Area	200 x 100 m
Palisade Fence Height	3.4 m
<b>Onshore Cable Route – Overall Parameters</b>	
Approximate length of cable route.	2,575 m
Approximate length of cable route through Pegwell Bay Country Park	725 m
Approximate length of cable route through Stonelees Nature Reserve	350 m
Approximate length of cable route through Baypoint Club	450 m
Approximate length of cable route through BCA site	300 m
Approximate length of cable route between proposed Substation and NGET	750 m
Cable route working corridor width	35 m
Approximate length of 5 m wide Haul Road	2,575 m

Description	Parameter
Approximate width of cable trench (maximum 4 trenches)	1 m
Approximate depth of each cable trench	1.5 m
Cable Trench Jointing Pits (1 Joint pit required per circuit per 800 m cable length, contained within working corridor)	up to 10 m (L) by 3 m (W) by 1.5 m deep
Construction and Laydown Areas	11,118 m <sup>2</sup>
<b>Onshore Cable Route – Landfall Option 1</b>	
Transition Pit Temporary Working Area	50 x 60 m
Transition Pit	12 x 22 m
Intertidal HDD Pits	20 x 20 m
<b>Onshore Cable Route – Landfall Option 2</b>	
Bunded cable sections approximate width	15.3 m
Bunded cable sections maximum height	1.2 m
Approximate length of bunded cable sections (limited to Pegwell Country Park)	~ 725 m
Transition Pit Temporary Working Area	30 x 40 m
Transition Pit	12 x 22 m
Approximate length of Rock Armour replacement	155 m
Indicative Sea wall cofferdam extent	165 width x 25 m depth (seaward)
Seaward extension of seawall	18.5 m
<b>Onshore Cable Route – Landfall Option 3</b>	
Transition Pit Temporary Working Area	30 x 40 m
Transition Pit	12 x 22 m
Indicative Sea wall cofferdam extent	165 width x 25 m depth (seaward)

- 2.10.3 Within the substation visualisations, the substation area is shown as a grey transparent block model with a maximum height of 14 m as this is the maximum height of the substation building (and maximum height of any structure proposed within the substation area). Using the maximum footprint of the substation building, a more solid grey block is shown to represent the scale of the substation building within the substation area. The orientation and location of the substation building is within the south-east corner as this is considered to represent the worst-case as being potentially more visible from within the sensitive Sandwich Flats coastal area to the east.
- 2.10.4 Other elements of external substation infrastructure vary in height up to a maximum of 13.5 m, however, because the substation building could potentially be located anywhere within the substation area, the maximum parameter of 14 m in height has been applied to the whole substation area to create the LVIA Rochdale envelope shown in the LVIA visualisations.
- 2.10.5 Perimeter and site lighting of the proposed substation will be required during the winter months and a lower level of lighting will remain overnight for security purposes. There is existing lighting within the immediate proximity in the form of perimeter lighting around the substation area and in neighbouring BCA parcels of land, streetlighting and car lights from the busy dual carriageway. It is not considered therefore that the proposed substation would intensify the baseline lighting levels to a such a degree that the potential for significant landscape or visual effects could arise or be experienced over and above those considered and assessed during daylight hours. Temporary lighting required during periods of construction has been considered in the assessment of construction phase effects.
- 2.10.6 Volume 3, Chapter 1: Onshore Project Description provides more detail on the landfall and cable route Options including the locations of indicative onshore construction areas for both options. It should be noted however that the cable route alignments shown on these diagrams is indicative and subject to detailed design, however the final option would not fall outside the design envelope for each of the options and therefore the maximum parameter assessed in the LVIA.
- 2.10.7 The proposed cable route bund has not been modelled in the cable route viewpoints as the precise location of the bund is not known at this stage.

## 2.11 Potential Effects

### Potential effects during construction

- 2.11.1 The potential landscape and visual effects of the proposed development during construction would occur in relation to the construction of the proposed onshore cable route and landfall options and substation. These would include potential effects on the physical elements of the sites where construction would take place, as well as effects on the landscape character and visual amenity of the site and surrounding area. The effects would relate principally to the construction process, associated plant, construction compounds, materials, infrastructure and temporary structures, as well as the presence of emerging structures, where they would be visible above ground (see Volume 3, Chapter 1: Onshore Project Description for more detail).

### Potential effects during O&M

- 2.11.2 The potential landscape and visual effects of the proposed development during O&M relates principally to the presence of the proposed above ground structure such as the substation, potentially banded section of onshore cable route or extended rock armour within Pegwell Country Park in landfall Option 2 and the effect of potential loss of landscape elements within the working corridor of the cable route or substation working area. The effect of these elements on the landscape and visual resource of the onshore LVIA study areas has been assessed, with particular consideration of sensitive receptors such as valued landscapes, residents, recreational users of the countryside and road-users.
- 2.11.3 It is anticipated that once operational, the potential effects of the trenched sections of onshore cable route would be greatly reduced by their presence under ground level with a minimum amount of associated development visible above ground.

### Potential effects during decommissioning

- 2.11.4 The potential landscape and visual effects of the proposed development during decommissioning would relate principally to the removal of the proposed substation. The decommissioning of the cable route and landfall would have a lesser effect, as the ducts would be left *in situ* underground, while only the cables would be removed. Decommissioning would include potential effects on the landscape character and visual amenity of the sites and surrounding area. The effects would relate principally to the decommissioning process, associated plant, materials, infrastructure and temporary structures, as well as the presence of dismantled structures, where they would be visible above ground.



### Potential cumulative effects

- 2.11.5 Potential landscape and visual cumulative effects may arise due to the addition of the proposed development to the existing and proposed electrical grid infrastructure and energy developments in the area and the degree to which the proposed substation has additional effects on views and landscape character. Potential effects of the proposed development landfall in combination with these existing baseline energy developments are considered in the main assessment.
- 2.11.6 GLVIA3 (Landscape Institute and IEMA, 2013, p120) defines cumulative landscape and visual effects as those that 'result from additional changes to the landscape and visual amenity caused by the proposed development in conjunction with other developments (associated with or separate to it), or actions that occurred in the past, present or are likely to occur in the foreseeable future.' The approach to cumulative assessment also takes into account the Cumulative Impact Assessment Guidelines issued by RenewableUK in June 2013, together with comments made in response to other renewable energy developments within the Southern North Sea, and PINS 'Advice Note 9: Rochdale Approach'.
- 2.11.7 In assessing the potential cumulative impact(s) for onshore elements of Thanet Extension it is important to bear in mind that for some projects, predominantly those 'proposed' or identified in development plans etc. may or may not actually be taken forward. There is thus a need to build in some consideration of certainty (or uncertainty) with respect to the potential impacts which might arise from such proposals. For example, relevant projects/ plans that are already under construction are likely to contribute to cumulative impact with onshore elements of Thanet Extension (providing effect or spatial pathways exist), whereas projects/ plans not yet approved or not yet submitted are less certain to contribute to such an impact, as some may not achieve approval or may not ultimately be built due to other factors. For this reason, all relevant projects/ plans considered cumulatively alongside the onshore elements of Thanet Extension have been allocated into 'Tiers', reflecting their current stage within the planning and development process. This allows the cumulative impact assessment to present several future development scenarios, each with a differing potential for being ultimately built out. Appropriate weight may therefore be given to each scenario (Tier) in the decision making process when considering the potential cumulative impact associated with the onshore elements of Thanet Extension (e.g., it may be considered that greater weight can be placed on the Tier 1 assessment relative to Tier 2).
- 2.11.8 The projects and plans selected as relevant to the assessment of impacts to the LVIA are based upon an initial screening exercise undertaken on a long list (see Volume 4, Annex 3-3 Cumulative Assessment which describes the search criteria for including cumulative developments for consideration within the EIA). Each project, plan or activity has been considered and scoped in or out on the basis of effect-receptor pathway, data confidence and the temporal and spatial scales involved. The LVIA has therefore undertaken a process of scoping out plans, projects and activities from this

list, based on expert judgement, assessment rationale and guidance relevant to landscape and visual impacts. The Tier structure adopted in the EIA and intended to ensure that there is a clear understanding of the level of confidence in the cumulative assessment is as follows:

#### Tier 1

- The onshore elements of Thanet Extension considered alongside other projects/ plans currently under construction and/ or those consented but not yet implemented, and/ or those submitted but not yet determined where data confidence for the projects falling within this category is high.
- Built and operational projects will be included within the cumulative assessment where they have not been included within the environmental characterisation survey, i.e. they were not operational when baseline surveys were undertaken, and/ or any residual impact may not have yet fed through to and been captured in estimates of 'baseline' conditions or there is an ongoing effect.

#### Tier 2

- All projects included in Tier 1 plus other projects/ plans consented but not yet implemented and/ or submitted applications not yet determined where data confidence for the projects falling into this category is medium.

#### Tier 3

- The above plus projects on relevant plans and programmes (the PINS Programme of Projects and MMO 'Marine Case Management System' being the source most relevant for this assessment). Specifically, all projects where the developer has advised PINS in writing that they intend to submit an application in the future were considered.

- 2.11.9 The specific projects scoped into the cumulative assessment of this LVIA, and the tiers into which they have been allocated are presented in Table 2.30.

#### *Potential Effects Summary*

- 2.11.10 Table 2.14 summarises the potential landscape and visual effects that may arise from the introduction of the proposed development (it should be noted that their inclusion in Table 2.14 does not imply that they would occur, or be significant).

**Table 2.14: Potential effects summary**

Activity	Specific Element	Potential Effects	Potential Sensitive Receptors
Construction	Construction plant, temporary construction facilities, construction cranes, construction of substation and substation building, trenching, bunding and cable laying construction activities	Temporary physical effects on landscape fabric	Physical landscape features e.g. trees and ground cover
		Temporary effects on landscape character	
		Temporary effects on views	
O&M	Substation, substation building, banded onshore cable route and above ground TJB options at the landfall point	Temporary cumulative effects	Landscape character receptors – landscape character areas, wild land areas and designated landscapes  Views – experienced by different receptors e.g. residents, road users, walkers
		Permanent physical effects on landscape fabric	
		Long-term effects on landscape character	
Decommissioning	Construction plant, temporary construction facilities, construction cranes, removal of substation and substation building	Long-term effects on views	
		Long-term cumulative effects	
		Temporary physical effects on landscape fabric	
		Temporary effects on landscape character	
		Temporary effects on views	

2.11.12 It is anticipated that the construction of the proposed development is currently anticipated to start in 2019 and take approximately 30 months (see detailed breakdown in Table 1.7 of Volume 1, Chapter 1). The construction effects identified are therefore predicted to occur during this period and end at the start of the O&M period with the restoration of the onshore cable route. It is anticipated that the proposed development would be in operation for approximately 40 years.

**2.12 Embedded Mitigation**

**Embedded Mitigation**

2.12.1 Primary mitigation in respect of the proposed substation, onshore cable route and landfall has involved the sensitive siting and design of the onshore infrastructure during site selection, to ensure the potential impacts are avoided or reduced.

2.12.2 The site selection process considered constraints relating to physical landscape elements (such as woodlands, trees and hedgerows), landscape character and visual amenity, together with other environmental and technical constraints. The sensitivity of the surrounding landscape and of residents, road-users, workers and recreational users of the landscape was also a key consideration. The capacity of the landscape to accommodate the substation, onshore cable route and landfall is assessed in relation to the natural screening afforded by landform, woodlands and trees and the degree to which other surrounding infrastructure and buildings influence visual screening.

**Construction Phase Mitigation**

2.12.3 Mitigation opportunities during the construction phase of works will be limited and primarily relate to the restrictions imposed on the working areas and measures identified in the Construction Environmental Management Plan (CEMP). The CEMP will seek to stipulate measures to avoid, reduce or offset environmental effects of the construction works, including those related to landscape and visual amenity. Primary mitigation however has included the sensitive siting of construction compound areas away from more visible and larger numbers of receptors, to ensure the potential impacts are avoided or reduced.

2.11.11 The effects of the construction, O&M and decommissioning of the onshore elements of Thanet Extension on the landscape and visual resource would arise principally from the construction, O&M and decommissioning of the substation, potentially banded cable sections or extended sea wall and also the laying of the underground trenched sections of onshore cable route. The temporary construction facilities, such as cranes, construction vehicles, construction compound and delivery vehicles required during the construction process would also have effects on the landscape and visual resource.

### O&M Phase Mitigation

- 2.12.4 Mitigation measures seek to avoid, reduce or offset temporary, permanent and O&M environmental effects, including those related to the landscape and visual resource. Landscape and visual effects change over time as mitigation measures establish and mature (such as planting and restoration of habitat types included as part of the proposed development) and / or existing landscape external to the proposed development evolves. Vegetation and habitat loss across the site area would be kept to a minimum and proposed landscape mitigation planting will ensure that the character of the local area is retained and enhanced for future benefit. As the proposed landscape matures, the degree of adverse effect would reduce.
- 2.12.5 Through consultation with DDC, tree planting to the north of the proposed substation structures has been included as specific visual mitigation. This is mainly introduced to screen views from Richborough Roundabout (Viewpoint 1) but would also strengthen existing screening from more distant views further to the north such as from Pegwell Promenade and Shellness (although no current public access from Shellness). See also Substation Landscape Mitigation Figure 2.10 and Viewpoint 1 assessment, Table 2.24.
- 2.12.6 Outline landscape mitigation for the Cable Route and Landfall Options is focussed on the restoration of disturbed areas of ground within the working corridor of the cable route and re-establishment of ground cover. This will ensure the most positive contribution to the character of the landscape whilst encouraging biodiversity at a local level.
- 2.12.7 Further detail on the landscape strategy and outline mitigation objectives for the proposed Substation, Cable Route and Landfall Options are included in the outline Landscape and Ecological Management Plan (LEMP), (Document Ref: 8.7).

## 2.13 Physical Landscape Effects Assessment

### Preliminary Assessment

- 2.13.1 As described in Section 2.7, the proposed substation area is currently used as a storage area and does not contain any distinct landscape elements which could be physically affected by the construction of the proposed substation. There are large trees and shrubs that follow the River Stour to the east and that follow the A256 road corridor to the west, although it is anticipated that the construction works would be contained between these strips of trees and shrubs, which would be protected during construction and remain *in situ* during the O&M period. On that basis, no potential physical effects on the identified trees, shrubs and groundcover landscape elements is predicted as a result of the proposed substation.

- 2.13.2 As described in Section 2.7, the proposed open trenching, bunding, TJBs and creation of construction compounds would have physical landscape effects on the grassland, trees, shrubs and grass pitches that the proposed cable route and landfall disturbs. For assessment purposes, the physical landscape elements with the potential for significant effects have been divided into two categories: Trees and Scrub and Coastal Groundcover. Effects on these elements are described in detail in Table 2.15



**Table 2.15: Physical Landscape Effects Assessment**

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Trees and Scrub</b> See also Viewpoints 10, 11, 12 and 13 and reference photo sheet on Figures 2.8a-f			
<p>Within the substation area, there are large trees and shrubs that follow the River Stour to the east and that follow the A256 road corridor to the west although it is anticipated that the construction works would be contained between these strips of trees and shrubs and would therefore remain once the construction has been completed.</p> <p>Along the onshore cable route options and within the Country Park and Nature Reserve there are some small stands of trees near the access to Sandwich Road and at the boundary between the Country Park and Nature Reserve. Other vegetation along the onshore cable route within the Country park and Nature Reserve includes occasional hawthorn (dense scrub or isolated small trees) but with some areas of dense bramble within the Country Park.</p> <p>The shrubs and trees that separate the Country Park and Nature Reserve from Sandwich Road are dominated by hawthorn and willow although there is a good mix of tree species within this boundary that provides an attractive separation between the Country Park and Sandwich Road along the route of the cycle path. The onshore cable route would also cross the distinctive line of poplar trees that surround the recreational grounds and some further tree and shrub loss would occur along the western banks of the river Stour.</p>	<p>Trees, tree groups, boundary trees and areas of scrub vary in quality and condition throughout the onshore cable route study area nevertheless, the tree and scrub vegetation within the onshore cable route study area are valuable landscape features contributing to the landscape character of the onshore cable route study area. The value of these landscape elements is assessed as Medium.</p> <p>The roadside trees and shrubs that follow Sandwich Road are particularly susceptible to change. They provide visual and physical separation between Sandwich Road and Pegwell Bay Country Park contributing to a greater sense of remoteness within the Pegwell Bay LCA and focussing the coastal experience to areas away from the more built up and industrial characteristics of the Sandwich Corridor LCA. Although these landscape elements are not of particular historical importance they soften the built context found immediately to the west and strengthen the coastal character to the east that typifies this landscape.</p> <p>The trees and scrub within the RLB area appear to be of reasonable or good condition. Re-establishment of similar taller tree structures would take a long period of time to achieve which heightens the overall susceptibility of more mature trees. Apart from a small stand of trees, the majority of vegetation within the Country Park and Nature Reserve is however smaller scrub vegetation which could be replanted post-construction with relative ease.</p> <p>Taking all of this into account, the susceptibility to change of trees and scrub to the proposed onshore cable route is therefore assessed as Medium.</p> <p>The sensitivity of trees and scrub is therefore assessed as Medium.</p>	<p>Careful consideration of cable routing has sought to avoid the removal of trees, which would only occur in a few instances across the short approximately 2 km onshore cable route. This is largely due to embedded mitigation which in particular set out to avoid the removal of the roadside trees and shrubs that follow Sandwich Road to protect the visual and physical separation between Sandwich Road and Pegwell Bay Country Park. Where avoidance of trees and areas of scrub is not possible, proposed bunding and open trenching would be carefully sited so as to minimise the number of trees or amount of scrub to be removed by using existing gaps in groups of trees or existing breaks in the structure, e.g. following the existing path structure within the Country Park.</p> <p>The extent of tree removal as a result of the proposed onshore cable route will depend on the final alignment of the route and the corresponding area of disturbed ground required for construction. A cautionary worst-case assessment has therefore been applied to establish the magnitude of change. This includes:</p> <p>Landfall Options 2&amp;3 - the removal of an area of dense bramble scrub near the landfall point;</p> <p>Landfall Options 1,2&amp;3 - the removal of much of the remaining triangular stand of trees at the boundary between the Country Park and Nature Reserve (already substantially reduced by the NEMO cable bund construction); the removal of an area of the scattered hawthorn scrub within the Nature Reserve; the removal of scattered scrub and individual small trees to the south and east of Nemo in the Country Park; the removal of a small section of the poplar trees at the recreation ground; and the removal of small sections of boundary trees along the western banks of the Stour.</p> <p>Taking this all into account, the tree and scrub disruption for each of the landfall options is similar in extent for the vast majority of the cable route. The magnitude of change is therefore assessed as Medium during construction and O&amp;M phases although further tree and scrub removal would not be required during decommissioning.</p>	<p>The physical effect on trees and scrub as a result of the onshore substation, cable route and landfall options is considered to be <b>not significant</b> during construction, O&amp;M and decommissioning.</p> <p>There are no tree and scrub removals as a result of the substation construction and the effects described are therefore as a result of the cable route construction and landfall options.</p>

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Coastal Groundcover</b> See also Viewpoints 10, 11 and 12 and reference photo sheet on Figures 2.8a-f			
<p>This landscape element is made up of several distinct elements that together with the tree and scrub in the area create the coastal character found along the onshore cable route corridor.</p> <p>Large areas of semi improved grassland make up the majority of the landcover within Pegwell Bay Country Park. This grassland was established following the creation of the Country Park on the now capped landfill site. Cattle are seasonally grazed on this grassland within fenced compartments and an area in the south-west is a sensitive wildlife area and has restricted access.</p> <p>There are areas of unimproved grassland within Stonelees Nature Reserve and rough grassland within the area of scattered hawthorn scrub. Cattle are seasonally grazed in this area also within fenced compartments in the Country Park. Kent Wildlife Trust manage the Stonelees Nature Reserve.</p> <p>Other ground cover also includes the maintained grass pitches of the recreation grounds and the landfall area extends from the existing rock armour that follows the coastal path along the eastern edges of the Country Park into an area of saltmarsh.</p>	<p>Although not a landscape designation, the cable route crosses the valued Pegwell Bay Country Park and Stonelees Nature Reserve. The England Coast Path weaves through this area providing a direct experience of this landscape. Saltmarsh is also a notable landscape element in the area and contributes to the distinctive character of the Pegwell Bay character. Value of the coastal groundcover is therefore assessed as Medium.</p> <p>Semi-improved grassland and saltmarsh is susceptible to the cable route and landfall options due to potential disturbance during construction phases. Grassland is not uncommon in this area and whilst specific grass swards will need selected for restoration that are in keeping with the existing grassland, it is easily restored following completion of the construction activity. Areas of saltmarsh habitat have a higher susceptibility to change and require more careful restoration. The mown grass of the recreation grounds is a common landscape element and is easily restored following completion of the construction activity.</p> <p>On balance, susceptibility to change as a result of the proposed onshore cable route is assessed as Medium. When combined with a Medium value, the sensitivity of coastal groundcover as a characterising landscape element is therefore assessed as Medium.</p>	<p>Given the small amount of saltmarsh affected by the proposed development and that the disturbance is restricted to a single area at the landfall of the onshore cable route, the change to saltmarsh in relation to its influence on character is considered to be minimal (see Saltmarsh Mitigation and Reinstatement Plan, document ref. 8.13).</p> <p>The extent of disruption to groundcover as a result of the proposed onshore cable route will depend on the final alignment of the route and the corresponding location of disturbed ground required for construction. When considering the potential working corridor for the cable route however, the ground cover aspect of the route corridor is relatively consistent across its width, within the following parameters:</p> <p>Landfall Options 1&amp;3 – the onshore cable route would be trenched across areas of grassland for approximately 725 m in length through the Country Park.</p> <p>Landfall Option 2 - the onshore cable route would be bunded across areas of grassland for approximately 725 m in length through the Country Park.</p> <p>The onshore cable route would be trenched through grassland within Stonelees Nature Reserve which would be approximately 350 m and trenched through the grass pitches at the Baypoint Club, approximately 450 m in length.</p> <p>The level of disruption to groundcover would be similar for each of these options, albeit with the bunded section in Option 2 resulting in a different restoration profile once completed, rather than at ground level. Ultimately for each option, sections of cable route would be restored to close to existing groundcover following completion of construction activity (see section 2.12 landscape mitigation).</p> <p>Taking all of this into account the magnitude of change is assessed as Low for these cable route options during construction and O&amp;M. As the cables will be left in situ after O&amp;M phases, no decommissioning magnitude of change is predicted.</p>	<p>The physical effect on coastal groundcover as a result of the proposed onshore substation, cable route and landfall options is considered to be <b>not significant</b> during construction, O&amp;M and decommissioning.</p> <p>There is no loss of groundcover within the BCA site, proposed substation or between the substation and NGET. The effects described are therefore as a result of the cable route construction and landfall options between the landfall point and Baypoint Club.</p>

## 2.14 Landscape Character Effects Assessment

### Substation Preliminary Assessment

2.14.1 A preliminary assessment of the District level LCAs in the substation study area has been undertaken using ZTV analysis (Figure 2.6) and site survey, to identify which of the LCAs are likely to be affected by the proposed substation. A preliminary assessment of the proposed substation is presented in Table 2.16 below, which identifies the LCAs that have the potential to undergo significant effects as a result of the proposed substation and require to be assessed in full; and those LCAs that do not have potential to undergo potential significant effects that can be scoped out of further assessment.

2.14.2 The LCAs with a weak or indirect association with the proposed substation, of lower susceptibility to change, with limited or no visibility of the proposed substation and which would experience no change or negligible changes, as identified in Table 2.16 above, would continue to be defined principally by their baseline characteristics and are not assessed any further in the LVIA. The LCAs which are of medium susceptibility to change, which would have some association with the proposed substation, but are likely to experience a low scale of change and/ or effects experienced over limited or scattered geographic areas, are such that the proposed substation will not add a prevailing or defining element/ characteristic to their existing landscape character and are not assessed any further in the LVIA. For the onshore elements of Thanet Extension, potentially significant effects on landscape character are more likely to occur on the LCAs in which the proposed substation is located or that lie in close proximity, where the perceived changes to the pattern of elements that form the existing landscape character are likely to be highest.

2.14.3 The preliminary assessment has identified, in Table 2.16 that the following LCAs require to be assessed further as a result of the potential for significant landscape effects arising from the proposed substation.

- LCA 4 - The Sandwich Corridor
- LCA 6 - Sandwich Bay
- These LCAs are assessed in Table 2.16 of this chapter which also sets out the baseline conditions of these LCAs.

Table 2.16: Substation preliminary assessment - LCAs

Preliminary Assessment	Landscape Character Area
LCAs that despite potentially having medium or high value, are generally of lower susceptibility to change, which have weak/ indirect association with the proposed substation, experience no change or negligible scale of change and/ or effects experienced over a limited geographic area, such that the proposed substation will not become a prevailing or defining element/ characteristic.  No likely significant effects – further assessment not required.	<b>Thanet District</b>
	C1. St. Nicholas at Wade Undulating Chalk Farmland
	C2. Central Thanet Undulating Chalk Farmland
	A1. Manston Chalk Plateau
	G1. Ramsgate & Broadstairs Cliffs
	<b>Dover District</b>
	2. Preston and Ash Horticultural Belt
LCAs that despite potentially having medium or high value, are generally of medium susceptibility to change, which have some association with the proposed substation, but are likely to experience low scale of change and/ or effects experienced within limited or scattered geographic area, such that the proposed substation will not become a prevailing or defining element/ characteristic.  No likely significant effects – further assessment not required.	7. Lydden Valley
	<b>Thanet District</b>
	B1. Wantsum North Slopes
	E1. Stour Marshes
	F1. Pegwell Bay
LCAs generally of higher susceptibility to change, which have a strong/ direct association with the proposed substation, and may experience medium or high scale of change and/ or effects, such that the proposed substation may become a prevailing or defining element/ characteristic.  Significance assessed in full in LVIA.	<b>Dover District</b>
	3. Ash Level
	5. Richborough Castle
	<b>Dover District</b>
	4. The Sandwich Corridor
	6. Sandwich Bay



Substation landscape character effects assessment

Table 2.17: Substation landscape character effects assessment

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>The Sandwich Corridor LCA (4)</b>			
<p>The Sandwich Corridor is located to the north of Sandwich and broadly follows the A256 road corridor. It shares the inherent characteristics of the Ash Level, but land use (primarily through industrial and commercial developments that line the A256) has changed the character to such an extent that it is described as a separate area. The River Stour to the west and to the east border the area.</p> <p>The topography is flat and the geology predominantly marine (estuarine) alluvium, overlain by seasonally wet, deep, mainly calcareous clayey soils. Field shapes and sizes vary, creating a discordant landscape character with some arable and pasture land located around the estate edges.</p> <p>The industrial buildings are square, high rise and built close together and they appear out of scale and character to the surrounding landscape and historic built vernacular of Sandwich itself. There is an array of large scale, modern buildings, similar in style, with lots of windows, other glass panels and brick facades. Lighting is dominant at night especially the roads and car parks which become more visible, the buildings are also heavily illuminated.</p> <p>The River Stour defines the eastern and western boundaries, with river boating providing a stark contrast to the busy industrial character. Areas of former landfill, which have raised the land and changed the character.</p> <p>Views from within the character area are blocked and dominated by the scale of the industrial buildings in an otherwise flat, open landscape. Minor man-made alterations in the landform attempt to aid visual screening of the large buildings in the form of small bunds running alongside roads, further restricting views to and from the surrounding landscape.</p>	<p><b>Value:</b> Sandwich Corridor LCA is not subject to landscape designation for its scenic quality and the substation site area, which lies within this LCA, has no special value in relation to its characteristics. This is a geographically small LCA and the perceptual qualities of the Sandwich Corridor LCA are lower than within neighbouring LCAs due to its industrial context and the sense of enclosure that it provides, including the surrounding trees and vegetation which helps screen the built development from more open coastal or agricultural landscapes to the east west. The value of the Sandwich Corridor LCA is assessed as Low.</p> <p><b>Susceptibility:</b> Visibility of the proposed substation is perhaps most notable from within this LCA, particularly from the A256 road corridor that passes the proposed substation site area to the west. Potential visibility is however still relatively restricted from this road corridor by roadside vegetation and trees and susceptibility to changes as a result of the onshore substation are moderated as a result. See viewpoints 1 &amp; 3.</p> <p>Although the proposed substation area is located within this LCA the susceptibility of this LCA is lower than surrounding LCAs due to the level of existing industrial, commercial, energy and infrastructure development that already exists within it.</p> <p>Susceptibility is therefore assessed as Low.</p> <p><b>Sensitivity to Change:</b> The sensitivity of the Sandwich Corridor LCA is assessed as Low.</p>	<p><b>O&amp;M</b></p> <p>Southern parts of this LCA would not experience any change as a result of restricted views of the proposed substation.</p> <p>Views of the proposed substation would be limited in geographical extent to the northern section of the LCA, north of Stonar Cut. Views of the substation are further restricted by the roadside trees and vegetation to the east of the A256 which limits the extent to which the substation would be experienced within the context of the key characteristics of this LCA. In summer months this roadside vegetation would almost entirely screen the proposed substation development in nearby views from the A256. Much of the strip of planting between the substation area and the A256 is deciduous and whilst some of the bushy understorey is evergreen and the trees and shrubs appear more dense in nature due to ivy growing on tree trunks and branches, there is still partial visibility from the A256 through the gaps between trees in winter months. Strengthening this existing screening with the addition of a dark green coloured solid fence (such as corrugated fence panels) between the existing planting and the proposed substation area would obscure views through winter vegetation, muting the light contrast experienced through the deciduous vegetation. Proposed planting along the access as viewed from the Richborough Roundabout (see viewpoint 1, Figure 2.11) would reduce potential views of the built elements of the proposed Substation experienced from this particular area of Sandwich Corridor and would also therefore mitigate the effects to its character.</p> <p>Taking these factors into account and in applying the mitigation measures, the O&amp;M magnitude of change is therefore assessed as <b>low</b> for this LCA.</p> <p><b>Construction and decommissioning</b></p> <p>The introduction of the construction compound and the presence and activity of plant associated with the substation construction works would slightly intensify the influence on the landscape characteristics of the area localised in the northern part of the LCA. The construction/ decommissioning magnitude of change is therefore considered to be Medium to Low for this LCA.</p>	<p>The effect of the proposed substation on the character of the Sandwich Corridor LCA is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p> <p>Refer to Viewpoints 1&amp;3</p>

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Sandwich Bay LCA (6)</b>			
<p>Sandwich Bay is situated to the east of Sandwich along the coast, between Pegwell Bay and Deal.</p> <p>The landscape consists of a mosaic of habitats, inter-tidal mudflats, saltmarsh, shingle beach, dunes and managed golf courses, with limited agriculture and woodland.</p> <p>Three golf courses, including Royal St Georges (home to the Open Championship), which exhibit a man-made landform. Surrounding geology is flat with small variations in elevation, yet distinct with tidal flats, storm gravel beach deposits, and sand and mud exposed at low tide.</p> <p>Used primarily for recreation, with residential land use restricted to Sandwich Bay Estate. Industrial estates form western boundary along the River Stour, including Discovery Park and Richborough Energy Park, which influence the landward backdrop to the LCA.</p> <p>The natural influences are strong, with the habitats of the LCA internationally important for biodiversity.</p> <p>Flat coastal land and inshore waters enclosed by prominent white chalk cliffs at Ramsgate to the north.</p> <p>Shallow inlet to the Strait at the estuary of the River Stour provides historically important entry point to the land.</p> <p>Distinctive stretch of low lying windswept coast invoking sense of remoteness and exposure in places.</p> <p>Shallow seas provide a safe place for recreational watersports. Recreational boat trips and seal watching on the exposed mudflats of the River Stour are popular.</p> <p>Views from the area are open across the open and exposed landscape and sea. There is a horizontal emphasis to the landscape in views, with a simple composition of beach, sea and sky.</p> <p>The white cliffs/ headland to the north, together with high-rise flats, spires, industrial buildings and the TOWF provide vertical elements and foci in the surrounding landscape.</p>	<p><b>Value:</b> Sandwich Bay LCA is not subject to landscape designation for its scenic quality, but has multiple designation for its biodiversity value including Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site and Local Nature Reserve (LNR). The LCA has undisturbed expanses of intertidal mudflats, saltmarshes and dune pastures which contribute to a distinctive character. The perceptual qualities of the landscape afford a sense of remoteness and exposure. The largely undeveloped character at the coast creates an area of good condition and high landscape quality although the more managed agricultural landscapes and industrial estates along the western boundary locally moderate this. The LCA is valued for recreation, including the main shingle beach and Stour Valley Walk, England Coast Path, golf courses and water-based recreation. The aesthetic aspects of its cultural heritage contribute to its character. The value of the Sandwich Bay LCA is assessed as High.</p> <p><b>Susceptibility:</b></p> <p>The eastern edges of the proposed substation area lies within this LCA. Views of the proposed substation would be restricted from this LCA due to layers of trees and vegetation to the east of the substation site area which intervene. It would be located within the context of other industrial structures such as the NEMO and NGET buildings and the existing (to be replaced) Richborough Wind Turbine. This restricted level of substation visibility would also be limited in geographical extent to the north west of the LCA either on Sandwich Flats or along the western banks of the Stour estuary, where the proposed substation is located.</p>	<p><b>O&amp;M</b></p> <p>Southern parts of this LCA would not experience any change as a result of restricted views of the substation, where views are restricted by intervening vegetation or localised dune landforms.</p> <p>Views of the proposed substation would be limited in geographical extent to the north-west parts of the LCA either on Sandwich Flats or along the western banks of the Stour estuary, where the proposed substation would be located. Visibility of the proposed substation is limited by the trees and vegetation to the east of the substation site area which intervene and changes to key characteristics would as a result be minimal. The line of trees on the eastern boundary of the substation area are deciduous and there would be greater levels of visibility through these trees in winter months to the upper parts of built structures within the substation. Smaller trees within the area of Sandwich Flats does however limit the degree of influence on this character area to the immediately adjacent parts of the nature reserve (which in summer months would experience little or no effect). Public access to the area of National Nature Reserve at Shell Ness is not permitted although it is anticipated that visibility through the gap in trees and vegetation in the north east corner of the substation area would also result in an influence on the character of the northern part of Sandwich Flats.</p> <p>In summer months the level of visibility is reduced when these trees are in full leaf and only a small proportion of the substations maximum parameter area has the potential for any visibility through gaps in the tops of intervening trees.</p> <p>Changes to characteristics within this area are moderated by the existing backdrop and context of other industrial development which already influences this character area. Proposed mitigation planting within the existing vegetation gap in the north east corner of the substation area, as shown on the landscape mitigation plan, would reduce the potentially adverse influence on the northern parts of Sandwich Flats within the Nature Reserve.</p> <p>Taking these factors into account and in applying the mitigation measures, the O&amp;M magnitude of change is therefore assessed as <b>low</b> for this LCA.</p>	<p>The effect of the proposed substation on the character of the Sandwich Bay LCA is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p> <p>See Viewpoint 4, Figure 2.14 and landscape context photos on Figure 2.8a-f.</p>

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
	<p>The combination of limited potential visibility of the proposed substation from this LCA with an existing context of built infrastructure on the skyline to the west of this LCA, moderates the overall susceptibility to change. Susceptibility is therefore assessed as Medium.</p> <p><b>Sensitivity to Change:</b> The sensitivity of the Sandwich Bay LCA is assessed as Medium - High.</p>	<p><b><u>Construction and decommissioning</u></b></p> <p>The introduction of the construction compound and the presence and activity of plant associated with the substation construction works would very slightly intensify the influence on the landscape characteristics of the area localised to the north-west of the LCA. The construction/ decommissioning magnitude of change is therefore considered to remain Low for this LCA.</p>	



**Cable route and landfall preliminary assessment**

2.14.4 A preliminary assessment of the district level LCAs in the cable route study area has been undertaken using desk based and site survey, to identify which of the LCAs are likely to be affected by the proposed cable route and landfall. A preliminary assessment is presented in Table 2.18 below, which identifies the LCAs that have the potential to undergo significant effects as a result of the proposed cable route and landfall and therefore require to be assessed in full; and those LCAs that do not have potential to undergo potential significant effects that can be scoped out of further assessment.

**Table 2.18: Cable route and landfall preliminary assessment of LCAs**

Preliminary Assessment	Landscape Character Area
LCAs that despite potentially having medium or high value, are generally of lower susceptibility to change, which have weak/ indirect association with the proposed cable route and landfall, experience no change or negligible scale of change and/ or effects experienced over a limited geographic area, such that the proposed cable route and landfall will not become a prevailing or defining element/ characteristic.  No likely significant effects – further assessment not required.	<b>Thanet District</b>
	B1. Wantsum North Slopes
LCAs that despite potentially having medium or high value, are generally of medium susceptibility to change, which have some association with the proposed cable route and landfall, but are likely to experience low scale of change and/ or effects experienced within limited or scattered geographic area, such that the proposed cable route and landfall will not become a prevailing or defining element/ characteristic.  No likely significant effects – further assessment not required.	<b>Dover District</b>
	3. Ash Level
LCAs generally of higher susceptibility to change, which have a strong/ direct association with the proposed cable route and landfall, and may experience medium or high scale of change and/ or effects, such that the proposed cable route and landfall options may become a prevailing or defining element/ characteristic.  Significance assessed in full in LVIA.	6. Sandwich Bay
	<b>Thanet District</b>
	F1. Pegwell Bay
	E1. Stour Marshes
	<b>Dover District</b>
	4. The Sandwich Corridor

2.14.5 The LCAs with a weak or indirect association with the proposed cable route and landfall, of lower susceptibility to change, with limited or no visibility of the proposed cable route and landfall and which would experience no change or negligible changes, as identified in Table 2.16 above, would continue to be defined principally by their baseline characteristics and are not assessed any further in the LVIA. The LCAs which are of medium susceptibility to change, which would have some association with the proposed cable route and landfall, but are likely to experience a low scale of change and/ or effects experienced over limited or scattered geographic areas, are such that the proposed cable

route and landfall will not add a prevailing or defining element/ characteristic to their existing landscape character and are not assessed any further in the LVIA.

2.14.6 The preliminary assessment has identified, in Table 2.18 that the following LCAs require to be assessed further as a result of the potential for significant landscape effects arising from the proposed cable route and landfall options. These LCAs are assessed in Table 2.19 of this chapter which also sets out the baseline conditions of these LCAs.

- Thanet District; and
  - LCA F1 - Pegwell Bay; and
  - LCA E1 – Stour Marshes.
- Dover District.
  - LCA 4 - The Sandwich Corridor.

Cable route and landfall landscape character effects assessment

Table 2.19: Cable route and landfall landscape character effects assessment

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Pegwell Bay LCA (F1)</b>			
<p>Pegwell Bay is formed at the estuary of the River Stour where it enters the sea, formerly one end of the Wantsum Channel marking the historic separation of Thanet from the Kent mainland.</p> <p>Shallow waters with underlying sedimentary sandstone and mudstone partially contained by low chalk and flint cliffs.</p> <p>Flat expanses of marshes and mudflats. Mudflats at low tides contrast with high tide waters with the slack tide keeping the bay full of sea water for longer.</p> <p>The estuary of the River Stour enters the Strait in the bay marking the former Wantsum Channel.</p> <p>Ancient dune pasture and swards of sandy grassland within Pegwell Bay Country Park as well as extensive intertidal mudflats, saltmarsh and shingle beach.</p> <p>High biodiversity value, with internationally significant numbers of waders and wildfowl recognised by SSSI, Ramsar, SAC and SPA designations.</p> <p>River Stour/ Wantsum Channel provided a strategic entry point for successive invasions and landings (Roman, Saxon and reintroduction of Christianity) - events celebrated and commemorated in the landscape today.</p> <p>Long, panoramic views seaward across the Dover Strait with container ships and ferries forming features on the skyline, with the low white cliffs forming a distinctive feature in view to the north.</p> <p>A tranquil and natural area with a strong sense of remoteness prevailing. Exposed and windswept landscape created by sea winds channelled in the bay and across the coast.</p>	<p><b>Value:</b> Pegwell Bay LCA is not subject to landscape designation for its scenic quality, but has multiple designation for its biodiversity value including SSSI, NNR, SAC, SPA and Ramsar site. The LCA has expanses of intertidal mudflats, saltmarshes and dune pastures which contribute to a distinctive character. The perceptual qualities of the landscape afford a sense of remoteness. The undeveloped character and general absence of detracting features create an area of good condition and high landscape quality. The LCA is valued for recreation, including Pegwell Bay Country Park and coastal paths. The aesthetic aspects of its cultural heritage contribute to its character. Value is assessed as High.</p> <p><b>Susceptibility:</b></p> <p>The under-construction Nemo link represents a similar level of change with the proposed onshore cable route representing an increased development influence.</p> <p>The area in which the proposed onshore cable route and landfall would be introduced is susceptible to changes arising from the construction activity and physical disruption to the landscape of the Pegwell Country Park and Stonelees Nature Reserve and also as a result of the permanent introduction of the bundled sections of onshore cable route within the Country Park as detailed for Landfall Option 2.</p>	<p><b>O&amp;M</b></p> <p>Northern parts of the Pegwell Bay LCA would experience limited or no change as a result of restricted views of either of the cable route landfall options. The magnitude of change resulting from the introduction of the cable route to the landscape character of these northern areas of Pegwell Bay LCA is therefore assessed as negligible.</p> <p>The landfall construction would be located at the edges of the saltmarsh and the rock armour that defines the accessible coastal edges of the Country Park. Character effects along this coastal edge are influenced by which of the landfall options determined in the final design, with the replacement rock armour representing the worst-case option when these are considered in comparison. Once construction activity is completed the altered coastal profile as proposed would be experienced as a localised change with a minimal overall influence on the characteristics of the LCA.</p> <p>The bundled sections of onshore cable route within Option 2 would be permanently visible but would integrate over time as the reinstated grass (as agreed through the LEMP) establishes along its length. For Options 1&amp;3 the cable is trenched and would have little operational influence on the existing character of this LCA as the land in which the onshore cable route passes through can be quickly re-established beyond construction. This is also the case within Stonelees Nature Reserve in the south of this LCA, where all cable route landfall options are trenched.</p> <p>Potential character effects within this LCA are strongly influenced by the chalk capped cable bund of the Nemo link project with which the proposed cable route corridor closely follows. The modified nature of the baseline landscape as a result of the Nemo link bund moderates the potential effect but also introduces the potential for cumulative effect. Proposed mitigation within this proposal is considered to reduce potential character effects or cumulative character effects through careful restoration of disturbed areas of ground using appropriate re-establishment to avoid long-term visual contrasts with existing ground cover or an apparent extension to the noticeably contrasting Nemo bund, which appears out of character with the landscape of the Country Park.</p>	<p>The effect of the onshore cable route and landfall options on the character of the Pegwell Bay LCA is assessed as <b>significant</b> during construction and <b>not significant</b> during O&amp;M and decommissioning phases.</p> <p>See also Viewpoints 10, 11 and 12.</p>

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
	<p>The perceptual qualities of the landscape, including its sense of remoteness and perceived wildness, are most susceptible to these changes. Susceptibility is assessed as Medium to High.</p> <p><b>Sensitivity to Change:</b> The sensitivity of the Pegwell Bay LCA is assessed as Medium to High.</p>	<p>In summary, changes to key characteristics of the LCA would be minor and local to the affected parts of the LCA in and around each section of onshore cable route and landfall site within the Pegwell Country Park and Stonelees Nature Reserve. Whilst the bunded section of onshore cable route for landfall option 2, along with its bunded transition bays, would have a more permanent influence on perceived remoteness within the localised area, the overall change to the key characteristics of the LCA are considered to be relatively minor. The O&amp;M magnitude of change for this LCA is therefore assessed as <b>Low</b>.</p> <p><b>Construction and decommissioning</b></p> <p>The introduction of the haul road, construction compound, and the presence and activity of plant associated with the landfall construction works would intensify the influence on the landscape characteristics of the area localised around the onshore cable route and in particular around the bunded section of onshore cable route and landfall. The cofferdam required for construction of options 2&amp;3 would adversely influence the localised character of a section of this coastal edge. Construction lighting required at this coastal edge would also draw attention to these activities and the Country Park which is normally not visible in periods of darkness / twilight. The construction magnitude of change is therefore assessed as Medium to High for all landfall options for this LCA.</p> <p>The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is far less than experienced during construction. It is considered decommissioning magnitude of change would be Low for all Landfall Options.</p>	
<b>Stour Marshes LCA (E1)</b>			
<p>Stour Marshes is located in the south of Thanet District. Low lying and flat marshland occupying the former Wantsum river channel.</p> <p>A vast, open landscape with huge skies, extensive views and a strong rural, even remote, character.</p> <p>Irregular arable fields defined by straight and meandering drainage ditches representing an ancient enclosure pattern, plus small tributaries of the River Stour and River Wantsum.</p> <p>Small embanked reservoirs are a feature within the arable fields highly visible by their bunded topography and associated scrub/ tree growth.</p>	<p><b>Value:</b> Stour Marshes LCA is not subject to landscape designation for its scenic quality. The LCA is an open rural landscape which has an established and consistent pattern of agricultural fields and ditches which contribute to its rural character</p> <p>The undeveloped nature of the landscape and general absence of detracting features heighten its rural qualities in contrast to neighbouring character areas which are more developed, albeit that this area is intensively farmed. Value is assessed as Medium to Low</p>	<p>The proposed cable route landfall options would not influence the magnitude of effect predicted for this LCA. The following magnitude assessment is therefore the same for all options.</p> <p><b>O&amp;M</b></p> <p>Visibility of the cable route landfall options between the proposed substation and landfall within this LCA is restricted to the proposed access points on Sandwich Road. This is due to intervening vegetation found along the western edges of the Country Park and Stonelees Nature Reserve which screens the majority of views to the coast. Visibility of the proposed onshore cable route is further limited by trees found within the St Augustines golf course. A section of cable route is also proposed within the Richborough Energy Park, <u>between the substation and NGET, however, potential effects would occur within close context of the existing industrial infrastructure and would not result in loss of characterising landscape elements.</u></p>	<p>The effect of the proposed onshore cable route and landfall options on the character of the Stour Marshes LCA is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p>



Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<p>Limited tree cover with occasional small wooded copses and absence of enclosure.</p> <p>A largely undeveloped landscape, with few roads or buildings, crossed by the railway and two roads at Pluck’s Gutter and Marsh Farm Road.</p> <p>Long uninterrupted views across the marshes and Pegwell Bay and into marshes of neighbouring districts (Dover and Canterbury).</p> <p>Contained to the north by the slopes of the north shore (LCA B1).</p>	<p><b>Susceptibility:</b></p> <p>Potential access to the construction and laydown areas lies within this LCA at its easternmost edges. There would be no visibility of the cable route landfall options due to the trees along the eastern side of Sandwich Road, other than at these potential access points. Susceptibility is assessed as Low.</p> <p><b>Sensitivity to Change:</b> The sensitivity of the Stour Marshes LCA is assessed as Medium to Low.</p>	<p>The constructed cable route and landfall options have little or no influence on the character of the LCA and no change is therefore predicted during the O&amp;M phase.</p> <p><b>Construction and decommissioning</b></p> <p>Potential changes to characteristics of this LCA during construction are local to the proposed access or in close proximity to the NGET and the resulting construction magnitude of change is therefore assessed as Negligible for this LCA.</p> <p>The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is less than experienced during construction. It is considered decommissioning magnitude of change would remain Negligible for all Landfall Options.</p>	<p>See Viewpoint 13, Figure 2.23.</p>
<b>Sandwich Corridor LCA (4)</b>			
<p>The Sandwich Corridor is located to the north of Sandwich and broadly follows the A256 road corridor. It shares the inherent characteristics of the Ash Level, but land use (primarily through industrial and commercial developments that line the A256) has changed the character to such an extent that it is described as a separate area. The River Stour to the west and to the east border the area.</p> <p>The topography is flat and the geology predominantly marine (estuarine) alluvium, overlain by seasonally wet, deep, mainly calcareous clayey soils. Field shapes and sizes vary, creating a discordant landscape character with some arable and pasture land located around the estate edges.</p> <p>The industrial buildings are square, high rise and built close together and they appear out of scale and character to the surrounding landscape and historic built vernacular of Sandwich itself. There is an array of large scale, modern buildings, similar in style, with lots of windows, other glass panels and brick facades. Lighting is dominant at night especially the roads and car parks which become more visible, the buildings are also heavily illuminated.</p>	<p><b>Value:</b> Sandwich Corridor LCA is not subject to landscape designation for its scenic quality and the section of cable route, which lies within this LCA, has no special value in relation to its characteristics. This is a geographically small LCA and the perceptual qualities of the Sandwich Corridor LCA are lower than within neighbouring LCAs due to its industrial context and the sense of enclosure that it provides, including the surrounding trees and vegetation which helps screen the built development from more open coastal or agricultural landscapes to the east and west. The value of the Sandwich Corridor LCA is assessed as Low.</p> <p><b>Susceptibility:</b></p> <p>The onshore cable route crosses the northernmost part of this LCA, when it passes through the recreation ground. Visibility of the proposed cable route is restricted from within this LCA, particularly from the A256 road corridor that passes the proposed substation site area to the west.</p>	<p>The cable route landfall options vary in development characteristics to the north of this LCA. However, the proposed cable route is identical through this LCA for all options and these variations would not influence the magnitude of effect predicted for this LCA. The following magnitude assessment is therefore the same for all options.</p> <p><b>O&amp;M</b></p> <p>Southern parts of this LCA would not experience any change as a result of restricted views of the onshore cable route.</p> <p>Changes to key characteristics as a result of proposed onshore cable route are limited to the trenched sections of onshore cable route that pass through the recreation grounds or a small section of trenched cable route between the Substation and NGET. These changes are considered to be minimal and only experienced on a very localised portion of a geographically small unit of LCA. Ultimately for each option, sections of cable route would be restored to close to existing following completion of construction activity. See LEMP for areas of proposed grassland groundcover mitigation.</p> <p>The O&amp;M magnitude of change is therefore assessed as Negligible for this LCA.</p>	<p>The effect of the proposed onshore cable route and landfall options on the character of the Sandwich Corridor LCA is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p> <p>See Viewpoints 1 &amp; 3, Figures 2.11 &amp; 2.13</p>

Landscape Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<p>The River Stour defines the eastern and western boundaries, with river boating providing a stark contrast to the busy industrial character. Areas of former landfill, which have raised the land and changed the character.</p> <p>Views from within the character area are blocked and dominated by the scale of the industrial buildings in an otherwise flat, open landscape. Minor man-made alterations in the landform attempt to aid visual screening of the large buildings in the form of small bunds running alongside roads, further restricting views to and from the surrounding landscape.</p>	<p>Susceptibility of this LCA is lower than surrounding LCAs due to the level of existing industrial, commercial, energy and infrastructure development that already exists within it.</p> <p>Susceptibility is therefore assessed as Low.</p> <p><b>Sensitivity to Change:</b> The sensitivity of the Sandwich Corridor LCA is assessed as Low.</p>	<p><b>Construction and decommissioning</b></p> <p>The introduction of the construction compound and the presence and activity of plant associated with the cable route trenching and construction works close to the Baypoint Club and the creation of HDD reception pits within the Energy Park would intensify the influence on the landscape characteristics of the area localised in the northern part of the LCA. As a result the construction magnitude of change is considered to be Low for this LCA.</p> <p>The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is less than experienced during construction. It is considered decommissioning magnitude of change would remain Low for all Landfall Options</p>	

## 2.15 Visual Effects Assessment

### Substation preliminary assessment

#### Viewpoints

2.15.1 As described in the baseline overview, the assessment of effects on views includes effects on viewpoints and principal visual receptors. The following preliminary assessment identifies which of these views may experience significant effects and therefore which require to be assessed in full. A baseline description is then provided for each view receptor that has the potential to be significantly affected.

#### Principal Visual Receptors

2.15.2 The following preliminary assessment, set out in Table 2.21, Table 2.22 and Table 2.23, identifies which of the principal visual receptors may experience significant effects and therefore which require to be assessed in full. A baseline description is then provided for each receptor that has the potential to be significantly affected. Following a baseline review, principal visual receptors include settlements, transport routes and recreational routes. Individual properties within close proximity of the proposed Substation area and Cable Route and Landfall Options have restricted views of the proposed development and as such visual effects from are considered to be minimal and have therefore not been considered further.

**Table 2.20: Substation Preliminary assessment of viewpoints**

Viewpoint	Status/ Comments
1. A256 (Richborough Port Roundabout)	Included in the detailed assessment due to the proximity and potential visibility of the substation.
2. Saxon Shore Way (South)	Included in the detailed assessment due to the proximity and potential visibility of the Thanet Extension substation.
3. A256 (Stevens Carlotti)	No visibility of the proposed substation during summer months due to intervening roadside trees. Views are still largely obscured by these same intervening trees during winter when not in leaf resulting in restricted visibility. Further detailed assessment not included as the proposed development does not have potential to lead to a significant effect (including cumulative effect) on this viewpoint.
4. Sandwich Flats (England Coast Path)	Small amount of potential visibility of the substation, behind existing trees/ vegetation on eastern side of the proposed substation area. Included in the detailed assessment due to the proximity of the Thanet Extension substation and sensitivity of receptor.

Viewpoint	Status/ Comments
5. A256 (Cycle Path)	The proposed substation is almost entirely screened due to the layers of trees and buildings that intervene in the view. Further detailed assessment not included as the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on this viewpoint.
6. Richborough Castle	Small amount of potential visibility of the substation, behind existing trees/ vegetation and at relative distance. Included in the detailed assessment due to the sensitivity of receptor.
7. A299, Thorne Hill	Small amount of potential visibility of the substation, at relative distance, and although the viewpoint not particularly sensitive, it is included in the detailed assessment as the viewpoint is representative of worst-case elevated views from TOWF.
8. A257 near Ash	This viewpoint is located just outside the 5 km onshore LVIA study area to the south-west and views of the proposed substation are almost entirely screened due to trees and roadside vegetation within the intervening landscape. Further detailed assessment not included as the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on this viewpoint.
9. Pegwell, promenade	The view of the proposed substation is limited from this viewpoint due to layers of trees and vegetation to the north of the substation site area which intervene (including roadside trees and vegetation, small tree clumps, tall trees that bound the recreation grounds and vegetation within Pegwell Bay Country Park (where the onshore cable route is located)). There is potential for a glimpsed view from this particular location along the alignment of the Stour Estuary where a gap in the existing vegetation allows potential views of the proposed substation site.  Given the limited potential visibility of the proposed substation, distance from the receptor and existing industrial context of the proposed substation site area in this view, it is considered there is little potential for significant effects (including cumulative effects). A viewpoint assessment from this location was however requested by DDC in their s42 response and as a result a detailed assessment is included.

**Table 2.21: Substation Preliminary assessment of settlements<sup>1</sup>**

Status - No potential for significant effects and not included in detailed assessment	
Main Settlements	Preliminary assessment
Ramsgate and Cliffsend	<p>Views of the proposed substation are restricted from these settlements due to layers of trees and vegetation to the north of the substation site area which intervene (including roadside trees and vegetation, small tree clumps, tall trees that bound the recreation grounds and vegetation within Pegwell Bay Country Park (where the onshore cable route is located). Due to restricted visibility only the upper parts of the proposed substation would be seen from these settlements which would be viewed within the context of other industrial buildings.</p> <p>Given the limited potential visibility of the proposed substation, distance from the receptor and existing industrial context of the proposed substation site area in views, it is considered there is no potential for significant effects (including cumulative effects) on these settlements and further detailed assessment is not included.</p> <p>See viewpoint 9, Pegwell promenade (Figure 2.19).</p>
Minster	<p>The proposed substation ZTV shows theoretical visibility throughout this settlement. Actual visibility is limited to the north-eastern edges of the settlement which is more elevated and although views to south are generally elevated and open to the south, views towards the proposed substation site area are restricted by field boundary trees or woodlands within the intervening landscape.</p> <p>Given the limited potential visibility of the proposed substation, distance from the receptor, it is considered there is no potential for significant effects (including cumulative effects) on these settlements and further detailed assessment is not included.</p>
Sandwich	<p>Views are restricted from within this settlement as a result of other built urban/ suburban context combined with trees and vegetation within and surrounding this low-lying settlement, which intervenes in views. This settlement is not included in the detailed assessment therefore as the proposed substation does not have potential to lead to a significant effect (including cumulative effect).</p>

Status - No potential for significant effects and not included in detailed assessment	
Main Settlements	Preliminary assessment
Ash and Woodnesborough	<p>These settlements lie at the edges of the substation study area to the south-west and views are entirely restricted due to trees and roadside vegetation within the intervening landscape. Further detailed assessment not included as the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on these settlements. See also viewpoint 8 A257 near Ash (Figure 2.18).</p>
Status - Effects assessed as not significant due to no theoretical visibility of the proposed substation. Not included in detailed assessment.	
Manston	

<sup>1</sup> Settlements within the study area have been identified and assessed in this preliminary assessment using the following local planning policy documents which define the various settlements within each District/Borough Council area in the study area: Thanet District Council -

Settlement Pattern and Hierarchy (Online resource) ([www.thanet.gov.uk/publications/planning-policy/settlement-pattern-and-hierarchy](http://www.thanet.gov.uk/publications/planning-policy/settlement-pattern-and-hierarchy)); and Dover District Council - Dover District Settlement Review and Hierarchy, 2007.



**Table 2.22: Substation Preliminary assessment of transport routes**

Status - Potential for significant effects and included in detailed assessment	
Route	Preliminary assessment
A256	The sections of this road that may have views of the proposed substation lie between the sewage works at Ebbsfleet and the roundabout at Great Stonar. Viewpoint 1, 3 and 5 are located on this section of road. Although the road is slightly more elevated, both to the south and to the north of the proposed substation, potential views of the proposed substation would be restricted by the large amount of roadside vegetation that lies closer to the proposed substation site area that intervenes in these longer views. The A256 is assessed in detail from viewpoint 1 where there is visibility of the substation through a gap in the roadside vegetation.
Status - No potential for significant effects and not included in detailed assessment	
Route (s)	Preliminary assessment
A257	There is limited visibility of the proposed substation along this road due to intervening roadside vegetation and road embankments. More open and elevated views near Ash but these are short sections, outwith the substation study area, which are also restricted by more distant roadside or field boundary trees or nearby woodlands that intervene in views towards the coast.
A299	The A299 within the substation study area runs from Minster to the A256 near Cliffsend with an additional small section at Pegwell Tunnel. The majority of the A299 that runs to the east of Minster has a high road bund against the southern carriageway which almost entirely restrict views in the direction of the proposed substation. A glimpsed view at speed is available at a gap in this bunding near Thorne Hill, close to where viewpoint 7 is located. This view is of extremely short duration on a fast-moving dual carriageway. A short section of the A299 that follows the coast along West Cliff has distant views across Pegwell Bay towards Richborough Port and the proposed substation area. Views of the proposed substation are restricted due to layers of trees and vegetation to the north of the proposed substation which intervene (including roadside trees and vegetation, small tree clumps, tall trees that bound the recreation grounds and vegetation within Pegwell Country Park). It is considered that given the limited level of potential visibility, distance and duration of potential effects that the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on the A299 and is not included in the detailed assessment.

B2050	Views in the direction of the proposed substation are available from short elevated sections of this route at the edges of the substation study area. Views of the proposed substation however are restricted due to layers of trees and vegetation to the north of the proposed substation which intervene (including roadside trees and vegetation, small tree clumps, tall trees that bound the recreation grounds and vegetation within Pegwell Bay Country Park (where the onshore cable route is located). Due to restricted visibility only the upper parts of the proposed substation would be seen from this route which would be viewed within the context of other industrial buildings. Given the limited potential visibility of the proposed substation, existing industrial context and distance from the receptor, further detailed assessment is not included as there is no potential for a significant effect (including cumulative effect).
B2190	Of the stretch of B2190 that is within the substation study area only a small section has potential visibility, at the A299 Minster roundabout. Hotel and services buildings at the northern edges of Minster obscure views in the direction of the proposed substation. Further detailed assessment not included as the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on the B2190.
Ramsgate – Faversham Railway Line (Via Canterbury) and Dover – Ramsgate Railway Line	The ZTV shows that long sections of these railway lines have theoretical visibility of the proposed substation. In reality, there is little opportunity for views outwith the railway corridors either because the railway is in cutting or because of the railway embankment tree vegetation which substantially reduces views of the surrounding landscape. Where views outwith the railway corridor are available other intervening landscape elements (built, roadside trees or small woodlands) to the west of the proposed substation. It is therefore considered that the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on these railway lines and are not included in the detailed assessment.
Status - Effects assessed as not significant due to restricted and/ or distant visibility of the proposed substation. Not included in detailed assessment.	
A255, B2054, B2014	The built up urban fabric of Ramsgate entirely restricts visibility towards the proposed substation from these roads. Further detailed assessment not included as the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on these receptors.

**Table 2.23: Substation preliminary assessment of recreational routes**

Status - Potential for significant effects and included in detailed assessment	
Route	Preliminary assessment
England Coast Path, Regional Cycle Route 15	Each of these routes pass the proposed substation at the Richborough roundabout. They are included in the detailed assessment at viewpoint 1 therefore, due to the proximity and potential visibility of the proposed substation. The England Coast Path would also have views of the proposed substation from through the trees further to the east on the Sandwich Flats. The detailed assessment for viewpoint 4 considered this receptor.
Saxon Shore Way	The Saxon Shore Way is a long distance, primarily coastal route, that within the onshore LVIA study area follows the River Stour inland across the Wantsum Channel before reconnecting to the coast at Sandwich Bay Estate. The potential for significant effects is assessed in detail at viewpoint 2, which is located on an elevated section of this route and has potential visibility of the proposed substation.
Status - No potential for significant effects and not included in detailed assessment	
Route (s)	Preliminary assessment
Viking Coastal Trail and Thanet Coastline Path	<p>The Viking Coastal Trail follows the northern part of the Thanet Coastline Path although there are inland sections through Minster and St Nicholas at Wade creating a circular route. Thanet Coastline Path also includes a section along the coast of Pegwell Bay Country Park.</p> <p>Within the substation study area, views towards the proposed substation are limited to distant views from the section of route that follows the coast along West Cliff. From this area, views of the proposed substation are restricted due to layers of trees and vegetation to the north of the substation which intervene (including roadside trees and vegetation, small tree clumps, tall trees that bound the recreation grounds and vegetation within Pegwell Bay Country Park).</p> <p>It is considered that given the limited level of potential visibility, distance and duration of potential effects that the proposed substation does not have potential to lead to a significant effect (including cumulative effect) on this route and is not included in the detailed assessment.</p>

White Cliffs Country Trail	The White Cliffs Country Trail is a long distance walking route linking Dover to Sandwich on a coastal route including along the top of the White Cliffs and then returning inland via Northbourne or Sholden. Within the substation study area, the path extends past Sandwich Bay Estate before cutting across Royal St Georges Golf Course. Views are restricted in the direction of proposed substation by intervening vegetation or localised dune landforms and the proposed substation is not considered to have the potential to result in a significant effect.
Status - Effects assessed as not significant due to very restricted and/or distant visibility of the proposed substation. Not included in detailed assessment.	
Stour Valley Walk	The Stour Valley Walk is a walking route that follows the river Stour between Pegwell Bay and Bagham via Canterbury. There would be no visibility of the proposed substation from the majority of this route, some limited visibility is available from the section of this route that follows the eastern dunes of Sandwich Flats, however this is limited by intervening vegetation and as such is not considered to have the potential to result in a significant effect. As a result it is not included in the detailed assessment.
National Cycle Route 1 (Dover to Faversham)	There would be no visibility of the proposed substation from this route and as a result is not included in the detailed assessment.

### Summary of substation preliminary assessment of visual receptors

2.15.3 The preliminary assessment has identified the viewpoints and principal visual receptors that require to be assessed further as a result of the potential effects of the proposed substation are as follows:

- Viewpoint 1 - A256 (Richborough Port Roundabout);
- Viewpoint 2 - Saxon Shore Way (South);
- Viewpoint 4 - Sandwich Flats (England Coast Path);
- Viewpoint 6 - Richborough Castle;
- Viewpoint 7 - A299, Thorne Hill;
- Viewpoint 9 – Pegwell, promenade
- Visual effects on potentially significantly affected section of the A256 assessed at viewpoint 1;
- Visual effects on potentially significantly affected section of the Saxon Shore Way assessed at viewpoint 2;
- Visual effects of the England Coast Path, Regional Cycle Route 15 as assessed at viewpoint 1; and
- Visual effects of the England Coast Path on Sandwich Flats as assessed at viewpoint 4.

Substation visual effects assessment

Table 2.24: Substation visual effects assessment

Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Viewpoint 1 - A256 (Richborough Port roundabout)</b>			
<p>The viewpoint is located on the A256 at the Richborough Port roundabout. It is representative of road users but also of users of the England Coast Path and Regional Cycle Route 15 which pass this location.</p> <p>The view is dominated by the roadside vegetation, industrial buildings and hoarding that follows either side of the A256 which creates an enclosed industrial feel to the visual context of this location and channels views along the long and relatively straight and busy road corridor. The current view into the site is through a palisade fence and includes many large industrial sized containers, spread across the proposed substation area. The existing TOWF substation and under construction Nemo substation are large structures in views to the north and east from this location and both within very close proximity on the opposite side of the roundabout from the proposed substation site. The surrounding landscape also includes views of the Richborough Wind Turbine, Biomass Storage Units and overhead lines and pylons.</p>	<p><b>Value:</b> Low</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality, and has an enclosed feel due to the substantial roadside trees and industrial context on either side of the A256.</p> <p><b>Susceptibility:</b> Low for motorists, Medium-Low for walkers and cyclists.</p> <p>Susceptibility primarily relates to motorists on the A256 but also relates to recreational walkers and cyclists on the long distance routes that pass close to this location.</p> <p>There is potential visibility of the proposed substation from this location and it is liable to change, however, the susceptibility of this viewpoint is considerably influenced by the substantial presence of industrial buildings and other electrical / built infrastructure in the majority of the view and immediately surrounding context of the view.</p> <p>For motorists this section of A256 has a 50mph limit and although motorists would be travelling slower on approach to the roundabout. This viewpoint is located in the only location along the A256 where motorists have views through roadside vegetation, their attention would be on the busy duelled road and navigating the roundabout, not on the surrounding view, reducing their susceptibility.</p> <p>For walkers and cyclists, the view would be experienced by people whose attention would likely be on their surroundings, although as for motorists their attention at this location would largely be influenced by the busy road and roundabout, reducing their susceptibility.</p> <p><b>Sensitivity to Change:</b> The sensitivity is assessed as Low for motorists and Medium-Low for walkers and cyclists.</p>	<p><b>O&amp;M</b></p> <p>Views of the proposed substation are partially restricted by roadside trees although this viewpoint is located where the clearest view into the substation site can be obtained from within the onshore LVIA study area. The short duration of the effect and the industrial context of other parts of the view from the roundabout strongly influence the degree of magnitude experienced from this location moderating the effect.</p> <p>The visualisations shown on Figure 2.11 (VP1a summer) and (VP1b winter), illustrate that the maximum parameter model (14 m in height) would be clearly visible through the gap in the trees at the roundabout junction with Richborough Port, created as the view along the north side of the substation site area is not currently vegetated. The darker more solid grey block rendered on Figure 2.11 (VP1a summer) represents the footprint of the substation building and its likely location whilst the more transparent grey block represents the substation area in which the building could be located but would otherwise contain the external infrastructure of the substation (Figure 1.15). The worst-case situation for this viewpoint is considered to be a situation where the substation building is located closest to this viewpoint in the north-west corner and it is this situation that is assessed here and as shown in Figure Figure 2.11 (VP1b winter)</p> <p>In winter months views through the existing vegetation would lead to a greater extent of the substation structures being visible from this location, resulting in a filtered view of the proposed substation for those parts of the view where existing trees intervene. It is in close proximity however and the O&amp;M magnitude of change is considered to be Medium – High before mitigation.</p> <p>Mitigation screen planting along the northern edges of the substation area would reduce levels of visibility (as shown on Figure 2.11) This would reduce the magnitude of effect to Medium after 15 years when the screen planting is predicted to have grown to approximately 8-10 m in height screening much of the built elements of proposed development from view, softening its appearance. The magnitude of effect would further reduce to Low after 25 years when screen planting has reached approximately 13-15 m in height.</p>	<p>For all receptors, the effect of the proposed substation on this viewpoint is assessed as <b>significant</b> during construction and <b>not significant</b> during O&amp;M phases.</p> <p>Once mitigation planting has established the magnitude of change would reduce and less of the proposed substation structures would be visible over time.</p> <p>Activities involved in decommissioning are similar in nature to construction activities although mitigation planting would be established at decommissioning and the and the effect would be <b>not significant</b>.</p>



Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
		<p><b>Construction and decommissioning</b></p> <p>Construction activity associated with the substation construction works would intensify visual effects at this location, as a result the magnitude of visual change would increase to High during construction. Decommissioning effects would take place after the proposed screen planting has established and the magnitude of change would drop to Medium.</p>	
<b>Viewpoint 2 - Saxon Shore Way (South)</b>			
<p>The viewpoint is located on the Saxon Shore Way on an elevated section that crosses the agricultural land to the west of the River Stour, close to the now closed metal footbridge and is representative of views experienced by walkers on the Saxon Shore Way. The foreground view is dominated by the earthworks and hoarding to the west of the A256 on the site of the recycling centre. The existing TOWF substation and under construction Nemo substation are large structures in the view and the surrounding landscape includes the Richborough Wind Turbine a network of overhead lines and pylons.</p>	<p><b>Value:</b> Medium - Low</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality, and is largely a view across industrial land. More valuable views are found on other section of this route away from the existing industrial context and where the focus is more rural in nature.</p> <p><b>Susceptibility:</b> Medium - Low</p> <p>Susceptibility primarily relates to the recreational walker receptor type and the location of the proposed substation relative to this part of the route that runs along the banks of the River Stour. The view would be experienced by people whose attention is likely to be on their surroundings.</p> <p>There is potential visibility of the proposed substation from this location and it is liable to change, however, the susceptibility of this viewpoint is moderated by the substantial presence of other industrial buildings and built infrastructure in the majority of the view. The proposed substation would be located within a built context similar to that proposed.</p> <p><b>Sensitivity to Change:</b> The sensitivity of walkers at this location is assessed as Medium to Low.</p>	<p><b>O&amp;M</b></p> <p>Views of the proposed substation are restricted by the hoarding of the A256 that contain the recycling centre. As a result only the upper parts of the proposed substation would be visible. These upper parts of the proposed substation would be seen within the context of the TOWF substation and under construction Nemo substation.</p> <p>The proposed substation would occupy a wide part of the view from this location due to the close proximity of this viewpoint. The viewpoint is located on an elevated section of this route and for other parts of the Saxon Shore Way the proposed substation is far less visible dropping off all together behind vegetation and built elements of the Richborough Energy Park or behind the commercial units of Stevens Carlotti.</p> <p>From this location, the proposed substation building would only occupy a small proportion of the maximum parameter model illustrated in the visualisation presented on Figure 2.12 and although the external elements of the substation would occupy the remaining footprint illustrated they are smaller in height and would not form a solid built structure, resulting in a less noticeable addition to the view.</p> <p>Taking this into account, the O&amp;M magnitude of change is therefore considered to be Medium for this viewpoint.</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity associated with the substation construction works (particularly crane movements above the treeline) would slightly intensify visual effects during construction/ decommissioning, however, the magnitude of change would remain Medium.</p>	<p>The effect of the proposed substation on this viewpoint is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p>

Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Viewpoint 4 - Sandwich Flats (England Coast Path)</b>			
<p>The viewpoint is located on the England Coast Path on Sandwich Flats, between Pegwell Bay and the estuary of the River Stour. The viewpoint is representative of views experienced by walkers on the England Coast Path.</p> <p>The views from this location take in the agricultural landscape, flood protection bunding and scattered scrub that lies to the east of the River Stour and the tall trees and tops of industrial commercial units found to the west of the River Stour. The large scale industrial/ commercial complex at Stonar Cut is of particular visual influence from this location and section of England Coast Path in views to the south. With the existing Nemo substation and existing Richborough Wind Turbine clearly visible in the view towards the proposed substation.</p>	<p><b>Value:</b> Medium</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality and is largely a view across unremarkable agricultural land. More valuable views are found on other section of this route such as on more open coastal sections and the perceptual qualities of the landscape, including its sense of remoteness and perceived wildness, are not experienced at this location.</p> <p><b>Susceptibility:</b> Medium</p> <p>Susceptibility primarily relates to the recreational walker receptor type and the location of the proposed substation relative to this part of the route within Sandwich Flats. The view would be experienced by people whose attention is likely to be on their surroundings.</p> <p>There is little visibility of the proposed substation and the existing built infrastructure on the skyline to the west beyond the proposed substation site area moderates the susceptibility as the proposed substation would be located within a built context similar to that proposed.</p> <p><b>Sensitivity to Change:</b> The sensitivity of walkers at this location is assessed as Medium.</p>	<p><b>O&amp;M</b></p> <p>In summer months, views of the proposed substation would be restricted by the trees and vegetation to the east of the substation site area which intervene in views and only a small proportion of the substation would be visible through gaps in the tops of intervening trees. Small trees within the intervening area of Nature Reserve coalesce to screen lower parts of the substation area in the view (in summer and winter months). In winter months views of the upper parts of substation structures and building would be viewed through the tall trees found on the west banks of the Stour, that intervene resulting in a filtered view of the proposed substation structures from this location.</p> <p>Visible substation structures would occupy a small part of the overall view, which is already affect by a strong existing baseline of industrial/ commercial development in the view across the Stour and would be seen within the immediate context of the Nemo substation and Richborough Wind Turbine.</p> <p>The O&amp;M magnitude of change is considered to be Medium for this viewpoint during winter months Figure 2.14 (VP4b winter), reducing to negligible in summer months when trees are in full leaf Figure 2.14 (VP4a summer)</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity associated with the substation construction works (particularly crane movements above the treeline) would slightly intensify visual effects during construction/ decommissioning, however, the magnitude of change would remain Medium if in winter months and negligible if in summer months.</p>	<p>The effect of the proposed substation on this viewpoint is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p>
<b>Viewpoint 6 - Richborough Castle</b>			
<p>The viewpoint is located on the track to the west of Richborough Castle, where views towards the proposed substation site area are free from more immediate vegetation or other parts of the castle walling. It is representative of views experienced by visitors to Richborough Castle, which is managed by English Heritage with visitor access from a car park and visitor centre off Richborough Road.</p>	<p><b>Value:</b> High</p> <p>Richborough Castle is one of the most symbolically important of Roman sites in Britain, witnessing both the beginning and almost the end of Roman rule in Britain. When the fort was built it was surrounded by water on three sides, but silting of the Wantsum Channel which once separated the Isle of Thanet from the rest of Kent has left it inland from the present sea shore. Richborough Castle is now managed by English Heritage with visitor access daily during the summer and at weekends in the</p>	<p><b>O&amp;M</b></p> <p>Views of the proposed substation would be restricted by the trees and vegetation to the west of the substation site area which intervene in views and only the of the substation would be visible through gaps in the tops of intervening trees. In summer months when these same intervening trees are in full leaf visibility would be further reduced. The upper parts of the proposed substation would be seen within the context of the Richborough Wind Turbine, overhead lines, TOWF substation and under construction Nemo substation.</p>	<p>The effect of the proposed substation on this viewpoint is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p>

Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<p>Foreground views from this location take in the stone walls and grounds of the castle and surrounding agricultural landscape of the Ash Level LCA. Distant views are open to the north and north-east across the Wantsum Channel to elevated backdrop formed by the plateau of the Isle of Thanet, views in the direction of the site however contain enclosing trees that follow the railway line which passes Richborough Energy Park and Richborough Castle.</p> <p>The existing Richborough Wind Turbine, overhead lines, TOWF and substation and under construction Nemo substation are all visible elements beyond the tree line that follows the railway.</p>	<p>winter, with a museum assisting with visitor’s interpretation of the historic value of the site.</p> <p><b>Susceptibility:</b> Medium - Low</p> <p>The viewpoint is representative of the view experienced by visitors to Richborough Castle. Visitors to the castle are likely to have a high level of interest on the views of the castle and its landscape setting. The view is influenced by large scale energy infrastructure in the mid-ground at Richborough Energy Park, the existing TOWF and extensive urban areas on the Isle of Thanet beyond.</p> <p>There are only small gaps in the tree cover around the fort which allow more distant views to the sea to the north-east. The open aspect of views to the north are susceptible to change although the substantial tree cover that follows the railway moderates this.</p> <p><b>Sensitivity to Change:</b> The sensitivity of visitors to Richborough Castle at this location is assessed as Medium.</p>	<p>The proposed substation building would only occupy a small proportion of the maximum parameter model illustrated in the visualisation presented on Figure 2.16 and although the external elements of the substation would occupy the remaining footprint they would be smaller in height and would not form a solid built structure, resulting in a less noticeable addition to the view.</p> <p>Taking this into account, the O&amp;M magnitude of change is therefore considered to be low for this viewpoint.</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity associated with the substation construction works (particularly crane movements above the treeline) would slightly intensify visual effects during construction/ decommissioning, however, the magnitude of change would remain Low.</p>	
<b>Viewpoint 7 - A299, Thorne Hill</b>			
<p>The viewpoint is located on a minor road on Thorne Hill which has elevated views across the agricultural landscape of the Wantsum Channel. The A299 is directly north of this viewpoint and a gap in the road embankment allows a similar view to the viewpoint location.</p> <p>The views from this location are panoramic and the route of the River Stour moving from agricultural landscape, through the industrial context close the site and passing the Sandwich Flats can be appreciated by following the pattern of riparian vegetation that follow it through the Wantsum Channel although the River Stour is not visible itself.</p> <p>The existing Richborough Wind Turbine, overhead lines, British Car Auction, Biomass plant at Ebbsfleet, TOWF and</p>	<p><b>Value:</b> Low</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality and although the elevated view across the agricultural landscape of the Wantsum Channel has local value other parts of the southern edges of Thanet also have similarly elevated views across this landscape.</p> <p><b>Susceptibility:</b> Low</p> <p>This viewpoint is on a minor road which although not facing the direction of the proposed substation site, nearby sections do face south. The national speed limit applies to this section of road and although there are no speed restrictions, the sharp bend in this quite narrow road slows motorists and for the majority of motorists views of the surrounding landscape are experienced whilst travelling at speeds of between 30 – 40 mph. Given the high speed of vehicles, road users on the A299 would only share this view through the road embankment for only</p>	<p><b>O&amp;M</b></p> <p>Views of the proposed substation would be restricted by the trees and vegetation to the north and west of the substation site area which intervene in views although a central section of the substation site area would be visible through a break in the vegetation across the rooftop of the British Car Auction buildings and closer Biomass plant at Ebbsfleet. Whilst slightly more of the substation structures would be visible in winter months, these visible upper parts of the proposed substation would be seen within the context of the Richborough Wind Turbine, overhead lines, TOWF substation and Nemo substation (which sits closer and partially obscures the proposed substation in this view).</p> <p>The proposed substation building would only occupy a small proportion of the maximum parameter model illustrated in the visualisation presented on Figure 2.17 and although the external elements of the substation would occupy the remaining footprint illustrated, they would be smaller in height and would not form a solid built structure, resulting in a less noticeable addition to the view.</p> <p>Taking all of this into account, the O&amp;M magnitude of change is therefore considered to be medium - low for this viewpoint.</p>	<p>The effect of the proposed substation on this viewpoint is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p>



Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<p>substation and under construction Nemo substation are all visible elements beyond the tree line that follows the railway.</p>	<p>the briefest of glimpses. The susceptibility of this viewpoint is moderated by the substantial presence of other industrial buildings and built infrastructure in the view.</p> <p><b>Sensitivity to Change:</b> The sensitivity of motorists to the proposed substation at this location is assessed as Low.</p>	<p><b>Construction and decommissioning</b></p> <p>Construction activity associated with the substation construction works (particularly crane movements) would slightly intensify visual effects during construction/ decommissioning, however, the magnitude of change would remain Medium to Low.</p>	
<p><b>Viewpoint 9 – Pegwell, promenade</b></p>			
<p>The viewpoint is located on the western end of the West Cliff promenade that lies between Pegwell and Ramsgate Harbour.</p> <p>The settled area of Pegwell and Ramsgate slopes gradually upwards to the north of the viewpoint. Residents within many of these properties would therefore share a similar view to the viewpoint location.</p> <p>The viewpoint is elevated above west cliff and views across Pegwell Bay to the south form the principal view.</p> <p>The substation location appears to sit within a relatively narrow strip of land on the opposite side of Pegwell Bay. The Stour Estuary can be seen in this view beyond the edges of the Country Park, with the northern tip of Sandwich Flats (Shell Ness) on the other side of the Stour.</p> <p>The existing Richborough Wind Turbine, overhead lines, British Car Auction, Biomass plant at Ebbsfleet, TOWF substation, Nemo substation industrial buildings along the A256 and the massing of large scale industrial/ commercial buildings at Stonar Cut are all visible elements above the tree lined skyline on the opposite side of Pegwell Bay in this view.</p>	<p><b>Value:</b> Medium-high</p> <p>The surrounding landscape or seascape is not covered by local or national designations and the view is not formally recognised through signage, however there are facilities (e.g. benches) provided for the view. England Coast Path, Thanet Coastal Path, Viking Coastal Trail and Regional Cycle Route 15 all pass this viewpoint.</p> <p><b>Susceptibility:</b> Medium</p> <p>The attention and interest of visitors/tourists is likely to be on their surroundings at this viewpoint, including the elevated sea views to the south out to sea across the harbour and Ramsgate Sands and across Pegwell Bay to Sandwich Flats and the Stour Estuary. Residents may have both static, long-term views from their primary place of residence, and dynamic views coming and going from their residence. The susceptibility of this viewpoint is moderated by the substantial presence of other industrial buildings and built infrastructure in the view and the distance from the proposed substation.</p> <p><b>Sensitivity to Change:</b> The sensitivity of visitors/tourists, walkers and residents at this location is assessed as <b>medium-high</b>.</p>	<p><b>O&amp;M</b></p> <p>The view of the proposed substation is limited from this viewpoint due to layers of trees and vegetation to the north of the substation site area which intervene (including roadside trees and vegetation, small tree clumps, tall trees that bound the recreation grounds and vegetation within Pegwell Bay Country Park (where the onshore cable route is located). There is potential for a glimpsed view from this particular location along the alignment of the Stour Estuary where a gap in the existing vegetation allows potential views of the proposed substation site.</p> <p>This visible section of the proposed substation, as seen between the gap in existing vegetation, would be seen in the distance to the south within the context of existing industrial buildings that punctuate the skyline. The proposed substation building would only occupy a small proportion of the maximum parameter model illustrated in the visualisation presented on Figure 2.19 and although the external elements of the substation would occupy the remaining footprint illustrated, they would be smaller in height and would not form a solid built structure, resulting in a less noticeable addition to the view.</p> <p>In winter months views of the upper parts of substation structures and building would be viewed through the trees that intervene resulting in a filtered view of the proposed substation from this location. In summer months the proposed substation structures would be almost entirely screened other than at the gap in the existing vegetation. Landscape mitigation planting includes a strip of screen planting and a larger area of woodland that would introduce further screening to the gap in the existing vegetation and trees as viewed from this location.</p> <p>Taking all of this into account, the O&amp;M magnitude of change is therefore considered to be Low for this viewpoint.</p> <p><b>Construction and decommissioning</b></p>	<p>The effect of the proposed substation on this viewpoint is assessed as <b>not significant</b> during construction, O&amp;M and decommissioning phases.</p>



Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
		<p>The construction activities associated with the Landfall Options would adversely influence the view of the coastal edge of the Country Park which is visible at distance from this viewpoint. Construction activity associated with the substation construction works (particularly crane movements) would also slightly intensify visual effects during construction/ decommissioning, albeit at greater distances.</p> <p>Construction lighting would draw attention to these activities particularly at the proposed Landfall in the Country Park which is not normally lit in periods of darkness / twilight. Whilst the magnitude of change would remain low during daylight hours, it is considered to be Medium - Low during construction due to the influence of lighting in this view.</p>	

**Cable route and landfall preliminary assessment**

*Viewpoints*

2.15.4 As described in the baseline overview, the assessment of effects on views includes effects on viewpoints and principal visual receptors. The following preliminary assessment identifies which of these views may experience significant effects and therefore which require to be assessed in full. A baseline description is then provided for each view receptor that has the potential to be significantly affected.

**Table 2.25: Cable route and landfall Preliminary assessment of viewpoints**

Viewpoint	Status/ Comments
10. Pegwell Bay Country Park near the bird hide	Included in the detailed assessment due to the proximity and potential visibility of the onshore cable route and landfall options
11. Cycle route and path adjacent to Sandwich Road	Included in the detailed assessment due to the proximity and potential visibility of the onshore cable route and landfall options
12. Cycle route and path near Sandwich Road access	Included in the detailed assessment due to the proximity and potential visibility of the onshore cable route and landfall options
13. Sandwich Road	Included in the detailed assessment due to potential visibility of the onshore cable route and landfall options

*Principal Visual Receptors*

2.15.5 The following preliminary assessment, set out in Table 2.26, Table 2.27 and Table 2.28, identifies which of the principal visual receptors may experience significant effects and therefore which require to be assessed in full. A baseline description is then provided for each receptor that has the potential to be significantly affected.

**Table 2.26: Cable route and landfall preliminary assessment of settlements<sup>2</sup>**

Status - No potential for significant effects and not included in detailed assessment	
Main Settlements	Preliminary assessment
Cliffsend	The onshore cable route and landfall is potentially visible from the elevated coastal edges of Cliffsend but located at the outer edges of the cable route study area, is not considered to have the potential for significant effects due to distance. It is considered there is no potential for significant effects (including cumulative effects) on this settlement and further detailed assessment is not included.

**Table 2.27: Cable route and landfall preliminary assessment of transport routes**

Status - No potential for significant effects and not included in detailed assessment	
Route (s)	Preliminary assessment
A256	The onshore cable route between the proposed landfall and substation area would not be visible from this route. Potential views of the section of cable route between the substation and NGET is limited and is not considered to have the potential for significant effects. This route is therefore not included in the detailed assessment.
Ramsgate – Faversham Railway Line (Via Canterbury) and Dover – Ramsgate Railway Line	The onshore cable route would not be visible from these railway lines and are not therefore included in the detailed assessment.

<sup>2</sup> Settlements within the study area have been identified and assessed in this preliminary assessment using the following local planning policy documents which define the various settlements within each District/Borough Council area in the study area: Thanet District Council - Settlement Pattern and Hierarchy (Online resource) ([www.thanet.gov.uk/publications/planning-](http://www.thanet.gov.uk/publications/planning-policy/settlement-pattern-and-hierarchy)

[policy/settlement-pattern-and-hierarchy](http://www.thanet.gov.uk/publications/planning-policy/settlement-pattern-and-hierarchy); and Dover District Council - Dover District Settlement Review and Hierarchy, 2007.

**Table 2.28: Cable route and landfall preliminary assessment of recreational routes**

Status - Potential for significant effects and included in detailed assessment	
Route	Preliminary assessment
Regional Cycle Route 15	Regional Cycle Route 15 passes close to the onshore cable route for sections through Stonelees Nature Reserve and Pegwell Bay Country Park. The potential for significant effects is assessed in detail at viewpoints 11 and 12, which are located on this route.
England Coast Path and Thanet Coastline Path	The proposed onshore cable route crosses these routes at the proposed landfall. The potential for significant effects is assessed in detail at viewpoint 10, which is located close to the landfall.
Status - No potential for significant effects and not included in detailed assessment	
Route (s)	Preliminary assessment
Saxon Shore Way	The Saxon Shore Way is a long distance, primarily coastal route, that within the onshore cable route study area follows the River Stour to the west of Richborough Energy Park. The onshore cable route between the proposed landfall and substation area would not be visible from this route. Potential views of the section of cable route between the substation and NGET is limited and not considered to have the potential for significant effects. This route is therefore not included in the detailed assessment. See landscape context photos on Figure 2.8a-f.
Viking Coastal Trail	The Viking Coastal Trail follows the northern part of the Thanet Coastline Path although there are inland sections through Minster and St Nicholas at Wade creating a circular route. Within the onshore cable route study area views are screened by the scrub and trees within the Country Park. Although the proposed landfall would be visible from the coastal edges of Cliffsend where this route passes, the proposed cable route and landfall is not considered to have the potential for significant effects due to distance. It is considered there is no potential for significant effects (including cumulative effects) on this route and further detailed assessment is not included.

Stour Valley Walk	The Stour Valley Walk is a walking route that follows the river Stour between Pegwell Bay and Bagham via Canterbury. Within the onshore cable route study area visibility is limited to a view of the onshore cable route landfall which would only be possible the northernmost tip of Shell Ness. The northern area of Sandwich Flats has restricted access due to the nature reserve and as such Shell Ness has few visitors, restricted to the beach. Given the extremely limited views of the proposed cable route and landfall options, it is considered that the proposed cable route and landfall does not have potential to lead to a significant effect (including cumulative effect) on the Stour Valley Walk and is not included in the detailed assessment.
-------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**Summary of cable route and landfall preliminary assessment of visual receptors**

2.15.6 The preliminary assessment has identified the viewpoints and principal visual receptors that require to be assessed further as a result of the potential effects of the proposed cable route and landfall are as follows:

- Viewpoint 10 - Pegwell Bay Country Park near the bird hide;
- Viewpoint 11 - Cycle route and path adjacent to Sandwich Road;
- Viewpoint 12 – Cycle route and path near Sandwich Road access;
- Viewpoint 13 – Sandwich Road;
- Visual effects to Regional Cycle Route 15, as assessed at viewpoints 11 and 12;
- Visual effects on potentially significantly affected sections of the Thanet Coastline Path, and England Coast Path, as assessed at viewpoint 10.

Cable route and landfall visual effects assessment

Table 2.29: Cable route and landfall visual effects assessment

Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Viewpoint 10 - Pegwell Bay Country Park near the bird hide</b>			
<p>This viewpoint is located on the coastal section of path to the north of the bird hide close to the landfall of the proposed onshore Cable Route. The viewpoint is located on the England Coast Path and Thanet Coastal Path long distance walking routes.</p> <p>Views from this location include - views south across the saltmarsh and River Stour Estuary towards Sandwich Flats; views north towards Cliffsend and Ramsgate; and views out to sea of the existing TOWF turbines. (See Figure 2.20).</p>	<p><b>Value:</b> Medium - High</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality. This is a man-made landscape although there is local value in the open coastal scene which includes a sense of remoteness and perceived wildness.</p> <p><b>Susceptibility:</b> Medium - High</p> <p>Susceptibility primarily relates to the recreational walker receptor type or visitors to the bird hide and the location of the proposed cable route and landfall options relative to the path. The view would be experienced by people walking around the Pegwell Bay Country Park whose attention is likely to be on their surroundings.</p> <p>Visibility of the proposed onshore cable route from this location is limited to the landfall area. This viewpoint is susceptible to changes as a result of the construction activity and physical disruption to the landscape in the view.</p> <p><b>Sensitivity to Change:</b> The sensitivity of walkers/ visitors to this location assessed as Medium to High.</p>	<p>The cable route and landfall options share the same landfall location and route corridor. There are however differing parameters at the landfall and through the Country Park. The visual effect as a result of the proposed onshore cable route and landfall will therefore depend on the final alignment of the route and landfall option, within the following parameters:</p> <p>Landfall Option 1 – The intertidal HDD pits would be visible during construction. Other sections of the trenched cable route or transition pits would not be visible from this viewpoint although construction activity at the HDD transition pit to the west of this location would be perceived.</p> <p>Landfall Option 2 – The sub-sea cable installation would be visible during construction. The introduction of the cofferdam and replacement rock armour would be visible at close range during construction on this section of the footpath. Permanent change would also occur as a result of the rock armour replacement.</p> <p>Landfall Option 3 – The sub-sea cable installation would be visible during construction. The introduction of the cofferdam would be visible at close range during construction on this section of the footpath.</p> <p><b>O&amp;M</b></p> <p>Permanent changes to the view from this location are limited to the replacement rock armour and area of extended sea wall resulting from landfall option 2. These changes would occupy a small proportion of a long section of coastal path which from this location is more notable due to its close proximity. The coastal landscape would be restored in terms of groundcover being re-established, although the changes in landform profile of this section of path would be permanent.</p> <p>Taking all of this into account, the O&amp;M magnitude of change for landfall option 2 is therefore considered to be Medium for this viewpoint. There are no permanent visual changes predicted for this viewpoint for landfall options 1 or 3.</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity would intensify visual effects during construction in the local area and the magnitude of change is considered to be Medium to High for options 2 and 3 due to construction activity proposed along the sea wall and existing rock armour. Visible construction activity for option 1 would be limited to the intertidal HDD pits and the magnitude of change would be Low as a result.</p> <p>The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is far less than experienced during construction. It is considered decommissioning magnitude of change would be Low for all Landfall Options</p>	<p>The effect of the onshore cable route and landfall options is assessed as <b>Not Significant</b> during O&amp;M and decommissioning phases.</p> <p>The construction effect is assessed as <b>Significant</b> for onshore landfall option 2 and <b>Not Significant</b> for landfall options 1 and 3.</p>



Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Viewpoint 11 - Cycle route and path adjacent to Sandwich Road</b>			
<p>This viewpoint is located on the existing path that lies within Pegwell Bay Country Park adjacent to Sandwich Road. The viewpoint is on the route of Regional Cycle Route 15. Views from this location are currently dominated by the construction of the Nemo onshore cable route but also include - views south along the path towards the group of trees that lie at the border between Pegwell Bay Country Park and Stonelees Nature Reserve; views east across a large compartment of semi improved grassland within the Country Park; views of the boundary scrub and trees that align with Sandwich Road to the west; and views to the north along the path towards the Nemo construction compound location. (See Figure 2.21).</p>	<p><b>Value:</b> Medium</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality. This is a man-made landscape and although there is some local value in the open views across the grassland of the Country Park, the sense of remoteness experienced at more coastal locations is not as strong in this location.</p> <p><b>Susceptibility:</b> Medium - Low</p> <p>Susceptibility primarily relates to cyclist or walker receptor types and the location of the proposed cable route relative to the path. Receptors attention is likely to be on the surrounding landscape of the Pegwell Bay Country Park.</p> <p>This viewpoint is susceptible to changes as a result of the construction activity and physical disruption to the landscape in the view but also as a result of the permanent introduction of the proposed sections of onshore cable route potentially visible from this location. The presence of the bundled Nemo cable has an influence on the susceptibility of this location as the proposed onshore cable route would not be an unfamiliar development in this view.</p> <p><b>Sensitivity to Change:</b> The sensitivity of walkers/ cyclists at this location is assessed as Medium to Low.</p>	<p>In relation to this viewpoint location the cable route and landfall options share the same route corridor, there are however differing parameters through the Country Park depending on the landfall option. The visual effect as a result of the proposed onshore cable route and landfall will therefore depend on the final alignment of the route and landfall option, within the following parameters:</p> <p>Landfall Options 1&amp;3 – the onshore cable route would be trenched across areas of grassland for approximately 725 m in length through the Country Park.</p> <p>Landfall Option 2 - the onshore cable route would be bundled across areas of grassland for approximately 725 m in length through the Country Park.</p> <p><b>O&amp;M</b></p> <p>The proposed onshore cable route and landfall option 2 would be bundled in the section that passes through the Country Park, where this viewpoint is located. The precise position of the proposed onshore cable route has not yet been identified although the project description chapter places the alignment of the proposed onshore cable route and therefore bund to the east of the existing chalk capped bundled cable of the Nemo link. Further tree removal would be required to accommodate the proposed onshore cable route from the group of trees that lie at the border between Pegwell Bay Country Park and Stonelees Nature Reserve (tree removals to this tree group, as a result of the Nemo link bundled cable, can be clearly seen from this location). The proposed landfall option 2 cable bund would be visible beyond the Nemo bund as the landscape gently rises away from the path and viewpoint. This would create a double bundled structure for the length of proposed onshore cable route adjacent to the cycle path, north of Stonelees Nature Reserve. This bund would have an engineered appearance initially although once the reinstated grass (as agreed through the LEMP) establishes on top and around the bund, its appearance would be more in keeping with the existing landscape. Landscape mitigation proposals would therefore minimise potential visual contrasts between the capping material and the surrounding landscape. Taking all of this into account, the O&amp;M magnitude of change for proposed landfall option 2 is considered to be Medium to Low for this viewpoint.</p> <p>Visibility of the trenched cable routes of proposed landfall options 1 and 3 would be restricted by the bund of the Nemo link cable and landscape mitigation would restore disturbed areas of groundcover. No permanent visual change is therefore predicted for landfall options 1 and 3 from this viewpoint.</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity for each of the proposed landfall options would intensify visual effects during construction at this viewpoint location and the magnitude of change is considered to be Medium to High. The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is far less than experienced during construction. It is considered decommissioning magnitude of change would be Low for all Landfall Options.</p>	<p>The effect of the onshore cable route and landfall options is assessed as <b>not significant</b> during construction, O&amp;M and at decommissioning following the re-establishment of grassland ground cover.</p>

Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Viewpoint 12 - Cycle route and path near Sandwich Road access</b>			
<p>This viewpoint is located on the existing path that lies within Pegwell Bay Country Park adjacent to Sandwich Road and at the existing controlled access to the Country Park from Sandwich Road.</p> <p>The viewpoint on the path of Regional Cycle Route 15 close to the Nemo bund and the recently surfaced path over the Nemo bund that allows access to the wider Country Park.</p> <p>Views from this location are currently dominated by the construction of the Nemo onshore cable route but also include - views north and south along the cycle path and views of the boundary scrub and trees that align with Sandwich Road to the west. Views east from this location are restricted by the Nemo bund in the foreground view and the vegetated higher ground beyond this restricts views to the coast. (See Figure 2.22).</p>	<p><b>Value:</b> Medium</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality. This is a man-made landscape and although there is some local value in the open views across the grassland of the Country Park, the sense of remoteness experienced at more coastal locations is not as strong in this location although the tree lined cycle path does offer a sense of enclosure which is a characteristic not as strongly felt elsewhere in the Country Park.</p> <p><b>Susceptibility:</b> Medium - Low</p> <p>Susceptibility primarily relates to cyclist or walker receptor types and the location of the proposed cable route and landfall options relative to the path. Receptors attention is likely to be on the surrounding landscape of the Pegwell Bay Country Park.</p> <p>This viewpoint is susceptible to changes as a result of the construction activity and physical disruption to the landscape in the view but also as a result of the permanent introduction of the proposed bundled sections of onshore cable route visible from this location. The presence of the bundled Nemo cable has an influence on the susceptibility of this location as the proposed onshore cable route is not an unfamiliar development in this view.</p> <p><b>Sensitivity to Change:</b> The sensitivity of walkers/ cyclists at this location is assessed as Medium to Low.</p>	<p>In relation to this viewpoint location the cable route and landfall options share the same route corridor, there are however differing parameters through the Country Park depending on the landfall option, as follows:</p> <p>Landfall Options 1&amp;3 – the onshore cable route would be trenched across areas of grassland for approximately 725 m in length through the Country Park.</p> <p>Landfall Option 2 - the onshore cable route would be bundled across areas of grassland for approximately 725 m in length through the Country Park.</p> <p><b>O&amp;M</b></p> <p>The proposed onshore cable route and landfall option 2 would be bundled in the section that passes through the Country Park, to the south of where this viewpoint is located. The precise position of the proposed onshore cable route has not yet been identified although the project description chapter places the alignment of the proposed onshore cable route and therefore bund to the east of the existing chalk capped bundled cable of the Nemo link.</p> <p>The proposed landfall option 2 cable bund would be partly visible beyond the Nemo bund as the landscape gently rises away from the path and viewpoint. This would create a double bundled structure for the section of proposed bundled cable visible from this viewpoint to the south.</p> <p>The proposed bund would have an engineered appearance initially although once the reinstated grass (as agreed through the LEMP) establishes on top and around the bund, its appearance would be more in keeping with the existing landscape of the Country Park. Landscape mitigation proposals would therefore minimise potential visual contrasts between the capping material and the surrounding landscape. Taking all of this into account, the O&amp;M magnitude of change for proposed landfall option 2 is considered to be Medium to Low for this viewpoint.</p> <p>Visibility of the trenched cable routes of proposed landfall options 1 and 3 would be restricted by the bund of the Nemo link cable and landscape mitigation would restore disturbed areas of groundcover. No permanent visual change is therefore predicted for landfall options 1 and 3 from this viewpoint.</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity for each of the proposed landfall options would intensify visual effects during construction at this viewpoint location, particularly as the construction compound and laydown area would be located in this location. The construction magnitude of change is therefore considered to be Medium to High. The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is far less than experienced during construction. It is considered decommissioning magnitude of change would be Low for all Landfall Options.</p>	<p>The effect of the onshore cable route and landfall options is assessed as <b>not significant</b> during construction, O&amp;M and at decommissioning following the re-establishment of grassland ground cover.</p>

Baseline	Sensitivity to Change	Magnitude of Change	Significance of Effect
<b>Viewpoint 13 - Sandwich Road</b>			
<p>This viewpoint is located on Sandwich Road on a northbound layby between the main access and the controlled access to the Country Park.</p> <p>It is a busy road which is consistently vegetated along its eastern side creating a visual barrier between the road and the Country Park. Trees and tree groups also line the western side between the road and the St Augustines golf course although there are large gaps in these tree groupings allowing views to the west. (See Figure 2.23).</p>	<p><b>Value:</b> Medium to Low</p> <p>The landscape in the view is not subject to landscape designation for its scenic quality. Views from this location are unremarkable and although at the edge of the Country Park road users are visually separated.</p> <p><b>Susceptibility:</b> Low</p> <p>Susceptibility primarily relates to the road user receptor type and the location of the proposed cable route and landfall options relative to the road. The speed of this road is 40mph and road users attention is likely to be on the direction of travel due to the amount of roadside trees that channel views to the north or south depending on the direction of travel.</p> <p><b>Sensitivity to Change:</b> The sensitivity of road users at this location is assessed as Medium to Low.</p>	<p><b>O&amp;M</b></p> <p>Visibility of the proposed cable route and landfall options is restricted by existing vegetation resulting in no change to the existing view during the O&amp;M phase.</p> <p><b>Construction and decommissioning</b></p> <p>Construction activity along Sandwich Road would intensify visual effects during construction/ decommissioning resulting in a higher magnitude of change, assessed as Low. The cable would likely be removed after O&amp;M phases although as the cable duct would likely remain in situ the construction activity required at decommissioning is far less than experienced during construction. It is considered decommissioning magnitude of change would be Low for all Landfall Options.</p>	<p>The effect of the onshore cable route and landfall options is assessed as <b>not significant</b> during construction, O&amp;M and at decommissioning.</p>

## 2.16 Cumulative Assessment

### Preliminary Assessment

2.16.1 As described in Section 2.9, a comprehensive list of projects that have the potential to contribute to cumulative impacts of the proposed substation, onshore cable route and landfall has been compiled and this list and the approach to compiling this list is described in Volume 4, Annex 3-3, see Table 2.12.

2.16.2 The LVIA has undertaken a process of scoping out projects and activities from this list, based on expert judgement, assessment rationale and guidance relevant to landscape and visual impacts. The results of this are presented in the Preliminary Assessment of Cumulative Developments in Table 2.30.

**Table 2.30: Preliminary assessment of cumulative developments**

Reference	Description/ Location	Type	Assessment
<b>Consented</b> (All consented projects are considered Tier 1 within LVIA)			
Dover District Council 13/00701, (15/00788, 15/01205)	Biomass combined heat and power plant. Site North East side of Discovery Park & Access, Ramsgate Road, Sandwich, CT13 9ND	Energy	Minimal Cumulative Interaction or combined visibility and not included in CLVIA.
Dover District Council 14/00058	Redevelopment of site. Discovery Park, Ramsgate Road, Sandwich, CT13 9ND	Commercial/ Residential	Minimal Cumulative Interaction or combined visibility and not included in CLVIA.
Dover District Council 14/00091	Additional log storage. Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND	Energy	Minimal Cumulative Interaction or combined visibility and not included in CLVIA.

Reference	Description/ Location	Type	Assessment
Dover District Council 16/00045	4,230 m <sup>2</sup> research, development and manufacturing building. Discovery Park, Site North East, Ramsgate Road, Sandwich, CT13 9ND	Energy	Minimal Cumulative Interaction or combined visibility and not included in CLVIA.
PINS EN020017	Richborough Connection: Proposed 400 kV electricity transmission connection.  Richborough Energy Park to Canterbury East substation, Kent	Grid	There is potential for successive cumulative interaction from elevated sections of the Saxon Shore Way and sections of the A256. There is also the potential for simultaneous views of the proposed substation with the Richborough Connection from elevated landscape to the north and south of the onshore LVIA study area (e.g. Viewpoints 7 and 8). The level of cumulative interaction is influenced by the low level of visibility (and visual effect) of the proposed substation from these receptors which is primarily as a result of the vegetation and other buildings which intervene in views towards the proposed substation where these cumulative interactions occur. Furthermore, the degree of cumulative change is moderated by the existing built context of views towards the proposed substation (which has the closer, more visible substation buildings of Thanet and the Existing Nemo Link converter station building in the view) and the existing landscape context of the Richborough Connection (which has an existing overhead line in the view, albeit at a smaller scale).



Reference	Description/ Location	Type	Assessment
			Cumulative interaction is restricted, and the addition of Richborough Connection would not introduce the potential for significant cumulative effects in combination with the proposed development. Not included in CLVIA.
<b>Application</b> (Data confidence in relation to LVIA is considered sufficiently high for all application stage projects to be considered Tier 1 within the LVIA)			
Dover District Council 17/00280	67 dwellings. Former Kumor Nursery and 121 Dover Road, Sandwich, CT13 ODA	Housing	Sandwich settlement intervenes resulting in no cumulative Interaction or combined visibility and not included in CLVIA.
Thanet District Council F/TH/17/0321	Change of use and conversion. Pegwell Road RAMSGATE Kent CT11 0JE	Housing	Cumulative interaction is visually successive and restricted to areas where there is no potential for significant effects as a result of the proposed development. Not included in CLVIA.
Thanet District Council OL/TH/16/1715	48 dwellings. Land South Of Manston Road RAMSGATE Kent	Housing	Cumulative interaction is visually successive and restricted to areas where there is no potential for significant effects as a result of the proposed development. Not included in CLVIA.
Thanet District Council OL/TH/16/1374	95 dwellings. St Stephens Haine Road RAMSGATE Kent CT12 5ES	Housing	Cumulative interaction is visually successive and restricted to areas where there is no potential for significant effects as a result of the proposed development. Not included in CLVIA.
Thanet District Council OL/TH/16/0967	12 dwellings. Land Adjacent 15 Southall Close Minster RAMSGATE Kent	Housing	Cumulative interaction is visually successive and restricted to areas where there is no potential for significant effects as a result of the proposed development. Not included in CLVIA.
Thanet District Council OL/TH/16/1752	14 houses. Land at Haine Lodge Spratling Lane RAMSGATE Kent CT12 5LL	Housing	Cumulative interaction is visually successive and restricted to areas where there is no potential for significant effects as a result of the proposed development. Not included in CLVIA.

Reference	Description/ Location	Type	Assessment
Thanet District Council F/TH/16/0914	12 general industrial units. Land South of Invicta Way Ramsgate Kent	Housing	Cumulative interaction is visually successive and restricted to areas where there is no potential for significant effects as a result of the proposed development. Not included in CLVIA.

**Summary of Cumulative Assessment**

2.16.3 The preliminary cumulative assessment has determined that there are no future cumulative development scenarios that require detailed assessment in a Cumulative Landscape and Visual Assessment (CLVIA). The LVIA therefore focuses on the effects resulting from the proposed substation, onshore cable route and landfall in conjunction with O&M and under-construction developments that form part of the baseline conditions.

**2.17 Inter-relationships**

2.17.1 To avoid duplication, the inter-relationships of relevance to LVIA, namely those inter-related effects from both onshore and offshore LVIA receptors, are considered in detail within Volume 2, Chapter 12: Seascape Landscape Visual Impact Assessment (SLVIA) Chapter (Document Ref: 6.2.12)

**2.18 Summary of Effects**

**Landscape**

2.18.1 The landscape would be directly affected by the proposed development although residual effects are not predicted to be significant. Physical effects would be kept to a minimum to ensure that the character of the area is retained for future benefit. A description of physical landscape effects is found in Table 2.15

2.18.2 There would be no significant residual effects on landscape character within the onshore LVIA study area arising from the proposed substation, with the majority of LCAs predicted to experience a low level of change.

2.18.3 The effect of the Cable Route and Landfall Options 1, 2 and 3 on the character of the Pegwell Bay LCA is assessed as significant during construction, however, this effect is temporary in nature and beyond completion of construction have been assessed as not significant. There would therefore be no significant residual effects during O&M and decommissioning phases. A description of landscape character effects is found in Table 2.17: Substation landscape character effects assessment and Table 2.19: Cable route and landfall landscape character effects assessment.

## Visual

- 2.18.4 The proposed development may intrude into existing views experienced by users of the onshore LVIA study area, changing their view. Substantial tree vegetation and existing built development in the closely surrounding landscape restrict and limit the degree to which the substation and onshore cable route is visible in the wider landscape context.
- 2.18.5 There would be no significant residual effects on the identified viewpoints or principal receptors within the onshore LVIA study area arising from the proposed substation, with the majority of these visual receptors predicted to experience a Low - Medium level of change as a result of the introduction of the substation. The effect of the proposed Substation on Viewpoint 1 during construction is assessed as significant, however, this effect is temporary in nature and beyond completion of construction has been assessed as not significant for O&M. Following establishment of mitigation planting the activities associated with decommissioning phases are also considered not significant. Substation mitigation proposals will provide screening to the built elements within the substation reducing the magnitude of effects over time.
- 2.18.6 During O&M phases Viewpoints 10, 11 and 12 are assessed as having no effect for Cable Route and Landfall Options 1 and 3 and a not significant effect for Option 2. The effect of the Cable Route and Landfall Options 1, 2 and 3 on viewpoint 13 is assessed as having no effect during O&M phases.
- 2.18.7 The effect of the Cable Route and Landfall Options 1, 2 and 3 on viewpoints 11, 12 and 13 is assessed as having no effect during construction phases. Viewpoint 10 is assessed as significant for Cable Route and Landfall Options 2 and 3 and not significant for Option 1.
- 2.18.8 The effect of the Cable Route and Landfall Options 1, 2 and 3 on viewpoints 10, 11, 12 and 13 is assessed as having no effect during decommissioning phases.
- 2.18.9 The effect of the Cable Route and Landfall Options 2 and 3 is assessed as significant during construction for viewpoint 10 for England Coast Path and Thanet Coastline Path. These effects are however temporary in nature and beyond completion of construction have been assessed as not significant. A description of visual effects is found in Table 2.29.

## 2.19 Conclusion

- 2.19.1 This LVIA has considered the potential effects that the proposed development may have on the existing landscape resource of the onshore LVIA study area and the visual amenity of its receptors. The LVIA predicted no significant residual effects as a result of physical disruption to landscape elements within the onshore LVIA study area. The LVIA predicted no significant residual effects on landscape character or visual amenity as a result of the proposed substation.

- 2.19.2 There is an existing baseline of developments that share development characteristics to the proposed development (either through development type or scale). The most notable of these is the under-construction Nemo substation and cable. These existing developments have been identified in the baseline and are therefore considered in the assessment of landscape and visual effects which concluded no residual significant effects. None of the planning applications in the study area have the potential to contribute to significant landscape or visual effects.
- 2.19.3 Whilst the onshore elements of Thanet Extension will give rise to landscape and visual effects within the onshore LVIA study area, the LVIA has assessed that there are no residual significant effects to the landscape and visual resource as a result of the O&M of the proposed substation over the long-term, and that the significant landscape and visual effects will be limited to localised effects during construction of the substation, cable route and landfall options. All developments of this scale are likely to give rise to some effects on landscape character and visual amenity. However, the LVIA has shown that the landscape has capacity to accommodate the Proposed Development without long-term significant adverse effects on the landscape and visual resource.

## 2.20 Summary effects tables

This section provides a summary of all residual effects resulting from the onshore substation, cable route and landfall. O&M effects are summarised in Table 2.31, Construction effects are summarised in Table 2.32 and Decommissioning effects are summarised in Table 2.33.

**Table 2.31: Summary of predicted O&M effects of the onshore substation, cable route and landfall**

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent/ reversible
Physical landscape effects					
<b>Trees and scrub</b>	Medium	Options 1, 2, and 3 – Medium	Not Significant	Long-term	Permanent
<b>Coastal Groundcover</b>	Medium	Options 1, 2, and 3 – Low	Not Significant	Long-term	Permanent
Substation landscape character effects					
<b>LCA 4 - The Sandwich Corridor</b>	Low	Medium - Low	Not Significant	Long-term	Reversible
<b>LCA 6 - Sandwich Bay</b>	Medium - Low	Low	Not Significant	Long-term	Reversible
Cable route and landfall landscape character effects					
<b>LCA F1 - Pegwell Bay</b>	Medium – High	Options 1, 2, and 3 – Low	Not Significant	Long-term	Permanent
<b>LCA E1 – Stour Marshes</b>	Medium – Low	Options 1, 2, and 3 – No Change	No Effect	N/A	N/A
<b>LCA 4 - The Sandwich Corridor</b>	Low	Options 1, 2, and 3 – Negligible	Not Significant	Long-term	Permanent
Substation visual effects					
<b>Viewpoint 1 - A256 (Richborough Port Roundabout)</b>	Road users (A256): low	Medium – High (year 1) Medium (year 15) Negligible (year 25)	Not Significant (years 1, 15 & 25)	Long-term	Reversible
	Walkers (England Coast Path, Regional Cycle Route 15): Medium - Low				
<b>Viewpoint 2 - Saxon Shore Way (South)</b>	Walkers (Saxon Shore Way): Medium - Low	Medium	Not Significant	Long-term	Reversible
<b>Viewpoint 4 - Sandwich Flats (England Coast Path)</b>	Walkers (England Coast Path, Sandwich Flats): Medium	Medium to Negligible	Not Significant	Long-term	Reversible
<b>Viewpoint 6 - Richborough Castle</b>	Visitors: Medium	Low	Not Significant	Long-term	Reversible
<b>Viewpoint 7 - A299, Thorne Hill</b>	Road Users: Low	Medium - Low	Not Significant	Long-term	Reversible
<b>Viewpoint 9 – Pegwell, promenade</b>	Visitors, residents, walkers (Thanet Coastline Path, Viking Coastal Trail, England Coast Path and RCR15): Medium - High	Low	Not Significant	Long-term	Reversible

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent/ reversible
Cable route and landfall visual effects					
<b>Viewpoint 10 - Pegwell Bay Country Park near the bird hide</b>	walkers (Thanet Coastline Path, England Coast Path): Medium - High	Options 1 and 3 – No Change	No Effect	N/A	N/A
		Option 2 – Medium	Not Significant	Long-term	Permanent
<b>Viewpoint 11 - Cycle route and path adjacent to Sandwich Road</b>	Walkers/ Cyclists (RCR15): Medium - Low	Options 1 and 3 – No Change	No Effect	N/A	N/A
		Option 2 – Medium - Low	Not Significant	Long-term	Permanent
<b>Viewpoint 12 – Cycle route and path near Sandwich Road access</b>	Walkers/ Cyclists (RCR15): Medium - Low	Options 1 and 3 – No Change	No Effect	N/A	N/A
		Option 2 – Medium - Low	Not Significant	Long-term	Permanent
<b>Viewpoint 13 – Sandwich Road</b>	Road Users (Sandwich Road): Medium - Low	Option 1, 2 and 3 – No change	No Effect	N/A	N/A



Table 2.32: Summary of predicted Construction effects of the onshore substation, cable route and landfall

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent/ reversible
Physical landscape effects					
<b>Trees and scrub</b>	Medium	Options 1, 2, and 3 – Medium	Not Significant	Short-term	Reversible
<b>Coastal Groundcover</b>	Medium	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
Substation landscape character effects					
<b>LCA 4 - The Sandwich Corridor</b>	Low	Medium - Low	Not Significant	Short-term	Reversible
<b>LCA 6 - Sandwich Bay</b>	Medium - Low	Low	Not Significant	Short-term	Reversible
Cable route and landfall landscape character effects					
<b>LCA F1 - Pegwell Bay</b>	Medium – High	Options 1, 2, and 3 – Medium – High	Significant	Short-term	Reversible
<b>LCA E1 – Stour Marshes</b>	Medium – Low	Options 1, 2, and 3 – Negligible	No Effect	N/A	N/A
<b>LCA 4 - The Sandwich Corridor</b>	Low	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
Substation visual effects					
<b>Viewpoint 1 - A256 (Richborough Port Roundabout)</b>	Road users (A256): low; and walkers (England Coast Path and Regional Cycle Route 15): Medium	High	Significant	Short-term	Reversible
<b>Viewpoint 2 - Saxon Shore Way (South)</b>	Walkers (Saxon Shore Way): Medium - Low	Medium	Not Significant	Short-term	Reversible
<b>Viewpoint 4 - Sandwich Flats (England Coast Path)</b>	Walkers (England Coast Path, Sandwich Flats): Medium	Medium - Negligible	Not Significant	Short-term	Reversible
<b>Viewpoint 6 - Richborough Castle</b>	Visitors: Medium	Low	Not Significant	Short-term	Reversible
<b>Viewpoint 7 - A299, Thorne Hill</b>	Road Users: Low	Medium - Low	Not Significant	Short-term	Reversible
<b>Viewpoint 9 – Pegwell, promenade</b>	Visitors, residents, walkers (Thanet Coastline Path, Viking Coastal Trail, England Coast Path and RCR15): Medium - High	Medium - Low	Not Significant	Short-term	Reversible
Cable route and landfall visual effects					
<b>Viewpoint 10 - Pegwell Bay Country Park near the bird hide</b>	walkers (Thanet Coastline Path and England Coast Path): Medium - High	Option 1 – Low	Not Significant	Short-term	Reversible
		Options 2 and 3 – Medium - High	Significant	Short-term	Reversible

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent/ reversible
<b>Viewpoint 11 - Cycle route and path adjacent to Sandwich Road</b>	Walkers/ Cyclists (RCR15): Medium - Low	Options 1, 2, and 3 – Medium - High	Not Significant	Short-term	Reversible
<b>Viewpoint 12 – Cycle route and path near Sandwich Road access</b>	Walkers/ Cyclists (RCR15): Medium - Low	Options 1, 2, and 3 – Medium - High	Not Significant	Short-term	Reversible
<b>Viewpoint 13 – Sandwich Road</b>	Road Users (Sandwich Road): Medium - Low	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible

Table 2.33: Summary of predicted Decommissioning effects of the onshore substation, cable route and landfall

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent/ reversible
Physical landscape effects					
<b>Trees and scrub</b>	Medium	Options 1, 2, and 3 – No Change	No Effect	N/A	N/A
<b>Coastal Groundcover</b>	Medium	Options 1, 2, and 3 – Low	No Effect	N/A	N/A
Substation landscape character effects					
<b>LCA 4 - The Sandwich Corridor</b>	Low	Medium - Low	Not Significant	Short-term	Reversible
<b>LCA 6 - Sandwich Bay</b>	Medium - Low	Low	Not Significant	Short-term	Reversible
Cable route and landfall landscape character effects					
<b>LCA F1 - Pegwell Bay</b>	Medium – High	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
<b>LCA E1 – Stour Marshes</b>	Medium – Low	Options 1, 2, and 3 – Negligible	No Effect	N/A	N/A
<b>LCA 4 - The Sandwich Corridor</b>	Low	Options 1, 2, and 3 – Low	Not Significant	Short-term	Reversible
Substation visual effects					
<b>Viewpoint 1 - A256 (Richborough Port Roundabout)</b>	Road users (A256): low; and walkers (England Coast Path and Regional Cycle Route 15): Medium	Medium	Not Significant	Short-term	Reversible
<b>Viewpoint 2 - Saxon Shore Way (South)</b>	Walkers (Saxon Shore Way): Medium - Low	Medium	Not Significant	Short-term	Reversible
<b>Viewpoint 4 - Sandwich Flats (England Coast Path)</b>	Walkers (England Coast Path, Sandwich Flats): Medium	Medium - Negligible	Not Significant	Short-term	Reversible
<b>Viewpoint 6 - Richborough Castle</b>	Visitors: Medium	Low	Not Significant	Short-term	Reversible
<b>Viewpoint 7 - A299, Thorne Hill</b>	Road Users: Low	Medium - Low	Not Significant	Short-term	Reversible
<b>Viewpoint 9 – Pegwell, promenade</b>	Visitors, residents, walkers (Thanet Coastline Path, Viking Coastal Trail, England Coast Path and RCR15): Medium - High	Medium - Low	Not Significant	Short-term	Reversible
Cable route and landfall visual effects					
<b>Viewpoint 10 - Pegwell Bay Country Park near the bird hide</b>	walkers (Thanet Coastline Path and England Coast Path): Medium - High	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible
<b>Viewpoint 11 - Cycle route and path adjacent to Sandwich Road</b>	Walkers/ Cyclists (RCR15): Medium - Low	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible

Receptor	Sensitivity to Change	Magnitude of Change	Significance of Effect	Duration	Permanent/ reversible
<b>Viewpoint 12 – Cycle route and path near Sandwich Road access</b>	Walkers/ Cyclists (RCR15): Medium - Low	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible
<b>Viewpoint 13 – Sandwich Road</b>	Road Users (Sandwich Road): Medium - Low	Option 1, 2 and 3 – Low	Not Significant	Short-term	Reversible



## 2.21 References

- Thanet District Council Landscape Character Assessment (Thanet District Council, 2017).
- Dover District Landscape Character Assessment (Dover District Council, 2006).
- Landscape Institute, 2017 - Visual Representation of Development Proposals.
- Landscape Institute and IEMA (2013), Guidelines for the Assessment of Seascape/landscape and Visual Impacts: Third Edition (herein referred to as 'GLVIA3').
- Natural England (2014). An Approach to Seascape/landscape Character Assessment.
- European Landscape Convention (2000), Council of Europe. Cultural Heritage, Landscape and Spatial Planning Division Directorate of Culture and Cultural and Natural.
- SNH (2012), Assessing the Cumulative Impact of Onshore Wind Energy Developments.
- SNH (2017), Siting and Designing Wind Farms in the Seascape/landscape, Guidance (Version 3) (herein referred to as 'SNH Siting and Designing').
- SNH (2017), Visual Representation of Wind Farms, Guidance (Version 2.2) (herein referred to as 'SNH Visual Representation').