The Great Grid Upgrade

Sea Link

Preliminary Environmental Information Report

Volume: 1 Part 3 Kent Onshore Scheme Chapter 2 Landscape and Visual

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3.2 Landscape and Visual

3.2.1 Introduction

- 3.2.1.1 This chapter of the Preliminary Environmental Information Report (PEIR) presents information about the preliminary environmental assessment of the likely significant landscape and visual effects identified to date, that could result from Sea Link (hereafter referred to as the Proposed Project) (as described in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**).
- 3.2.1.2 This chapter describes the methodology used, the datasets that have informed the preliminary assessment, baseline conditions, mitigation measures and the preliminary landscape and visual residual significant effects that could result from the Proposed Project.
- 3.2.1.3 Landscape effects associated with the Kent Onshore Scheme relate to the changes to the fabric, character, and quality of the landscape and how it is experienced. As defined in the Guidelines for Landscape and Visual Impact Assessment (Third edition) (GLVIA3) (Ref 3.2.1) the term landscape also encompasses urban landscape, often referred to as townscape. For the purpose of this assessment the term landscape is adopted and may include areas of townscape within towns or villages.
- 3.2.1.4 Visual effects relate closely to changes to the landscape; however, these consider the effects of change on the views available to people and their visual amenity resulting from the introduction of the Kent Onshore Scheme. Although effects on the landscape and visual environment are interrelated, they are assessed and reported separately in this chapter.
- 3.2.1.5 The draft Order Limits, which illustrate the boundary of the Proposed Project, are illustrated on **Figure 1.1.1 Draft Order Limits** and the Kent Onshore Scheme Boundary is illustrated on **Figure 1.1.3 Kent Onshore Scheme Boundary**.
- 3.2.1.6 This chapter should be read in conjunction with:
 - Volume 1, Part 1, Chapter 4, Description of the Proposed Project;
 - Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology;
 - Volume 1, Part 1, Chapter 6, Scoping Opinion and EIA Consultation;
 - Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme;
 - Volume 1, Part 3, Chapter 3, Ecology and Biodiversity;
 - Volume 1, Part 3, Chapter 4, Cultural Heritage;
 - Volume 1, Part 3, Chapter 8, Traffic and Transport;
 - Volume 1, Part 3, Chapter 10, Noise and Vibration; and
 - Volume 1, Part 3, Chapter 11, Socio-economics Recreation and Tourism.

- 3.2.1.7 This chapter is supported by the following figures:
 - Volume 3, Part 1, Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy;
 - Volume 3, Part 3, Figure 3.2.1: Topography;
 - Volume 3, Part 3, Figure 3.2.2: Landscape Context and Designations;
 - Volume 3, Part 3, Figure 3.2.3: Landscape Character National and County;
 - Volume 3, Part 3, Figure 3.2.4: Landscape Character District;
 - Volume 3, Part 3, Figure 3.2.5: Seascape Character National and Regional;
 - Volume 3, Part 3, Figure 3.2.6: Representative Viewpoint Locations;
 - Volume 3, Part 3, Figure 3.2.7 Representative Viewpoint Locations and Screened Zone of Theoretical Visibility; and
 - Volume 3, Part 3, Figure 3.2.8: Representative Viewpoint Photography and Photomontages:
 - A: Viewpoint 1: Jutes Lane;
 - B: Viewpoint 2: Pegwell Bay Country Park;
 - C: Viewpoint 3: Saxon Shore Way, west of Richborough Energy Park;
 - D: Viewpoint 4: Public Footpath east of Minster;
 - E: Viewpoint 5: Junction of Grinsell Hill and Ebbsfleet Lane North;
 - F: Viewpoint 6: Public Footpath south of Minster;
 - G: Viewpoint 7: Sandwich Bay adjacent to English Coast Path;
 - H: Viewpoint 8: Richborough Roman Fort;
 - I: Viewpoint 9: Richborough Road east of Lower Gladstone;
 - J: Viewpoint 10: Saxon Shore Way, southwest of Minster;
 - K: Viewpoint 11: Thorne Hill, south of the A299;
 - L: Viewpoint 12: Public Bridleway north of Minster;
 - M: Viewpoint 13: Chalk Hill, NCN Route 15; and
 - N: Viewpoint 14: England Coast Path, West Cliff Ramsgate.
- 3.2.1.8 This chapter is supported by the following appendices:
 - Volume 2, Part 1, Appendix 1.4.A, Outline Code of Construction Practice;
 - Volume 2, Part 1, Appendix 1.4.F, Outline Schedule of Environmental Commitment and Mitigation Measures;
 - Volume 2, Part 3, Appendix 3.2.A, Photomontage Methodology; and
 - Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.

3.2.2 Regulatory and Planning Context

- 3.2.2.1 This section sets out the legislation and planning policy that is relevant to the preliminary landscape and visual assessment. A full review of compliance with relevant national and local planning policy will be provided within the Planning Statement that will be submitted as part of the application for Development Consent.
- 3.2.2.2 Policy generally seeks to minimise landscape effects from development and to avoid significant adverse effects.

Legislation

European Landscape Convention

- 3.2.2.3 The European Landscape Convention (ELC) (Ref 3.2.2) was signed by the UK Government in 2006 and came into effect in March 2007¹. The ELC recognises landscape in law. It focuses specifically on landscape issues and highlights the importance of integration of landscape into areas of policy, to promote protection, management and planning of all landscapes including the assessment of landscape and analysis of landscape change.
- 3.2.2.4 The ELC defines landscape as: "an area, as perceived by people, whose character is the result of the action and interaction of natural and / or human factors".
- 3.2.2.5 The ELC promotes an 'all-landscapes approach', founded on the recognition of value in all landscapes. It recognises that the landscape is important as a component of the environment and of people's surroundings in both town and country and whether it is ordinary landscape or outstanding. The ELC considers landscape as a whole (land or marine), from urban to rural areas, and whether special or degraded.

National Parks and Access to the Countryside Act 1949

3.2.2.6 In England and Wales National Parks and Areas of Outstanding Natural Beauty (AONB) are designated under the National Parks and Access to the Countryside Act 1949 (Ref 3.2.3). The Environment Act 1995 revised the original legislation and set out two statutory purposes for national parks in England and Wales:

"Conserve and enhance the natural beauty, wildlife and cultural heritage" and

"Promote opportunities for the understanding and enjoyment of the special qualities of national parks by the public".

3.2.2.7 When national parks carry out these purposes, they also have the duty to:

"Seek to foster the economic and social well-being of local communities within the national parks" (Section 62 of the Environment Act 1995)."

¹ The UK remains a signatory post-Brexit

Tree Preservation Orders

3.2.2.8 The law on Tree Preservation Orders is set out in the Town and Country Planning Act 1990 (in particular sections 197-214 as amended) (Ref 3.2.4) and in the Town and Country Planning (Trees) Regulations 1999 (Statutory Instrument number 1892) (Ref 3.2.5).

National Policy

National Policy Statements

- 3.2.2.9 National Policy Statements (NPSs) set out the primary policy tests against which the application for a Development Consent Order (DCO) for the Proposed Project would be considered. A review of the NPS was announced in the 2020 Energy white paper: Powering our net zero future. This review was to ensure the NPSs were brought up to date to reflect the policies set out in the white paper.
- 3.2.2.10 Table 3.2.1 and Table 3.2.2 provide details of the elements of NPS for Energy (EN-1) (Ref 3.2.6) and NPS for Electricity Networks Infrastructure (EN-5) (Ref 3.2.7) that are relevant to this chapter, and how and where they are covered in the PEIR or will be covered within the Environmental Statement (ES).

NPS EN-1 section	Where this is covered in the PEIR
Part 4.2 sets out the requirement for an ES which should describe "the aspects of the environment likely to be significantly affected by the project".	An ES will accompany the DCO application, which will include a Landscape and Visual chapter and reference to interaction between disciplines. The Landscape and Visual chapter will set out an assessment of likely significant effects for construction, operation, maintenance and decommissioning, as set out within the NPS in paragraph 4.2.1.
Part 4.5 sets out criteria for "good design" for energy infrastructure. Paragraph 4.5.1 states that: "Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure	Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme identifies the environmental considerations, including landscape and visual considerations, which have informed the siting and outline design of the proposed Minster Converter Station and Minster Substation. The design of these structures, in terms of the building form and the external materials,

Table 3.2.1: NPS EN-1 requirements relevant to landscape and visual

NPS EN-1 section	Where this is covered in the PEIR
development will often limit the extent to which it can contribute to the enhancement of the quality of the area".	will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the detail proposals of these structures.
4.5.3 (part) "Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation"	Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme identifies the environmental considerations, including landscape and visual considerations, which have informed the siting and outline design of the proposed Minster Converter Station and Minster Substation. The design of these structures, in terms of the building form and the cladding materials, will be developed alongside consultation and stakeholder feedback and design principles will be provided with the application for development consent.
4.5.4 (part) "For the IPC to consider the proposal for a project, applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy".	The draft Order Limits have been developed through a detailed routeing and siting process. Volume 1, Part 1, Chapter 3, Main Alternatives Considered sets out how the Proposed Project has evolved to date, and the alternatives considered. The evolution of the design will be informed by both environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback. This evolution will be documented in the Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme within the ES.

NPS EN-1 section	Where this is covered in the PEIR
Part 5.3 sets out information regarding Biodiversity and geological conservation and Part 5.8 sets out information regarding the Historic Environment, including reference to designations.	Such disciplines will inform judgements on landscape value within the Landscape and Visual chapter of the ES.
5.9.5 (part)" 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 plan documents in England and local development plans in Wales".	Published landscape and seascape character documents have been used as a means of assessing the preliminary landscape effects presented in this chapter. The baseline landscape character is presented in Section 3.2.7, Volume 2, Part 3, Appendix 3.2.8, Landscape and Visual Baseline and on Figures 3.2.3 Landscape Character - National and County to 3.2.5 Seascape Character - National and Regional. The preliminary assessment takes account of relevant planning policy as identified in Section 3.2.2.
5.9.6 "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".	The preliminary landscape and visual assessment presented in this chapter has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme (see Section 3.2.9).
5.9.8 "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".	An iterative process of design and assessment has informed the siting and routeing of the Kent Onshore Scheme. Mitigation measures including those which are embedded in the Kent Onshore Scheme design are presented in Section 3.2.8. Consideration of landscape character, quality and value are considered in Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline and have informed the value and susceptibility judgements.

NPS EN-1 section	Where this is covered in the PEIR
5.9.9 "National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas".	No landscape related nationally designated areas (including National Parks and AONB) have been identified within the study area.
5.9.14 "Outside designated landscapes, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales 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".	There are no locally designated landscapes within the study area. Consideration of landscape value is provided in Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline .
5.9.15 "The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC ² should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project".	The Zone of Theoretical Visibility (ZTV) is presented on Figure 3.2.7, Representative Viewpoint Locations and Screened Zone of Theoretical Visibility. Beyond the extents shown on the ZTV and the identified study area, potentially significant landscape and visual effects are not considered likely.
5.9.16 "In reaching a judgement, the IPC should consider whether the adverse impact on the landscape is temporary, such as during construction, and/ or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable".	The preliminary landscape and visual assessment presented in this chapter has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme (see Section 3.2.9). The magnitude judgements consider the duration and reversibility of the impact.

² Any function of the IPC referred to in the NPSs is now dealt with by the SoS following the IPC being abolished following publication of the NPS EN-1.

NPS EN-1 section	Where this is covered in the PEIR
5.9.17 "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".	An iterative process of design and assessment has informed the siting and routeing of the Kent Onshore Scheme to minimise effects on landscape character and visual amenity. Mitigation measures including those which are embedded in the Kent Onshore Scheme design are presented in Section 3.2.8.
5.9.18 "All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast".	The preliminary landscape and visual assessment presented in this chapter has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme. This has included a range of receptors, including local residents and visitors as well as views experienced from recreational routes along the coast and from Pegwell Bay Country Park. These are presented in Section 3.2.9.
5.9.19 "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".	Consideration of similar infrastructure present within the study area such as Nemo Link Converter Station has informed the preliminary landscape and visual assessment where relevant.

NPS EN-1 section	Where this is covered in the PEIR
5.9.21 "Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a significant operational constraint and reduction in function – for example, the electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the IPC may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function".	As part of the iterative process of design and assessment, the vertical Limits of Deviation (LoD) for the converter station have been reduced from 30m to 26m to reduce the potential landscape and visual effects. See Volume 1, Part 1, Chapter 3, Main Alternatives Considered and Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme.
5.9.22 "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 design of buildings should always be given careful consideration".	Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme identifies the environmental considerations, including landscape and visual considerations, which have informed the siting and outline design of the proposed Minster Converter Station and Minster Substation design. The design of these structures, in terms of the building form and the cladding materials, will be developed alongside consultation and stakeholder feedback and design principles will be provided with the application for development consent.

NPS EN-1 section	Where this is covered in the PEIR
 5.9.23 "Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off-site. For example, when filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista". Part 5.9 also goes on to discuss developments outside nationally designated areas. It acknowledges that a landscape does not have to be designated to be valued locally and makes reference to local designations. 	Landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy. Within the draft Order Limits additional landscape planting beyond the converter station and substation site boundaries has been identified to assist in reducing landscape and visual effects, also shown on Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy.
Part 5.10 sets out information regarding Land use including open space, green infrastructure & Green Belt. This section is relevant primarily relating to mitigation. This includes ensuring that the: <i>"connectivity of the green infrastructure network is maintained" and "appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way".</i>	Landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and consider connectivity with the green infrastructure network. Potential effects on rights of way, National Trails and other longer distance recreational routes are considered in the visual assessment (see Section 3.2.9).
Part 5.11 sets out information regarding noise and vibration, which will be referred to where relevant to inform the landscape and visual impact assessment such as relating to tranquillity.	Consideration of noise and vibration has informed the landscape value judgements relating to tranquillity (refer to Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline).

3.2.2.11 The draft version of the Overarching National Policy Statement for Energy (EN-1) published in March 2023 (Ref 3.2.8) also refers to factors that should be taken into consideration when completing a landscape and visual impact assessment. However, these remain similar to the adopted version and refers to the Secretary of State as the decision maker rather than the IPC.

3.2.2.12 The draft document includes a new part 4.5: Environmental and Biodiversity Net Gain. Paragraph 4.5.1 states that:

"Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Projects should therefore not only mitigate harms, following the mitigation hierarchy, but also consider whether there are opportunities for enhancements.

Biodiversity net gain is an essential component of environmental net gain. Projects in England should consider and seek to incorporate improvements in natural capital, ecosystem services and the benefits they deliver when planning how to deliver biodiversity net gain."

3.2.2.13 Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Convertor Station Indicative Landscaping Strategy and will be developed collaboratively with the ecology team to ensure biodiversity net gain (BNG) and the conservation, enhancement and management of biodiversity and geodiversity assets is positively considered.

NPS EN-5 section	Where this is covered in the PEIR
2.2.6 " As well as having duties under section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), developers will be influenced by Schedule 9 to the Electricity Act 1989, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, to "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects." Depending on the location of the proposed development, statutory duties under section 85 of the Countryside and Rights of Way Act 2000 and section 11A of the National Parks and Access to the Countryside Act 1949 may be relevant".	No landscape related nationally designated areas (including National Parks and AONB) have been identified within the study area.

Table 3.2.2: NPS EN-5 requirements relevant to landscape and visual

NPS EN-5 section	Where this is covered in the PEIR
Part 2.5 reiterates the importance of good design and refers back to EN-1. Paragraph 2.5.2 states that: <i>"Proposals for electricity networks infrastructure should demonstrate good design in their approach to mitigating the potential adverse impacts which can be associated with overhead lines".</i>	Landscape and visual considerations have informed the development of the above ground High Voltage Alternating Current (HVAC) cables options (see Volume 1, Chapter 3, Main Alternatives Considered and Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme). These options are assessed within the preliminary assessment in this chapter (see Section 3.2.9).
2.8.2 (part) "Government does not believe that development of overhead lines is generally incompatible in principle with developers' statutory duty under section 9 of the Planning Act to have regard to amenity and to mitigate impactsIn practice new above ground electricity lines, whether supported by lattice steel towers/pylons or wooden poles, can give rise to adverse landscape and visual impacts, dependent upon their scale, siting, degree of screening and the nature of the landscape and local environment through which they are routed. For the most part these impacts can be mitigated, however at particularly sensitive locations the potential adverse landscape and visual impacts of an overhead line proposal may make it unacceptable in planning terms, taking account of the specific local environment and context"	Landscape and visual considerations have informed the development of the above ground HVAC options (see Volume 1, Part 1, Chapter 3, Main Alternatives Considered and Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme). These options are assessed within the preliminary assessment in this chapter (see Section 3.2.9).
2.8.2 (part) " 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"	Landscape and visual considerations have informed the development of the above ground HVAC options and the siting of the converter station and substation. The HVAC options and substation are assessed within the preliminary assessment in this chapter (see Section 3.2.9).

NPS EN-5 section

Where this is covered in the PEIR

2.8.4 "Where possible, applicants should follow the principles below [Holford Rules] in designing the route of their overhead line proposals and it will be for applicants to offer constructive proposals for additional mitigation of the proposed overhead line. While proposed underground lines do not require development consent under the Planning Act 2008, wherever the nature or proposed route of an overhead line proposals makes it likely that its visual impact will be particularly significant, the applicant should have given appropriate consideration to the potential costs and benefits of other feasible means of connection or reinforcement, including underground and sub-sea cables where appropriate. The ES should set out details of how consideration has been given to undergrounding or sub-sea cables as a way of mitigating such impacts, including, where these have not been adopted on grounds of additional cost, how the costs of mitigation have been calculated"	Landscape and visual considerations including the principles of the Holford Rules have informed the development of the above ground HVAC options (see Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme). The HVAC options are assessed within the preliminary assessment in this chapter (see Section 3.2.9).
2.8.5 "Guidelines for the routeing of new overhead lines, the Holford Rules, were originally set out in 1959 by Lord Holford, and are intended as a common sense approach to the routeing of new overhead lines. These guidelines were reviewed and updated by the industry in the 1990s and should be followed by developers when designing their proposals."	The Holford Rules and the subsequent updates to them have informed the development of the HVAC options (see Volume 1, Part 1, Chapter 3, Main Alternatives Considered and Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme) which are assessed within the preliminary assessment in this chapter (see Section 3.2.9).
2.8.8 "Paragraph 3.7.10 of EN-1 sets out the need for new electricity lines of 132kV and above, including overhead lines. Although Government expects that fulfilling this need through the development of overhead lines will often be appropriate, it recognises that there will be cases where this is not so. Where there are serious concerns about the likely adverse effects of a proposed overhead line, the IPC will have to balance these against the relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding)".	The above ground HVAC options are assessed within the preliminary assessment in this chapter (see Section 3.2.9).

NPS EN-5 section

2.8.9 "The impacts and costs of both overhead and underground options vary considerably between individual projects (both in absolute and relative terms). Therefore, each project should be assessed individually on the basis of its specific circumstances and taking account of the fact that Government has not laid down any general rule about when an overhead line should be considered unacceptable. The IPC should, however only refuse consent for overhead line proposals in favour of an underground or sub-sea line if it is satisfied that the benefits from the nonoverhead line alternative will clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable. In this context it should consider:

- The landscape in which the proposed line will be set, (in particular, the impact on residential areas, and those of natural beauty or historic importance such as National Parks, AONBs and the Broads);
- the additional cost of any undergrounding or sub-sea cabling (which experience shows is generally significantly more expensive than overhead lines, but varies considerably from project to project depending on a range of factors, including whether the line is buried directly in open agricultural land or whether more complex tunnelling and civil engineering through conurbations and major cities is required. Repair impacts are also significantly higher than for overhead lines as are the costs associated with any later uprating.); and
- the environmental and archaeological consequences (undergrounding a 400 kV line may mean disturbing a swathe of ground up to 40 metres across, which can disturb sensitive habitats, have an impact on soils and geology, and damage heritage assets, in many cases more than an overhead line would)".

Where this is covered in the PEIR

The draft Order Limits for the HVAC options have been developed through a detailed routeing and siting process. **Volume 1, Part 1, Chapter 3, Main Alternatives Considered** sets out how the

Proposed Project has evolved to date, and the alternatives considered.

NPS EN-5 section	Where this is covered in the PEIR
 2.8.10 "In addition to following the principles set out in the Holford Rules and considering undergrounding, the main opportunities for mitigating likely adverse landscape and visual impacts of electricity networks infrastructure are: consideration of network reinforcement options (where alternatives exist) which may allow improvements to an existing line rather than the building of an entirely new line; and selection of the most suitable type and design of support structure (i.e., different lattice tower types, use of wooden poles etc.) in order to minimise the overall visual impact on the landscape." 	The draft Order Limits for the HVAC options have been developed through a detailed routeing and siting process. Volume 1, Part 1, Chapter 3, Main Alternatives Considered sets out how the Proposed Project has evolved to date, and the alternatives considered. The proposed pylon type has not been selected; this will be determined through further environmental considerations, including landscape and visual considerations, as well as stakeholder engagement and consultation. The potential pylon types under consideration are explained further in Volume 1, Part 1, Chapter 4 Description of the Proposed Project.
2.8.11 "(part) There are some more specific measures that might be taken, and which the IPC could require through requirements if appropriate, as follows: Landscape Schemes comprising off- site tree and hedgerow planting are sometimes used for larger overhead line projects to mitigate likely landscape and visual impacts, softening the effect of a new above ground line whilst providing some screening from important visual receptors. These can only be implemented with the agreement of the relevant landowner(s) and advice from the relevant statutory advisor may also be needed"	Landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy. Within the draft Order Limits additional landscape planting beyond the converter station, HVAC and substation site boundaries have been identified to assist in reducing landscape and visual effects, also shown on Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy.

3.2.2.14 The draft version of the Overarching National Policy Statement for Electricity Networks Infrastructure (EN-5) published in March 2023 (Ref 3.2.9) also refers to factors that should be taken into consideration when completing a landscape and visual impact assessment specifically relating to electricity networks. In addition to the adopted version, the draft document in paragraph 2.0.11 states that:

> "Though mitigation of the landscape and visual impacts arising from overhead lines and their associated infrastructure is usually possible, it may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for overhead lines".

3.2.2.15 There is information regarding landscape and visual mitigation, including in paragraph 2.10.8 which states:

"Furthermore, since long-term management of the selected mitigation schemes is essential to their mitigating function, a management plan, developed at least in outline at the conclusion of the examination, and which sets out proposals within a realistic timescale, should secure the integrity and benefit of these schemes. This should also uphold the landscape commitments made to achieve consent, alongside any pertinent commitments to environmental and biodiversity net gain".

3.2.2.16 The draft document also includes part 2.8: Environmental and Biodiversity Net Gain. Paragraph 2.5.1 states that:

"When planning and evaluating the proposed development's contribution to environmental and biodiversity net gain, it will be important – for both the applicant and the Secretary of State – to supplement the generic guidance set out in EN-1 (Section 4.5) with recognition that the linear nature of electricity networks infrastructure allows excellent opportunities to: i) reconnect important habitats via green corridors, biodiversity stepping zones, and reestablishment of appropriate hedgerows; and/or ii) connect people to the environment, for instance via footpaths and cycleways constructed in tandem with environmental enhancements".

3.2.2.17 In response to this draft policy, draft landscape mitigation proposals have been prepared and are set out in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Convertor Station Indicative Landscaping Strategy. These proposals will be developed collaboratively with the ecology team to ensure BNG and the conservation, enhancement and management of biodiversity and geodiversity assets is positively considered.

National Planning Policy Framework

3.2.2.18 The National Planning Policy Framework (NPPF) (Ref 3.2.10) was published in July 2021 and sets out national planning policies that reflect priorities of the Government for operation of the planning system and the economic, social, and environmental aspects of the development and use of land. The NPPF has a strong emphasis on sustainable development, with a presumption in favour of such development. The NPPF has the potential to be considered important and relevant to the SoS' consideration of the Proposed Project. Table 3.2.3 below provides details of the elements of the NPPF that are relevant to this chapter, and how and where they are covered in the PEIR or will be covered within the ES.

Table 3.2.3: NPPF requirements relevant to landscape and visual

NPPF section	Where this is covered in the PEIR
Paragraph 127 states: "Design policies should be developed with local communities so they reflect local aspirations, and are grounded in an understanding and evaluation of each area's defining characteristics".	Statutory consultation as part of the DCO process will enable local communities to respond to the landscape mitigation proposed.
 Paragraph 130: "Planning policies and decisions should ensure that development (amongst other criteria): (a) "will function well and add to the overall quality of the area, not just for the short-term but over the lifetime of the development (b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping; (c) are sympathetic to local character and history, including the surrounding built environment and landscape setting" while not preventing or discouraging appropriate innovation or change (such as increased densities); (d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit; (e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and (f) create places that are safe, inclusive and accessible and which promote health and wellbeing, with a high standard of amenity for existing and future users and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience." 	The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the detail proposals of these structures.
Paragraph 134 states: "Development that is not well designed should be refused, especially where it fails to reflect local design policies and government guidance on design, taking into account any local design guidance and supplementary planning documents such as design guides and codes. Conversely, significant weight should be given to:	The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be

(a) development which reflects local design policies and government guidance on design, taking into account any local design guidance and

provided with the application

The Design Code will provide

for development consent.

NPPF section	Where this is covered in the PEIR
supplementary planning documents such as design guides and codes; and / or (b) outstanding or innovative designs which promote high levels of sustainability, or help raise the standard of design more generally in an area, so long as they fit in with the overall form and layout of their surroundings."	guidance regarding the design intent and design principles that will be adopted and embedded into the design of these structures; and it will be developed with consideration of local design policies and government guidance in the extent possible.
This is further developed in paragraph 135 that states: "Local planning authorities should seek to ensure that the quality of approved development is not materially diminished between permission and completion, as a result of changes being made to the permitted scheme (for example through changes to approved details such as the materials used)."	The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the design of these structures. The detailed design of the Kent Onshore Scheme will be secured through the DCO Requirements.
 Paragraph 174 states: <i>"Planning policies and decisions should contribute to and enhance the natural and local environment by:</i> (a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); (b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; (c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate; 	Landscape and visual considerations have informed the development of the Kent Onshore Scheme (see Volume 1, Part 1, Chapter 3, Main Alternatives Considered and Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme). Landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and have been developed collaboratively

NPPF section	Where this is covered in the PEIR
 (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; (e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and (f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where 	with disciplines including cultural heritage and ecology.
Paragraph 176 "Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues"	No landscape related nationally designated areas (including National Parks and AONB) have been identified within the study area.
 Paragraph 185 states: "Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should: (a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life; (b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and (c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation." 	Preliminary cumulative effects are considered in Volume 1, Part 3, Chapter 14, Kent onshore Scheme Inter-Project Cumulative Effects. The preliminary landscape and visual assessment presented in this chapter (see Section 3.2.9) has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme including potential effects from lighting on landscape character and visual amenity.

National Planning Practice Guidance

Planning Practice Guidance for Natural Environment

- 3.2.2.19 Planning Practice Guidance (PPG) for 'Natural Environment' (Ref 3.2.11) under the subheading of Green Infrastructure, the PPG notes the importance of green infrastructure as a natural capital asset and should be considered at the earliest stages of development proposals.
- 3.2.2.20 Under the subheading of Biodiversity, geodiversity and ecosystems, the PPG notes biodiversity opportunities in relation to green infrastructure provision.
- 3.2.2.21 Under the subheading of Landscape, paragraph 036 (Reference ID: 8-036-20190721) states:

"...plans should recognise the intrinsic character and beauty of the countryside, and that strategic policies should provide for the conservation and enhancement of landscapes. This can include nationally and locally-designated landscapes but also the wider countryside."

3.2.2.22 Paragraph 036 also notes:

"Where landscapes have a particular local value, it is important for policies to identify their special characteristics and be supported by proportionate evidence. Policies may set out criteria against which proposals for development affecting these areas will be assessed. Plans can also include policies to avoid adverse impacts on landscapes and to set out necessary mitigation measures, such as appropriate design principles and visual screening, where necessary. The cumulative impacts of development on the landscape need to be considered carefully."

3.2.2.23 Paragraph 037 supports the use of landscape character assessment as a tool for understanding the character of the landscape.

Planning Practice Guidance for Light Pollution

3.2.2.24 PPG for 'Light Pollution' (Ref 3.2.12) sets out that:

"Artificial lighting needs to be considered when a development may increase levels of lighting, or would be sensitive to prevailing levels of artificial lighting."

3.2.2.25 Relevant to landscape and visual matters, the PPG sets out factors that can be considered when assessing whether a development proposal might have implications for light pollution. This includes the following points:

"Will a new development, or a proposed change to an existing site, be likely to materially alter light levels in the environment around the site and/or have the potential to adversely affect the use or enjoyment of nearby buildings or open spaces?" and

"Is the development in or near a protected area of dark sky or an intrinsically dark landscape where new lighting would be conspicuously out of keeping with local nocturnal light levels, making it desirable to minimise or avoid new lighting?"

Local Planning Policy

3.2.2.26 The Kent Onshore Scheme lies within the jurisdiction of Kent County Council. County planning guidance which is relevant to a study of landscape and visual matters and has informed the assessment of preliminary effects in this chapter are as follows.

Kent Council Framing Kent's Future – Our Council Strategy 2022 to 2026

3.2.2.27 The Kent County Council Framing Kent's Future - Our Council Strategy for 2022 to 2026 (Ref 3.2.13) includes four key priorities, one of which is Environmental Step Change. This includes the commitment "to consider Kent's environment as a core asset that is valued, strengthened and protected".

Kent Design Guide

- 3.2.2.28 Kent Design Guide (Ref 3.2.14) was published by Kent County Council (KCC) in 2006. This document seeks to "provide a starting point for good design while retaining scope for creative, individual approaches to different buildings and different areas". The document is split into three key sections, the value of good design, creating the design and getting the planning process right.
- 3.2.2.29 Under the first section: the value of good design, the document sets out what 'Good Design' means, including "*enriching existing character reinforcing local patterns of development and landscape while not ruling out innovation*".
- 3.2.2.30 Under the second section: creating the design, the document refers to landscape character areas (LCAs) and the landscape setting in order to understand the site and the importance of new buildings forming a "*harmonious composition with surrounding buildings or landscape features in local views and vistas*". The document also states that existing landscape features should be retained and enhanced where possible.

Kent Environment Strategy

- 3.2.2.31 Kent Environment Strategy (Ref 3.2.15) was published by KCC in 2016. The document sets out the vision for Kent across three themes: 1) building the foundations for delivery, 2) making best use of existing resources, avoiding or minimising negative impacts, and 3) toward a sustainable future.
- 3.2.2.32 Under theme two: making best use of existing resources, avoiding or minimising negative impacts, the document sets out a number of priorities including to "*conserve and enhance the quality and supply of the county of Kent's natural and historical resources and assets*". Several of the sub-priorities of this priority are relevant to landscape and visual matters and are stated within the document as follows:
 - "establish a coherent, landscape-led approach to decision making through identification of the natural and historic features that underpin landscape character and a strategic approach to assessment of character and trends in landscape condition;
 - improve and increase functional habitat networks on land and in the sea, identifying opportunities and protecting and enhancing our natural and historic environment and landscape character through planning and decision making; and
 - establish land-use management approaches that create, preserve and enhance healthy, viable soils and respect landscape character".

Kent Nature Partnership Biodiversity Strategy

- 3.2.2.33 Kent Nature Partnership Biodiversity Strategy (Ref 3.2.16) was published by Kent Nature Partnership, including KCC, in 2020. The document looks to "*protect and recover threatened species and enhance the wildlife habitats that Kent is particularly important for*".
- 3.2.2.34 The document sets four goals, including: "*Terrestrial habitats, ecosystems and species: by 2045 Kent has a rich and growing terrestrial biodiversity, underpinned by more resilient and coherent ecological networks and healthy, well-functioning ecosystems.*" Under this goal, the document sets out priority habitats in need of restoration and expansion, including lowland mixed broadleaved woodland and hedgerows, and various objectives such as:
 - "more, bigger and less fragmented areas of wildlife-rich habitat outside the protected sites network for wildlife, with an increase in the overall extent of all priority habitats to ensure greater connectivity and resilience to climate change;
 - new development to better provide for a greener urban environment, through increased urban tree planting, the inclusion of integral wildlife niches and green building and landscape design; and
 - protect and restore existing trees and woodland, whilst increasing tree cover within the county that supports the recovery of wildlife, delivers natural climate solutions and enriches people's lives".

Local Plans

3.2.2.35 The Kent Onshore Scheme Boundary (refer to **Figure 1.1.3 Kent Onshore Scheme Boundary**) lies within the boundary of Thanet Local Plan (Ref 3.2.17) and Dover District Local Plan (Ref 3.2.18). Local Plan policies which are relevant to landscape and visual matters and will inform the Landscape and Visual Impact Assessment (LVIA) in the ES are detailed in Table 3.2.4, Table 3.2.5, Table 3.2.6 and Table 3.2.7.

Thanet District Council

3.2.2.36 The majority of the Kent Onshore Scheme Boundary lies within the jurisdiction of Thanet District Council (TDC). Local planning policy for TDC consists of the Thanet Local Plan (Ref 3.2.17). Local Plan policies which are relevant to landscape and visual assessment matters and will inform the LVIA in the ES are detailed in Table 3.2.4.

Thanet Local Plan (adopted July 2020) – Policy	Where this is covered in the PEIR
SP24: Development in the Countryside This policy states that: <i>"All development proposals</i> to which this policy applies should be of a form, scale and size which is compatible with, and respects the character of, the local area and the surrounding countryside and its defining characteristics. Any environmental	Landscape and visual considerations have informed the routeing, siting and design development of the Kent Onshore Scheme to reduce the potential landscape and visual effects as far as possible. This is set out in Volume 1, Part 1, Chapter 3,

Table 3.2.4: Local Planning Policies relevant to landscape and visual – Thanet Local Plan

Thanet Local Plan (adopted July 2020) – Policy	Where this is covered in the PEIR
impact should be avoided or appropriately mitigated".	Main Alternatives Considered and Volume 1, Part 3, Chapter 1, Evolution of the Kent Onshore Scheme. Mitigation measures are identified in Section 3.2.8. The design of the Proposed Project is ongoing and will continue to be informed by landscape and visual considerations, other environmental and technical desk studies and site surveys as well as consultation and stakeholder feedback.
 SP26: Landscape Character Areas. This policy states the importance of conserving and enhancing landscape character and local distinctiveness and makes reference to published Landscape Character Assessments. The policy notes that development should be directed away from Landscape Character Areas E1, E2 and F1 as they are largely undeveloped and notes the importance of protecting the undeveloped coast, specifically proposals <i>"should respect the traditional seafront architecture of the area, maintain existing open spaces and should ensure that recreational and wildlife opportunities are not compromised by development"</i>. The policy also states that the distinction between town and countryside should be retained. The policy sets out elements of Thanet's local distinctiveness to conserve and enhance, including: <i>"Its island quality surrounded by the silted marshes of the former Wantsum Channel and the sea;</i>" 	Thanet District Council Landscape Character Assessment (Ref 3.2.18) published in 2017 forms the basis of the landscape assessment. The Kent Onshore Scheme Boundary lies within LCA E1 and F1. The preliminary landscape and visual assessment presented in this chapter has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme on these LCAs. The routeing and siting of the Kent Onshore Scheme has been informed by landscape and visual considerations to minimise effects on both LCA E1 and F1 which are identified in Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.
 a sense of openness and 'big skies', particularly in the central part of the District; 	
 its long, low chalk cliffs and the sense of 'wildness' experienced at the coast and on the marshes; 	

• gaps between Thanet's towns and villages, particularly those areas designated as Green Wedges;

Thanet Local Plan (adopted July 2020) – Policy	Where this is covered in the PEIR
 long-distance, open views, particularly across the Dover Strait and English Channel, North Sea and across adjacent lowland landscapes; and 	
 subtle skylines and ridges which are prominent from lower lying landscape both within and beyond the District". 	
SP27: Green Infrastructure This policy notes the importance of conserving and enhancing the green infrastructure network. The policy also sets out the management and maintenance of new or existing green infrastructure assets should be considered for the long-term.	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Convertor Station Indicative Landscaping Strategy and consider connectivity with the green infrastructure network.
 SP28: Protection of the International and European Designated Sites The policy makes reference to SPA, SAC and Ramsar sites and states that where possible <i>"applicants should incorporate measures to avoid or mitigate any adverse impacts".</i> 	Volume 1, Part 3, Chapter 3, Ecology and Biodiversity considers potential effects on the SPA, SAC and Ramsar sites.
SP30: Biodiversity and Geodiversity Assets This policy sets out that "development proposals will, where appropriate, be required to make a positive contribution to the conservation, enhancement and management of biodiversity and geodiversity assets resulting in a net gain for biodiversity assets". The policy refers to ways in which this could be achieved, including restoring, enhancing and creating habitats.	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Convertor Station Indicative Landscaping Strategy and will be developed collaboratively with the ecology team to ensure BNG and the conservation, enhancement and management of biodiversity and geodiversity assets is positively considered.
SP36: Conservation and Enhancement of Thanet's Historic Environment This policy sets out ways in which the historic environment will be conserved and enhanced, including "protecting the historic environment from inappropriate development" and "supporting development that is of high quality design and supports sustainable development".	Volume 1, Part 3, Chapter 4, Cultural Heritage considers potential effects on the historic environment. The historic environment has informed the historic landscape character and in particular consideration of landscape value (see Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline).

Thanet Local Plan (adopted July 2020) – Policy	Where this is covered in the PEIR
Gl06: Landscaping and Green Infrastructure This policy sets out the importance of describing the landscape baseline and how the proposals will enhance the setting of the development. The policy refers to several ways of achieving this, including retaining historic features, creating new wildlife corridors, softening of development, establishing a sense of enclosure and increasing connectivity. The policy also notes the importance of maintenance of landscape	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and consider connectivity with the green infrastructure network and BNG principles. The landscape baseline should be referred to within Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.
QD01: Sustainable Design This policy sets out ways in which development can be designed sustainably, including providing safe and attractive cycling and walking opportunities and the use of sustainable materials.	The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the detail proposals of these structures. The Design Code will have regard to local sustainable design policies, including the provision of cycling and walking opportunities, where appropriate, as well as potential for use of sustainable materials where they meet technical requirements
QD02: General Design Principles This policy sets out that the "primary plannin aim in all new development is to promote or reinforce the local character of the area and provide high quality and inclusive design and be sustainable in all other respects" and that "external spaces, landscape, public realm, and boundary treatments must be designed as an integral part of new development proposals and coordinated with adjacent site and phases". The policy sets out various elements that proposals must do, including relating to surrounding development, ensurin	The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the

Thanet Local Plan (adopted July 2020) – Policy	Where this is covered in the PEIR
trees and other planting is appropriate to the scale of built form and space available and retaining and enhancing existing trees and	detailed proposals of these structures.
natural habitats.	The indicative landscaping strategy should be referred to at Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy.
CC07: Richborough This policy states that: <i>"Proposals for the</i> <i>development of renewable energy facilities at</i> <i>Richborough will be permitted if it can be</i> <i>demonstrated that the development will not</i> <i>be detrimental to nearby sites of nature</i> <i>conservation value or heritage assets and</i> <i>that any potential effects would be fully</i> <i>mitigated."</i>	Volume 1, Part 3, Chapter 3, Ecology and Biodiversity and Volume 1, Part 3, Chapter 4, Cultural Heritage consider potential effects on the ecological and historic environments respectively. Representative viewpoint 8 considers the potential effects on visitors to Richborough Roman Fort. Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and will continue to be developed collaboratively with the ecology and heritage teams.

Dover District Council

- 3.2.2.37 The Kent Onshore Scheme Boundary (refer to **Figure 1.1.3 Kent Onshore Scheme Boundary**) lies partly within the jurisdiction of Dover District Council (DDC). It should be noted that the majority of the Scheme footprint lies within the boundary of TDC. Local planning policy for DDC consists of Dover District Core Strategy (Ref 3.2.20).
- 3.2.2.38 Core Strategy policies which are relevant to landscape and visual matters are identified in Table 3.2.5 below.

Table 3.2.5: Local Planning Policies relevant to landscape and visual – Dover District Core Strategy

Dover District Core Strategy – Policy	Where this is covered in the PEIR
CP7: Green Infrastructure Network This policy highlights the importance of protecting and enhancing the green infrastructure network.	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and consider connectivity with the green infrastructure network.
DM15: Protection of the Countryside This policy notes the importance of protecting and enhancing the character and appearance of the countryside.	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and consider the wider landscape character.
DM16: Landscape Character This policy notes the importance of protecting the character of the landscape and refers to published landscape character assessment.	Dover District Council Landscape Character Assessment (Ref 3.2.21) published in 2020 forms the basis of the landscape assessment. The preliminary landscape and visual assessment presented in this chapter has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme on these LCAs (Section 3.2.9).
DM25: Open Space This policy notes the importance of protecting open space.	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and considers the open character of the Stour Marshes and Ash Levels and their associated open space and recreational access provision.

3.2.2.39 One saved policy from the Dover District Local Plan (adopted 2002) (Ref 3.2.18), is also relevant to landscape and visual matters:

Table 3.2.6: Local Planning Policies relevant to landscape and visual – Dover District Local Plan

Dover District Local Plan – Policy	Where this is covered in the PEIR
CO8: Development which would adversely affect a hedgerow. This policy notes the importance of protecting hedgerows and sets out that development will only be permitted where hedgerows are adversely affected if <i>"no practicable</i> <i>alternatives exist, suitable native replacement</i> <i>planting is provided and future maintenance</i> <i>is secured through the imposition of</i> <i>conditions or legal agreements".</i>	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy. Any hedgerows removed as part of the construction of the HVDC corridor will be reinstated upon completion of the works (see Volume 2, Part 1, Appendix 1.4.A, Outline Code of Construction Practice).

3.2.2.40 DDC are producing a new Local Plan. DDC published the Regulation 19 Submission Draft Local Plan (Ref 3.2.22) in October 2022, and this is a material consideration in planning. Local Plan policies which are relevant to landscape and visual matters are identified in Table 3.2.7 below.

Table 3.2.7: Draft Local Planning Policies relevant to landscape and visual - Dover District Regulation 19 Submission Draft Local Plan

Dover District Regulation 19 Submission Draft Local Plan – Policy	Where this is covered in the PEIR
SP13: Protecting the District's Hierarchy of Designated Environmental Sites and Biodiversity Assets. This policy sets out the various designated environmental sites and biodiversity assets in the District, including SAC, SPA, Ramsar sites, Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), ancient woodland and veteran trees. The policy then outlines that the mitigation hierarchy should be followed for development affecting such designated sites.	Potential effects on biodiversity assets are considered in Volume 1, Part 3, Chapter 3, Ecology and Biodiversity . The draft landscape mitigation proposals in Section 3.2.8 have and will continue to be developed collaboratively with the ecology team.

Dover District Regulation 19 Submission Draft Local Plan – Policy	Where this is covered in the PEIR
SP14: Enhancing Green Infrastructure and Biodiversity. This policy notes the importance of conserving and enhancing green infrastructure, habitats and biodiversity, improving ecological networks.	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy and consider connectivity with the green infrastructure network, ecological habitats and networks.
CC8: Tree Planting and Protection. This policy states that trees should be native species and a presumption for on-site delivery. The policy highlights the need for a detailed landscaping scheme and landscape management plan	Draft landscape mitigation proposals are identified in Section 3.2.8 and Figure 1.4.13 Minster 400kV Substation and Minster Converter Station Indicative Landscaping Strategy. These will continue to be developed and indicative native species mixes alongside an outline landscape and ecological management plan will be prepared for ES and DCO submission stages.
PM1: Achieving High Quality Design, Place Making and the provision of Design Codes. This policy promotes high quality design, including reference to understanding of the local landscape context and character, making a positive contribution to visual character, incorporation of trees, supporting habitat conservation and creation, long-term management and adding to the overall quality of the area for the lifespan of the development.	The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the detailed proposals of these structures.
NE1: Biodiversity Net Gain. This policy states that development proposals must result in a 10% gain in biodiversity and sets out a number of criteria including focusing on local priorities outlined in published documents.	National Grid Electricity Transmission plc (National Grid) have a commitment of 10% gain in biodiversity which is set out in Volume 1, Part 1, Chapter 1, Introduction .

Dover District Regulation 19 Submission Draft Local Plan – Policy	Where this is covered in the PEIR
NE2: Landscape Character and the Kent Downs AONB. This policy sets out various published Landscape Character Assessments which should be referred to where relevant. The policy sets out key landscape characteristics including the pattern and composition of trees, woodland and field boundaries.	Dover District Council Landscape Character Assessment published in 2020 (Ref 3.2.21) forms the basis of the landscape assessment. The preliminary landscape and visual assessment presented in this chapter (Section 3.2.9) has assessed the likely significant effects from the construction, operation, maintenance and decommissioning of the Kent Onshore Scheme on these LCAs. The Kent Downs AONB will not be affected by the Kent Onshore Scheme.

Dover Green and Blue Infrastructure Strategy Evidence Report

- 3.2.2.41 The Dover Green and Blue Infrastructure Strategy Evidence Report (Ref 3.2.23) was published by DDC in May 2022 as an evidence base document to inform the new Local Plan but also supporting the adopted Core Strategy. The document "sets out a strategic network of green and blue infrastructure across Dover District" and notes the importance of the network, including benefits for climate change, protecting biodiversity and connectivity and developing a greener economy.
- 3.2.2.42 With reference to the Kent Onshore Scheme, the document notes the links along river valleys associated with the River Stour.
- 3.2.2.43 The document sets out strategy priorities for green and blue infrastructure, including:
 - protect, enhance and improve the core biodiversity sites and take action for priority species.
 - create an ecologically resilient network to join habitats, allow species to move and to help nature adapt to climate change.
 - link people and nature.
 - ensure development is sustainable.
 - protect and enhance biodiversity of water and wetland habitats, including chalk streams, and protect the quality and quantity of water resources.
 - utilise green and blue infrastructure solutions to manage water flows, including incorporating SuDS into new development and retrofitting into existing green infrastructure where such an approach is appropriate to help address flooding issues.
 - support increased active travel, to relieve congestion and air pollution and encourage healthy living through a strategic cycle network and walking routes.

- maximise the benefits of recreation and access to Dover's unique landscapes and green spaces, whilst ensuring that this does not have a negative impact on them or their biodiversity.
- strengthen and reinforce landscape character and ensure green and blue infrastructure enhances and fits with local landscape character".
- 3.2.2.44 The document also notes that "*landscape character is an important underpinning element of green and blue infrastructure planning*", that the local landscape character should be taken into account and refers to published landscape character assessments. Refer to Section 3.2.7 and **Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline**.

Thanet Coast and Sandwich Bay SPA, Strategic Access Mitigation and Monitoring Strategy

3.2.2.45 The Thanet Coast and Sandwich Bay SPA, Strategic Access Mitigation and Monitoring (SAMM) Strategy (Ref 3.2.24) published by DDC in 2022 is not referred to as it provides a "strategic approach to mitigating the potential in-combination impacts of new housing development", which is not relevant to the Kent Onshore Scheme.

Ash Parish Council Neighbourhood Development Plan 2018-2037

3.2.2.46 The Ash Parish Council Neighbourhood Development Plan 2018-2037 (Ref 3.2.25) was made in September 2021 to guide future development. The Plan notes the distinctive landscape of the Ash Levels which comprises a strong landscape pattern of drainage ditches along field boundaries. The Plan also states that "*the landscape forms an intrinsic part of the character and setting of the parish*" and that the "*distinctive character and sensitive landscape would be under threat from development of an inappropriate scale, location and / or design that would interrupt these views*". Refer to Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.

3.2.3 **Scoping Opinion and Consultation**

Scoping

3.2.3.1 A Scoping Report for the Proposed Project was issued to the Planning Inspectorate (PINS) on 24 October 2022 and a Scoping Opinion was received from the Secretary of State (SoS) on 1 December 2022. Table 3.2.8 sets out the comments raised in the Scoping Opinion and how these have been addressed in this PEIR or will be addressed within the ES. The Scoping Opinion takes account of responses from prescribed consultees as appropriate.
ID	Inspectorate's comments	Response
4.1.1	[Alteration to landscape character and visual amenity as a result of operational lighting for the convertor station (operation)] This matter is to be scoped out on the basis that there is less potential that significant effects will result on landscape character or visual amenity as any additional lighting will be limited to maintaining site security and safety and would be within the context of existing lighting at Richborough Energy Park and adjacent development. The Scoping Report also acknowledges that should the approach to lighting change, this aspect will be scoped into the landscape and visual assessments. Reference to this effect is not included in Table 3.2.9 (Proposed scope of the assessment). The Inspectorate does not agree that operational lighting of the convertor station can be scoped out at this stage in the absence of information confirming the type and location of any such lighting, and in the context of the existing environment. The ES should include an assessment of operational lighting on sensitive landscape and visual receptors, where likely significant effects could occur.	Volume 1, Part 1, Chapter 4, Description of the Proposed Project provides details on the proposed lighting requirements at the Minster Converter Station and Minster Substation. Permanent external lighting would likely comprise security lighting on sensors and low level egress lighting. Potential effects associated with the proposed lighting on landscape character and visual amenity have been considered in the preliminary assessment of this chapter (Section 3.2.9) and will be developed further at ES stage, when the lighting design is developed further.
4.1.2	[Alteration to visual amenity from the Operational HVAC overhead line (to be decided) (operation)] The Scoping Report states that this matter is to be scoped out on the basis that "The introduction of an overhead line HVAC connection has less potential to result in significant effects on visual amenity at operation given the existing context of vertical structures, including a wind turbine, communication masts and numerous overhead lines terminating at Richborough substation." However, it also states that "in order to ensure that potential effects on the additional wirescape are adequately covered, it will be scoped into the visual assessment."	This is an error in the Scoping Report (Table 3.2.2). The HVAC overhead line will be fully considered in the LVIA at ES stage. Potential effects associated with the three HVAC options have been considered in the preliminary assessment in this chapter (see Section 3.2.9).

Table 3.2.8: Comments raised in the Scoping Opinion

Table 3.2.9 states that this matter is

ID	Inspectorate's comments	Response
	scoped in for receptors including: settlement, isolated dwellings, recreational facilities, recreational routes and access land, employees, occupiers of vehicles and railway line passengers. For the avoidance of doubt, the Inspectorate considers this matter should be scoped in to the assessment, where likely significant effects on sensitive visual receptors could occur.	
4.1.3	[Alteration to landscape character and visual amenity from operational HVDC underground cable (and HVAC if underground)] This matter is proposed to be scoped out on the basis of there being less potential to have significant effects on landscape character and visual amenity at operation. It is stated that the landscape will be returned to previous land use and landscape components lost at construction will be reinstated as soon as reasonably practical after construction. The Inspectorate considers that the ES should address the potential for permanent landscape character effects due to any planting restrictions introduced for any easement required.	Volume 2, Part 1, Appendix 1.4.A, Outline Code of Construction Practice commits to the complete reinstatement of the HVDC corridor. However, the ES and the preliminary assessment contained in this chapter will consider the short-term operational effects on landscape character and visual amenity associated with the HVDC corridor until it is reinstated (see Section 3.2.9).
4.1.4	[Permanent alteration to landscape character and perceptual qualities as a result of the operational converter station on the following receptors: Thanet District Council Landscape Character Assessment (TDLCA) LCA A1: Manston Chalk Plateau, and Dover District Council Landscape Character Assessment (DDLCA) LCAs B1: Great Stour Sandwich Corridor, D1: Preston, and H1: Richborough Bluff (operation). This matter is proposed to be scoped out on the basis that the Kent Scoping Boundary does not lie within these LCAs. Whilst there is the potential for indirect effects on the perceptual qualities of these LCAs there is less potential that the effects would be significant. The Inspectorate is of the view that these LCAs can be scoped out	No further comment required.

ID	Inspectorate's comments	Response
	of the landscape assessment for the operational converter site on the basis of the likely nature of potential effects relative to the distance between these LCAs.	
4.1.5	[Temporary and permanent alteration to landscape character and perceptual qualities as a result of the construction and operation of the converter station, HVDC and HVAC on the following receptors: TDLCA Local Character Areas C1: St Nicholas at Wade Undulating Chalk Farmland and LCA C2: Central Thanet Undulating Chalk Farmland (all stages)] Scoped out on the basis of there being	No further comment required.
	no theoretical visibility between any aspect of the Kent Scoping Boundary during construction and operation and consequently there are not considered to be any effects on these LCAs. The Inspectorate is of the view that these LCAs can be scoped out of the landscape assessment on the basis of no pathway of effect between the Proposed Development and these LCAs.	
4.1.6	[Representative viewpoints] The viewpoints to be used for assessment should be agreed with the relevant consultation bodies, including the Local Authorities. The Applicant's attention is directed to the comments of Thanet District Council at Appendix 2 of this Opinion with regards to requested additional viewpoints.	National Grid has agreed viewpoints with Thanet District Council at a thematic landscape meeting on the 10 May 2023. Suggested viewpoints from Thanet District Council have all been incorporated into the revised representative viewpoint schedule (viewpoints 4 and 5, see Figure 3.2.6 Representative Viewpoint Locations) other than viewpoints at the junction of Canterbury Road West and the A299 and the Lord of the Manor Roundabout. As it hasn't been possible to gain safe pedestrian access to them, viewpoints 11 and 13 respectively have been
		suggested as alternatives, as

ID	Inspectorate's comments	Response
		agreed within Thanet District Council (see Figure 3.2.6 Representative Viewpoint Locations).
4.1.7	[Viewpoints and cultural heritage Receptors] The Applicant is advised to consider, and include as appropriate, heritage specific viewpoints to support the heritage assessment. Suitable cross- referencing between the LVIA aspect chapter and Cultural Heritage aspect chapter should be included.	Five heritage viewpoints have been identified and agreed with stakeholders, further details can be found within Volume 1, Part 3, Chapter 4, Cultural Heritage . Cross- referencing between the Landscape and Visual chapter and Volume 1, Part 3, Chapter 4, Cultural Heritage chapter has been carried out where appropriate including in Section 3.2.7 and Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.

Consultation and Project Engagement

- 3.2.3.2 A thematic landscape and visual meeting was held on the 10 May 2023 with attendance from National Grid, AECOM, Thanet District Council and Dover District Council. The purpose of the meeting was to provide an update on the Proposed Project since the Scoping Report was issued, and non-statutory consultation closed and also to clarify and agree landscape and visual related matters. The agenda included the following points:
 - Project Update;
 - Viewpoints, Study Area and Photomontages; and
 - Landscape Mitigation Strategy.

3.2.4 Approach and Methodology

3.2.4.1 Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology sets out the overarching approach which has been used in developing the preliminary environmental information. This section describes the technical methods used to determine the baseline conditions, sensitivity of the receptors and magnitude of effects and sets out the significance criteria that have been used for the preliminary landscape assessment and visual assessment.

Guidance specific to the landscape and visual assessment

- 3.2.4.2 The preliminary landscape and visual assessment has been carried out in accordance with the following good practice guidance documents:
 - Guidelines for Landscape and Visual Impact Assessment: Third edition (GLVIA3) (Ref 3.2.1);
 - Assessing landscape value outside national designations Technical Guidance Note 02/21(Ref 3.2.26);
 - Design Principles for National Infrastructure (Ref 3.2.27);
 - Infrastructure Technical Guidance Note 04/20 (Ref 3.2.28);
 - Tranquillity An overview Technical Information Note 01/17 (Ref 3.2.29); and
 - Visual Representation of Development Proposals Technical Guidance Note 06/19 (Ref 3.2.30).

Baseline Data Gathering and Forecasting Methods

- 3.2.4.3 Field work has been undertaken by two Chartered Landscape Architects within summer 2022, and winter 2023 to inform the scoping process, assess the existing character of the landscape and visit representative viewpoints. Viewpoint photography was captured on the 15 March 2023.
- 3.2.4.4 Data sources that have been used to inform the baseline data gathering include but are not limited to the following:
 - planning policy and local plan evidence base documents;
 - published landscape and seascape character documents;
 - ordnance survey mapping;
 - ZTV visibility plans;
 - aerial photography; and
 - fieldwork photography.

Assessment Criteria

- 3.2.4.5 GLVIA3 (Ref 3.2.1) places a strong emphasis on the importance of professional judgement in identifying and defining the significance of landscape and visual effects. The LVIA has been undertaken by Chartered Landscape Architects who are experienced in undertaking and reporting assessments of similar types of projects. Professional judgement has been used in combination with structured methods and criteria to determine the sensitivity of landscape and visual receptors (informed by their value and susceptibility to change), the magnitude of effects on those receptors (i.e., the nature of the effect), and the significance of effects.
- 3.2.4.6 The following section summarises the methodology for the LVIA which builds on the general assessment methodology presented in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology**. For clarity and in accordance with good practice, the assessment of likely significant effects on landscape character and visual amenity, although closely related, are undertaken separately.

- 3.2.4.7 The method for the production of visualisations which support the completion of the assessment is set out in Volume 2, Part 3, Appendix 3.2.A, Photomontage Methodology.
- 3.2.4.8 The LVIA methodology broadly follows the terminology described in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology**, however, in order to provide the necessary level of assessment detail, additional levels of sensitivity and magnitude have been used to allow for a finer grain of preliminary assessment.

Sensitivity of landscape receptors

- 3.2.4.9 Landscape receptors are described as components of the landscape that are likely to be affected by the Kent Onshore Scheme. These can include overall character and key characteristics, individual elements or features and specific aesthetic or perceptual aspects. It is the interaction between the different components of the Kent Onshore Scheme and these landscape receptors which has potential to result in landscape impacts and effects (both adverse and beneficial).
- 3.2.4.10 The sensitivity of the landscape receptor has been derived by combining the value of the landscape (undertaken as part of the baseline study) and the susceptibility to change of the receptor to the specific type of development being assessed.
- 3.2.4.11 Landscape value is frequently addressed by reference to international, national, regional, and local designations. Absence of such a designation does not necessarily imply a lack of quality or value. Factors such as accessibility and local scarcity can render areas of nationally unremarkable quality, highly valuable as a local resource. The evaluation of landscape value has been informed by Technical Guidance Note 02/21 (Ref 3.2.26) and undertaken considering the following factors and classified as very high, high, medium, low and negligible with evidence provided as to the basis of the evaluation:
 - "natural heritage Landscape with clear evidence of ecological, geological, geomorphological or physiographic interest which contribute positively to the landscape;
 - cultural heritage Landscape with clear evidence of archaeological, historical or cultural interest which contribute positively to the landscape;
 - landscape condition Landscape which is in a good physical state both with regard to individual elements and overall landscape structure;
 - associations Landscape which is connected with notable people, events and the arts;
 - distinctiveness Landscape that has a strong sense of identity;
 - recreational Landscape offering recreational opportunities where experience of landscape is important;
 - perceptual (scenic) Landscape that appeals to the senses, primarily the visual sense;
 - perceptual (wildness and tranquillity) Landscape with a strong perceptual value notably wildness, tranquillity and/or dark skies; and
 - functional Landscape which performs a clearly identifiable and valuable function, particularly in the healthy functioning of the landscape."

- 3.2.4.12 Landscape susceptibility relates to the ability of a particular landscape to accommodate the Kent Onshore Scheme. It is assessed through consideration of the baseline characteristics and attributes of the landscape, and in particular, the scale or complexity of a given landscape. Attributes relate to topography and landform, landcover, pattern, scale, complexity, perceptual aspects and it is the combination of these which make one landscape more susceptible to the type of development proposed compared with another. For example, a small scale, complex wooded landscape is going to be more susceptible to the introduction of the Proposed Project than one which is larger scale, simple with fewer vegetated features. The evaluation of landscape susceptibility is defined as very high, high, medium, low and negligible and is supported by a clear explanation based upon the analysis of the landscape receptor and the extent to which it is able to accommodate the changes that would result from the Kent Onshore Scheme.
- 3.2.4.13 The overall sensitivity assessment of the landscape receptor has been made by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall sensitivity has been rated as very high, high, medium, low and negligible. Table 3.2.9 Sensitivity of Landscape Receptors below outlines indicators that inform landscape value, susceptibility, and sensitivity. The basis of the assessment is made clear in the evaluation of each landscape receptor (see Section 3.2.9).

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

Table 3.2.9: Sensitivity of landscape receptors

Sensitivity of Visual Receptors

3.2.4.14 Sensitivity of visual receptors has been defined through an appraisal of the viewing expectation, or value placed on the view as identified in the baseline study, and its susceptibility to change.

- 3.2.4.15 Value of the view is an appraisal of the value attached to views and is often informed by the appearance on Ordnance Survey or tourist maps and in guidebooks, literature and art, or identified in policy. Value can also be indicated by the provision of parking or services and signage and interpretation. The nature and composition of the view and its scenic quality is also an indicator. The value of the view has been classified as very high, high, medium, low and negligible and is supported by evidenced, professional judgements.
- 3.2.4.16 The susceptibility of visual receptors to change has been established as a function of the occupation or activity of people experiencing the view, and the extent to which their attention or interest is focussed on the view and the visual amenity they experience. For example, walkers whose interest may tend to be focused on the landscape or a particular view, or visitors at an attraction where views are an important part of the experience, indicate a higher level of susceptibility. Conversely receptors engaged in outdoor sport where views are not important or receptors at their place of work are considered less susceptible to change.
- 3.2.4.17 Judgements about the susceptibility of visual receptors have been ascribed using very high, high, medium, low or negligible ratings using consistent and reasoned judgements.
- 3.2.4.18 The overall sensitivity assessment of the visual receptor has been determined by applying professional judgement to combine and analyse the identified value and susceptibility ratings. Overall visual sensitivity has been rated as very high, high, medium, low and negligible. Table 3.2.10 Sensitivity of Visual Receptors below outlines indicators that inform value of the view, susceptibility, and sensitivity of visual receptors. The basis of the assessment is made clear in the evaluation of each visual receptor (see Section 3.2.9).

	Higher Sensitivity	Lower Sensitivity
Value	Views protected by designation, or nationally recognised, or recorded on maps / guidebooks or with cultural associations. Views which may be associated with internationally or nationally designated landscapes. Views that have high scenic qualities relating to the content and composition of the view.	Views which are not documented or protected with minimal or no cultural associations. Views that exhibit low scenic qualities relating to the content and composition of the view.
Susceptibility	 Viewers whose attention or interest is focused on their surroundings, including: residential properties and settlements where views contribute to the landscape setting enjoyed by residents; and people engaged in outdoor recreation including users of 	 People whose attention or interest is not focused on their surroundings and where the view is incidental to their enjoyment including: people travelling more rapidly on major roads, rail or transport

Table 3.2.10: Sensitivity of visual receptors

Higher Sensitivity	Lower Sensitivity
cycle routes, long distance paths, public rights of way (PRoW) and visitors to heritage assets where	routes not recognised as scenic routes;
views of the surroundings are an important contributor to experience.	outdoor recreation which does not involve or depend upon appreciation of views of the landscape; and
	 people at their place of work whose attention is not on their surroundings.

Landscape Magnitude of Effect

- 3.2.4.19 Landscape magnitude of effect refers to the extent to which the Kent Onshore Scheme would alter the existing characteristics of the landscape. It is an expression of the size or scale of change to the landscape, the geographical extent of the area influenced, and its duration and reversibility. The variables involved are:
 - the extent of existing landscape elements that would be lost, the proportion of the total extent that this represents and the contribution of that element to the character of the landscape;
 - the extent to which aesthetic or perceptual aspects of the landscape are altered either by removal of existing components of the landscape or by the addition of new components;
 - whether the change alters the key characteristics of the landscape that are integral to its distinctive character;
 - the geographic area over which the change will be experienced (for example within the application boundary, the immediate setting around that boundary, at the local LCA scale, or on a larger scale influencing broader areas of landscape character);
 - the duration of the change (i.e., short-term, medium term, or long-term) and its reversibility (i.e. whether it is permanent, temporary, or partially reversible); and
 - landscape change can be both direct, through alteration of physical components, or indirect, resulting from changes to perceptual aspects of character and how it is experienced.
- 3.2.4.20 An overall assessment of the magnitude of landscape change resulting from the Kent Onshore Scheme on landscape receptors has been made by combining the above judgements using evidence and professional judgement. The levels of landscape magnitude of change are described as being very large, large, medium, small, negligible and none as defined in Table 3.2.11 below.

Magnitude	Criteria
Very Large	Substantial alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Large	Large alteration to the landscape receptor or may impact an extensive area or unique characteristics at a local level. May be longer term, permanent or reversible.
Medium	Partial alteration to the landscape receptor or may impact a wide area or characteristics at a local level. May be medium term, permanent or reversible.
Small	Slight alteration to the landscape receptor or may impact a restricted area and few key characteristics. May be short to medium term, permanent or reversible.
Negligible	Very slight alteration to the landscape receptor or may impact a limited area or no key characteristics. May be short-term, permanent or reversible.
None	No change to the landscape receptor

Visual Magnitude of Effect

- 3.2.4.21 Visual magnitude of effect relates to the extent to which the Kent Onshore Scheme would alter the existing view and is an expression of the size or scale of change in the view, the geographical extent of the area influenced and its duration and reversibility. The variables involved are described below:
 - the scale of the change in the view with respect to the loss or addition of features in the view and changes in its composition, including the proportion of the view occupied by the Kent Onshore Scheme;
 - the degree of contrast or integration of any new features or changes in the form, scale, composition and focal points of the view;
 - the nature of the view of the Kent Onshore Scheme in relation to the amount of time over which it will be experienced, and whether views of this will be visible fully, partially or glimpsed;
 - the angle of view in relation to the main activity of the receptor, distance of the viewpoint from the Kent Onshore Scheme and the extent of the area over which the changes would be visible; and
 - the duration of the change (i.e., short-term, medium term, or long-term) and its reversibility (i.e. whether it is permanent, temporary, or partially reversible).
- 3.2.4.22 An overall assessment of the magnitude of visual change resulting from the Kent Onshore Scheme on the visual receptor has been made combining the above judgements using evidence and professional judgement. The levels of visual magnitude of change are described as being very large, large, medium, small, negligible and none as defined in Table 3.2.12 below.

Table 3.2.12: Magnitude of	Effect - visual receptors
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Magnitude	Criteria
Very Large	A substantial change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Large	A pronounced change to the composition of the view or change that may be viewed in the foreground or directly. May be longer term, permanent or reversible.
Medium	A noticeable change to the composition of the view or change that may be viewed in the middle ground or indirectly. May be medium term, permanent or reversible.
Small	An unobtrusive change in the composition of the view or change that may be viewed in the background or obliquely. May be short to medium term, permanent or reversible
Negligible	A barely perceptible change in the composition of the view or change that may be viewed in the background and/or very obliquely. May be short-term, permanent, or reversible.
None	No change to the view.

Significance of effects

- 3.2.4.23 As set out in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology** the general approach taken to determining the significance of effect in this preliminary assessment is only to state whether effects are likely or unlikely to be significant, rather than assigning significance levels.
- 3.2.4.24 Determination of the significance of landscape and visual effects has been undertaken by employing professional judgement and experience to combine and analyse the magnitude of effect against the identified sensitivity of landscape and visual receptors.
- 3.2.4.25 The landscape assessment has taken account of direct and indirect changes to existing landscape elements, features, key characteristics and evaluates the extent to which these would be lost or modified, in the context of their importance in determining the existing baseline character.
- 3.2.4.26 The visual assessment has taken account of the likely changes to the visual composition, including the extent to which new features would distract or screen existing elements in the view or disrupt the scale, structure, or focus of the existing view.
- 3.2.4.27 The significance of landscape and visual effects are described with reference to the criteria presented in Table 3.2.13 below. For the purposes of this assessment, effects rated as being of moderate or major significance are considered to be significant.

Table 3.2.13: Significance of effect

Significance of Effect	Landscape	Visual
Major Beneficial	Alterations that result in a considerable improvement of the existing landscape resource. Valued characteristic features would be restored or reintroduced.	Alterations that typically result in a pronounced improvement in the existing view.
Moderate Beneficial	Alterations that result in a partial improvement of the existing landscape resource. Valued characteristic features would be largely restored or reintroduced.	Alterations that typically result in a noticeable improvement in the existing view.
Minor Beneficial	Alterations that result in a slight improvement of the existing landscape resource. Characteristic features would be partially restored.	Alterations that typically result in a limited improvement in the existing view.
Negligible Beneficial	Alterations that result in a very slight improvement to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible improvement in the existing view.
Neutral	No alteration to any of the components that contribute to the existing landscape resource.	No change to the existing view.
Negligible Adverse	Alterations that result in a very slight deterioration to the existing landscape resource, not uncharacteristic within the receiving landscape.	Alterations that typically result in a barely perceptible deterioration in the existing view.
Minor Adverse	Alterations that result in a slight deterioration of the existing landscape resource. Characteristic features would be partially lost.	Alterations that typically result in a limited deterioration in the existing view.
Moderate Adverse	Alterations that result in a partial deterioration of the existing landscape resource. Valued characteristic features would be largely lost.	Alterations that typically result in a noticeable deterioration in the existing view.
Major Adverse	Alterations that result in a considerable deterioration of the existing landscape	Alterations that typically result in a pronounced deterioration in the existing view.

Temporal Scope of Assessment

- 3.2.4.28 Landscape and visual effects can differ from one stage of the Proposed Project to the next and change over time as mitigation planting establishes and matures. Given the preliminary nature of the LVIA presented in this chapter at PEIR stage, effects at construction, maintenance and decommissioning have been grouped together. Effects at operation year of opening have also been grouped together. Consideration of the effects once mitigation planting has been established, including advanced planting, will be fully considered at ES stage once the landscape mitigation has been fully developed in line with the Proposed Project design.
- 3.2.4.29 The ES assessment will, however, consider potential effects of the Kent Onshore Scheme at each of the following stages.
 - construction: including consideration of introduction of construction activity including temporary compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting;
 - operation year 1: including consideration of potential medium to longer term effects associated with the operational converter station, substation, HVAC OHL and reinstatement of the HVDC cable corridor. Permanent alteration to landscape character for directional lighting associated with the converter station and substation. This stage is intended to represent the potential worst-case operational effects prior to establishment of mitigation planting;
 - operation year 15: including consideration of potential longer-term effects of the Kent Onshore Scheme 15 years after becoming operational. This stage is intended to help demonstrate how proposed mitigation planting will influence effects once established;
 - maintenance: including consideration of maintenance of the Minster Substation and Minster Converter Station, overhead HVAC cable and underground HVDC cable, such as visual checks and refurbishment work mainly limited to overground parts of the Kent Onshore Scheme; and
 - decommissioning: including consideration of decommissioning works involved with the Minster Substation and Minster Converter Station, overhead HVAC cable and underground HVDC cable including dismantling and removal of elements of the Kent Onshore Scheme. The lifespan of the substation and converter station equipment is anticipated to be 40 years, but it is likely that during this period replacement would extend the lifespan.

3.2.4.30 Following construction of the landfall and the underground HVDC cable route, the working width along with construction compounds would be fully reinstated. Noting the time taken to reinstate boundary vegetation, requests within the Scoping Opinion and the potential for the loss of trees above the HVDC cable route, operational effects at year 1 are included within the assessment of effects associated with the HVDC cable route in the PEIR and will be presented in the landscape and visual chapter of the ES. Operational effects have been scoped out for the landfall.

Assumptions and Limitations

- 3.2.4.31 No technical difficulties or practical problems were encountered in producing the landscape and visual PEIR chapter. Fieldwork was undertaken in weather with good to moderate visibility of at least 3 km.
- 3.2.4.32 Site visits to inform the landscape and visual chapter for the ES will be conducted in both winter and summer, therefore allowing a comparison of visibility or visual effects over two seasons. This allows assessment based on broadleaf vegetation not in leaf and represents the most open views. Potentially significant differences between seasonal views will be outlined where relevant within the assessment and taken into consideration in assessing the impacts and reaching conclusions.
- 3.2.4.33 The information presented in the PEIR is preliminary and the final assessment of likely significant effects will be reported in the ES.

3.2.5 Basis of Assessment

- 3.2.5.1 This section sets out the assumptions that have been made in respect of design flexibility maintained within the Proposed Project and the consideration that has been given to alternative scenarios and the sensitivity of the preliminary assessment to changes in the construction commencement year.
- 3.2.5.2 Details of the available flexibility and assessment scenarios are presented in Volume 1, Part 1, Chapter 4 Description of the Proposed Project and Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology.

Flexibility assumptions

- 3.2.5.3 The main preliminary assessments have been undertaken based on the description of the Proposed Project provided in **Volume 1, Part 1 Chapter 4 Description of the Proposed Project.** To take account of the flexibility allowed in the Proposed Project, consideration has been given to the potential for preliminary effects to be of greater or different significance should any of the permanent or temporary infrastructure elements be moved within the LoD or draft Order Limits.
- 3.2.5.4 The assumptions made regarding the use of flexibility for the main assessment, and any alternatives assumptions are set out in Table 3.2.14 below. Should the flexibility assumptions alter the results of the preliminary assessment of effects, this has been noted within the preliminary assessment section (see Section 3.2.9).

Element of flexibility	Proposed Project assumption for initial preliminary assessment	Flexibility assumption considered
Lateral LoD HVDC cables	HVDC cables laid anywhere within the lateral LoD	The maximum flexibility has been assessed under the preliminary assessment.
Lateral LoD Minster Converter Station and Minster Substation	Minster Converter Station and Minster Substation to be constructed within the lateral LoD footprint based on the indicative location of converter station and substation as shown in Figure 1.4.12 Minster 400kV Substation and Minster Converter Station Indicative Location.	Minster Converter Station and Minster Substation could be constructed anywhere within the lateral LoD.
Vertical LoD Minster Converter Station and Minster Substation	26 m maximum vertical LoD for the converter station and 18 m maximum vertical LoD for the substation as explained in Volume 1, Part 1, Chapter 4, Description of the Proposed Project	The maximum flexibility has been assessed under the preliminary assessment.
Lateral LoD overhead line	Overhead line options built within the lateral LoD as shown in Figure 1.4.1 Lateral Limits of Deviation.	The maximum flexibility has been assessed under the preliminary assessment.
Vertical LoD overhead line	Assessed at the height shown in Volume 1, Part 1, Chapter 4 Description of the Proposed Project for the three HVAC options.	The assessment has considered the possible effects of pylons being 6 m above the pylons' heights shown in Volume 1, Part 1, Chapter 4 Description of the Proposed Project for each of the three HVAC options.

Table 3.2.14: Flexibility assumptions and Minister substation

Consideration of Scenarios and Options

- 3.2.5.5 Two alternative scenarios have been considered within each of the technical assessment chapters in Part 3. These are:
 - The use of either low height or standard height pylons for the HVAC connection. Within this scenario there are three options as explained in **Volume 1, Part 1, Chapter 4, Description of the Proposed Project**; and
 - Permanent access to Minster Converter Station and Minster Substation is either taken off A256 (through bellmouth BM02) or off Jutes Lane through bellmouth BM03 but with bellmouth BM02 being retained for any abnormal indivisible load (AIL) movements during maintenance and operation as explained in Volume 1, Part 1, Chapter 4, Description of the Proposed Project.
- 3.2.5.6 Table 3.2.15 details where these scenarios are relevant to the preliminary landscape and visual assessment and how they have been assessed and reported in Section 3.2.9, preliminary assessment of effects.

Assessment scenario	How it has been considered within the preliminary assessment
Pylon types	All three pylon options have been considered in the preliminary assessment. Where the potential landscape or visual effect associated with a specific pylon option is considered to result in a different magnitude of effect or significance for a specific receptor, this is identified in the assessment.
Permanent access to Minster Converter Station and Minster Substation	Both permanent access options have been considered in the preliminary assessment. Where the potential landscape or visual effect associated with a specific access option is considered to result in a different magnitude of effect or significance for a specific receptor, this is identified in the assessment.

Table 3.2.15: Consideration of scenarios

Sensitivity Test

3.2.5.7 It is likely that under the terms of the draft DCO, construction could commence in any year up to five years from the granting of the DCO which is assumed to be 2026 subject to discharge to all of the relevant requirements. Consideration has been given to whether the preliminary effects reported would be any different if the works were to commence in any year up to year five. Where there is a difference, this is reported in Section 3.2.9, preliminary assessment of effects.

3.2.6 Study Area

- 3.2.6.1 The study area for the landscape and visual assessment of the Kent Onshore Scheme comprises an area of 3 kilometres (km) from the draft Order Limits, including the converter station, substation, HVAC overhead line (OHL) cable and from the proposed landfall (denoted as the high-water mark). This includes 1 km from the HVDC cable route. This excludes the construction access routes as this would result in a disproportionately large study area to assess potential landscape and visual effects. The study area is shown on **Figure 3.2.1 Topography** to **Figure 3.2.6 Representative Viewpoint Locations**.
- 3.2.6.2 The extent of the study area has been informed by a review of the design of the Kent Onshore Scheme, desk-based research, field-based appraisal, ZTV mapping and professional judgement. The study area was agreed with statutory consultees at scoping stage and again subsequently during the thematic landscape meeting on the 10 May 2023, to ensure a proportionate approach is followed which focusses on likely significant effects. It is important to note the study area defines the area within which it is judged that significant landscape and/or visual effects could occur, rather than the extent of visibility of the Kent Onshore Scheme.
- 3.2.6.3 The 3 km extent of the study area from the landfall is considered to be appropriate as the nature of the coastline around the landfall comprises of a bay in which views are typically focused into and across it from the surrounding landscape.
- 3.2.6.4 The computer generated ZTV (Figure 3.2.7 Representative Viewpoint Locations and Screened Zone of Theoretical Visibility) was run for the converter station and substation as part of the permanent above ground infrastructure. The ZTV is based on the maximum parameters of the converter station and substation, as described in Volume 1, Part 1, Chapter 4, Description of the Proposed Project. This is based on a maximum vertical height of 26 m for the converter station and 18 m for the substation.
- 3.2.6.5 The other above ground permanent infrastructure associated with the Kent Onshore Scheme comprises the HVAC OHL, however as a ZTV of an OHL has the potential to overestimate the theoretical visibility, at this preliminary assessment stage a ZTV has not been produced for this aspect of the Kent Onshore Scheme. The ES will include ZTVs for the converter station, substation and HVAC OHL.
- 3.2.6.6 Two ZTVs have been produced. The first has been generated using a 'bare ground' digital terrain model (DTM) generated using Ordnance Survey (OS) Terrain 5 DTM, which does not take account of the screening effects of vegetation, buildings, or other structures, and therefore the true extent of visibility is likely to be less than is indicated. This has been used to inform the baseline data collection and initial analysis.
- 3.2.6.7 The second ZTV incorporates screening from vegetation and buildings (Figure 3.2.7 Representative Viewpoint Locations and Screened Zone of Theoretical Visibility) based on the following factors:
 - existing buildings have been incorporated into the DTM from OS Open Map Local, based on an assumed building height of 7.5m; and
 - woodland from the National Forest Inventory (NFI) has also been incorporated into the DTM, based on an assumed woodland height of 10m.
- 3.2.6.8 The ZTVs indicate areas from where it may be possible to view part of or the entire converter station and substation.

- 3.2.6.9 The use of the ZTVs needs to be qualified by the following considerations:
 - the ZTVs are limited by the detail of the digital terrain model data used and do not take account of local topographic variations;
 - some areas of theoretical visibility may comprise woodland (not accounted for in the NFI) or agricultural land, where there is effectively no public access and the likelihood of views being experienced is consequently low; and
 - the ZTVs do not take account of the likely orientation of a viewer, such as the direction of travel and there is no allowance for reduction of visibility with distance, weather or light.
- 3.2.6.10 These limitations mean that the ZTVs tend to overestimate the extent of the visibility of the converter station and substation. Consequently, the ZTVs should be considered as a tool to identify areas of potential visibility for further targeted survey and assessment, and not a measure of the visual effect.

3.2.7 Baseline Conditions

- 3.2.7.1 The landscape varies within the study area, which is illustrated on **Figure 3.2.1 Topography**. It includes low-lying landform within the Ash Levels and Minster Marshes in the southern and central part. This landscape comprises a series of drainage ditches separating small to medium sized field enclosures, within the former Wantsum Channel. The landscape rises towards the settlement of Minster, comprising some comparatively larger scale field enclosures. The landscape also includes the low-lying coastal areas extending around Pegwell Bay which are characterised by larger intertidal areas of marsh and mudflat along the coastline.
- 3.2.7.2 The landscape of the study area is well-settled in the northern part, including the villages of Minster, Cliffsend and Manston on the southwestern edge of Ramsgate and off the A299 road corridor. Settlement within the southern part of the study area is comparatively sparse, with smaller settlements including Richborough, Great Stonar, small clusters of dwellings and scattered properties.
- 3.2.7.3 The land use within the study area is largely associated with agriculture, with predominantly pastoral fields particularly adjacent to the various drainage ditches which dissect the lower lying marsh and around the watercourses including the River Stour, with larger arable fields in the surrounding landscape. Orchards characteristic of the horticultural landscape are present across the southwestern part of the study area in the higher areas of the Ash Levels. Other land uses include the Richborough Energy Park in the western part of the study area which encompasses a considerable sized linear strip of land adjacent to the River Stour, a golf course, country park and various solar farms.
- 3.2.7.4 The vegetation within the Ash Levels and Minster Marshes in the southern and central part of the study area comprises hedgerows and mature individual and linear tree blocks. Within the northern part of the study area, the landscape includes smaller blocks of woodland such as Minster Woods, along with hedgerow planting. The coastal landscape is comparatively more wooded and treed than the remainder of the study area, notably around Richborough Energy Park.

Landscape and Seascape Character Overview

- 3.2.7.5 Landscape character is a composite of physical, cultural, perceptual and aesthetic elements (Ref 3.2.31). Landform, hydrology, vegetation, land cover, land use pattern, cultural and historic features and associations combine to create a common 'sense of place' and identity which can be used to categorise the landscape into definable types and areas. The level of detail and size of the types and areas can be varied to reflect the scale of definition required. It can be applied at a range of scale from national to local level.
- 3.2.7.6 Seascape character, alike landscape character, is a composite of physical and cultural elements (Ref 3.2.32). Landform, geology, coastal processes, flora and fauna, coastal features, surface features, sunken features, use and past use of coast and sea and associations combine to create an identity definable types and areas. The level of detail and size of the types and areas can be varied to reflect the scale of definition required. It can be applied at a national, regional, and local level.

National Landscape Character

3.2.7.7 Natural England has identified and mapped landscape character at the national level by identifying National Character Areas (NCAs) (Ref 3.2.33) in 2013-15. The Kent Onshore Scheme falls within the North Kent Plain (NCA 113) as shown on Figure 3.2.3 Landscape Character - National and County. Further detail is given in Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.

County Landscape Character

3.2.7.8 At the county scale, KCC published The Landscape Assessment of Kent (Ref 3.2.34) in 2004. The study defines Kent Character Areas (KCAs) which provide a county level landscape characterisation. Those KCAs that the study area falls within are shown on Figure 3.2.3 Landscape Character - National and County. Further detail is given in Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.

District Landscape Character

- 3.2.7.9 At a district scale, TDC published the Thanet District Council Landscape Character Assessment (TDLCA) (Ref 3.2.18) in 2017. The study defines Landscape Character Types (LCTs) and LCAs which provide a district level landscape characterisation which has been used as the basis of the preliminary landscape character assessment. Those LCAs that the study area falls within are shown on Figure 3.2.4 Landscape Character District. Value judgements are given as follows (see Landscape and Seascape baseline for assessment) and further detail is given in Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.
 - B1: Wantsum North Slopes: Medium.
 - E1: Stour Marshes: Medium.
 - F1: Pegwell Bay: High.
 - G1: Ramsgate and Broadstairs Cliffs: High.

- 3.2.7.10 At a district scale, DDC published the Dover District Council Landscape Character Assessment (DDLCA) (Ref 3.2.21) in 2020. The study defines LCTs and LCAs which provide a district level landscape characterisation which has been used as the basis of the preliminary landscape character assessment. Those LCAs that the study area falls within are shown on **Figure 3.2.4 Landscape Character – District**. Value judgements are given as follows and further detail is given in **Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline:**
 - A2: Ash Levels: Medium.
 - B1: Great Stour Sandwich Corridor: Low.
 - C1: Sandwich Bay: High.
 - D1: Preston Horticultural Belt: Medium.
 - H1: Richborough Bluff: High.

Historic Landscape Character

3.2.7.11 The historic landscape character context within the landscape and visual study area includes various designated assets. These include listed buildings and a Scheduled Monument at Richborough Castle, which consists of a Saxon shore fort, Roman port and other associated remains dating from the Iron Age through to the medieval period. The former Wantsum Channel also falls within the study area, which consists of a former navigable channel. Consultation with the Kent County Archaeologist highlighted significant early Roman remains that had been discovered immediately north of Ebbsfleet Farm on the north bank of the former Wantsum Channel. Further details should be referred to within **Volume 1, Part 3, Chapter 3, Cultural Heritage**.

National Seascape Character

3.2.7.12 At the national scale, the Marine Management Organisation (MMO) published the Seascape Character Area Assessment East Inshore and East Offshore Marine Plan Areas (Ref 3.2.35) in 2012. The study defines South East Marine Character Areas (MCAs). The study area falls within the Goodwin Sands and North Dover Strait (MCA 11) as shown on Figure 3.2.5 Seascape Character – National and Regional. Further detail is given in Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.

Regional Seascape Character

- 3.2.7.13 At the regional scale, KCC published the Seascape Character Assessment for the Dover Strait (SCADS) (Ref 3.2.36) in 2015. The study defines Seascape Character Types (SCTs) and Seascape Character Areas (SCAs) at a regional scale which have been used as the basis of the preliminary seascape character assessment. The SCAs that the study area falls within are shown on Figure 3.2.5 Seascape Character National and Regional. Value judgements are given as follows and further detail is given in Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.
 - C3C: Ramsgate Harbour: High.
 - C5A / I1A: Sandwich and Pegwell Bays: High.

Landscape and Seascape baseline for assessment

3.2.7.14 The published district level landscape character assessment and regional seascape character assessment information form the basis of the landscape baseline for assessment of the Kent Onshore Scheme. Table 3.2.16 sets out which LCAs and SCAs are scoped in and out of the preliminary assessment of effects on landscape character at both construction, maintenance and decommissioning and operation. An explanation for scoping out certain LCAs and SCAs is provided below.

Project Phase	Scoped in	Scoped out
	TDLCA: LCAs B1, E1, F1 and G1	TDLCA: LCAs A1, C1 and C2
Construction, maintenance, and decommissioning	DDLCA: LCAs A2, B1, C1, D1 and H1	
g	SCADS: SCAs C3C and C5A / I1A	
	TDLCA: LCAs B1 and E1	TDLCA: LCAs A1, C1, C2, F1 and G1
Operation	DDLCA: LCAs A2, B1, D1 and	DDLCA: LCA C1
	H1	SCADS: SCAs C3C and C5A / I1A

Table 3.2.16: LCAs and SCAs scoped in and out of the preliminary assessment of effects on landscape character

- 3.2.7.15 TDLCA LCAs A1, C1 and C2 are scoped out for construction, maintenance, and decommissioning and operation due to a lack of inter-visibility with the Kent Onshore Scheme, such that effects on the setting or perceptual qualities of these LCAs would be limited with no significant residual effect.
- 3.2.7.16 At operation, TDLCA LCAs F1 and G1, DDLCA LCA C1 and SCADS SCAs C3C and C5A / I1A are also scoped out as all areas will be reinstated post construction of the landfall and whilst there is scattered theoretical visibility across these areas from the permanent infrastructure (converter station, substation and HVAC cable corridor), the effects on the setting or perceptual qualities of these LCAs will be limited with no significant residual effect.

Landscape Designations Overview

- 3.2.7.17 Landscapes can be designated for their special landscape or scenic qualities. These areas may be identified in development plans at the national, regional or local scale.
- 3.2.7.18 The following landscape designations have been identified within the study area; their locations are shown on Figure 3.2.2 Landscape Context and Designations. Further detail is given in Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.
 - Tree Preservation Orders (TPOs).
 - Coastal Margin Access Land.
 - Pegwell Bay Country Park.
 - Open Space (designated within DDC adopted Core Strategy (Ref 3.2.20)).

Relevant Designations

- 3.2.7.19 In addition to the above, the study area also contains the following designations:
 - Listed buildings;
 - Countryside and Rights of Way (CRoW) Act 2000 Access Land;
 - National Nature Reserve (NNR) Sandwich and Pegwell Bay;
 - Local Nature Reserve (LNR) Prince's Beachlands;
 - Site of Special Scientific Interest (SSSI) Sandwich Bay to Hacklinge Marshes;
 - Scheduled monuments;
 - Ramsar Site Thanet Coast and Sandwich Bay; and
 - Special Area of Conservation (SAC) Sandwich Bay.
- 3.2.7.20 Whilst effects on these designations have not been assessed in the LVIA as they would be considered in other discipline specific chapters, they will inform judgements of landscape value and in the case of CRoW Act 2000 Access Land and Coastal Margin Access Land, these areas are also an important recreational resource, views from which would be considered as part of the visual assessment.
- 3.2.7.21 Within the landscape and visual impact assessment, consideration of specific heritage, access or ecological assets has been restricted to the contribution the designations make to present-day landscape character and visual amenity. Further consideration of specific heritage, access or ecological assets is contained in **Volume 1**, **Part 3**, **Chapter 3**, **Cultural Heritage** and **Volume 1**, **Part 3**, **Chapter 2**, **Ecology and Nature conservation**.

Visual Amenity Baseline

3.2.7.22 Visual amenity is defined in the GLVIA3 (Ref 3.2.1), p.158) as:

"the overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area"

Summary of visibility

3.2.7.23 The screened ZTV (shown on **Figure 3.2.7 Representative Viewpoint Locations and Screened Zone of Theoretical Visibility**) indicates theoretical visibility within the landscape and visual study area. This shows the majority of theoretical visibility across the relatively lower landform across the Minster Marshes and Ash Level. Theoretical visibility is limited to the north of the A299 by the landform of the Manston chalk plateau, to the north-east by existing built form on the edge of Ramsgate and only pockets visibility along the coastline due to intervening vegetation and existing built form, largely associated within Richborough Energy Park. The theoretical visibility has been tested during fieldwork to inform the baseline and the assessment of potential effects.

Summary of visual receptors

3.2.7.24 The below sets out a summary of the different types of visual receptors within the landscape and visual study area.

Residential receptors - settlement

- the settlements of Cliffsend and Minster in the north of the study area;
- the smaller settlement of Richborough within the south of the study area; and
- the western settlement edge of Ramsgate within the northeast of the study area. Representative **viewpoints 13 and 14** are located on the settlement edge, with views southwest towards the Kent Onshore Scheme.

Residential receptors – scattered properties

- isolated farmsteads and properties located along Richborough Road between Richborough and Westmarsh, within the south of the study area. Representative viewpoint 9 is located along Richborough Road, with views northeast towards the Kent Onshore Scheme; and
- isolated properties and small clusters of dwellings between Minster and Cliffsend within the north of the study area.

Recreational

- users of the PRoW network. Representative viewpoints 4, 6 and 12 are located on PRoW with views orientated in southerly and south eastly directions towards the Kent Onshore Scheme;
- users of the recognised long-distance trails, including:
 - The Stour Valley Walk, which runs east to west across the study area within the southern part of the study area and along the coast, to the east of Prince's Golf Course. Representative viewpoint 7 is located along the route with a view northwest towards the Kent Onshore Scheme;
 - the England Coast Path, which runs along the coast and around the Great Stonar area within the eastern part of the study area. Representative viewpoints 2 and 14 are located along this route, with views northwest and southwest respectively towards the Kent Onshore Scheme;

- the Saxon Shore Way, which follows the route of the River Stour through the study area. Representative viewpoints 3 and 10 are located along this route within the central part of the study area, with views northwest and east respectively towards the Kent Onshore Scheme; and
- the Viking Coastal Trail, which runs east to west within the northern part of the study area. Representative viewpoint 5 is located along this route, with views south towards the Kent Onshore Scheme. Representative viewpoints 13 and 14 are also located along this route, on the southwestern settlement edge of Ramsgate, with views southwest towards the Kent Onshore Scheme.
- Recreational aspects of the coast, including those using or visiting:
 - Pegwell Bay Country Park, which is located within the east of the study area.
 Representative viewpoint 2 is located within the Country Park, with views northwest towards the Kent Onshore Scheme;
 - Prince's Golf Club, which is located within the southeast of the study area.
 Representative viewpoint 7 is located on the northeastern boundary of the golf course, with views northwest towards the Kent Onshore Scheme;
 - Stoneless Golf Centre and St Augustine's Golf Club, which is located within the centre of the study area, with views north towards the Kent Onshore Scheme.
 - NCN 1, which runs west to southeast, following the route of Richborough Road, within the south of the study area. Representative viewpoint 9 is located along this route, west of Richborough, with views northeast towards the Kent Onshore Scheme;
 - NCN 15, which runs north to south, following the route of the A256 and Sandwich Road, before reaching the route of the Viking Coastal Trail at the southern edge of Ramsgate. Representative viewpoints 13 and 14 are located along this route, with views southwest towards the Kent Onshore Scheme; and
 - Richborough Roman Fort, which is located within the south of the study area. Representative viewpoint 8 is located on the northern boundary of the Fort, with views north towards the Kent Onshore Scheme. The location of the viewpoint will move to the newly opened viewing tower within the Fort for ES stage.

Road and railway users

- major 'A' roads, including users of the:
 - A256, which runs north to south through the centre of the study area.
 Representative viewpoint 1 is located adjacent to the route, north of Ebbsfleet
 Roundabout, with views north towards the Kent Onshore Scheme; and
 - A299, which runs east to west, within the north of the study area.
 Representative viewpoint 11 is located along the route, with views south towards the Kent Onshore Scheme.
- 'B' roads and the local (unclassified) road network; and

 passengers on the railway route between Sandwich and Minster and between Ramsgate and Canterbury. Representative viewpoint 4 is located along the Ramsgate to Canterbury route, with views south towards the Kent Onshore Scheme.

Workers in employment facilities within the area

- Weatherlees Hill Wastewater Treatment Works, within the centre of the study area, to the west of the A256;
- industrial area to the south of Ebbsfleet Roundabout, east and west of the A256.
 Representative viewpoint 3 is located on the western boundary, with views north towards the Kent Onshore Scheme; and
- Solar Energy Farm, within the centre of the study area, to the west of the A256. Representative **viewpoint 1** is located on the eastern boundary, with views northwest towards the Kent Onshore Scheme.

Representative Viewpoint Locations

3.2.7.25 Table 3.2.17 outlines the 14 representative viewpoints chosen to represent the receptors described above within the landscape and visual study area, including the value for each of the viewpoints. These are illustrated on **Figure 3.2.6 Representative Viewpoint Locations**. Further detail is given in **Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline.**

Viewpoint	Approximate	Approximate	Reason for	Value
Description	Easting	Northing	Selection	
Viewpoint 1: Jutes Lane, north of Ebbsfleet Roundabout	633469	162513	Representative of the local road users, including Jutes Lane and the A256 route. Representative of the workers in the Solar Energy Farm. Located within TDLCA Local Character Area E1: Stour Marshes.	Negligible

Table 3.2.17: Representative viewpoint locations

Viewpoint Description	Approximate Easting	Approximate Northing	Reason for Selection	Value
Viewpoint 2: Pegwell Bay Country Park along England Coast Path, northeast of Richborough Energy Park	634329	163184	Representative of recreational users within Pegwell Bay Country Park, users of England Coast Path and nearby users along National Cycle Network (NCN) route 15 towards the landfall element of the Proposed Project. Located within TDLCA Local Character Area F1: Pegwell Bay, close to the boundary of Local Character Area E1: Stour Marshes.	High
Viewpoint 3: Saxon Shore Way, west of Richborough Energy Park	633256	161604	Representative of recreational users along Saxon Shore Way recreational route and receptors at work within Richborough Energy Park. Located on the boundary of DDLCA LCA A2: Ash Levels and LCA B1: Great Stour Sandwich Corridor.	Low

Viewpoint Description	Approximate Easting	Approximate Northing	Reason for Selection	Value
Viewpoint 4: Public footpath (boundary of 0173/TE40/1 and 0173/TE37/2), east of Minster	632170	164051	Representative of recreational users including users of PRoW in the landscape to the east of Minster within the Minster Marshes. Representative of users of the local railway network along the Kent Coast Line and Ashford- Ramsgate railway lines. Located within TDLCA Local Character Area E1: Stour Marshes, close to the boundary of TDLCA Local Character Area B1: Wantsum North Slopes.	Medium
Viewpoint 5: Junction of Grinsell Hill and Ebbsfleet Lane North	633108	164456	Representative of users of the local road network, including along the promoted cycling route Viking Coastal Trail along Grinsell Hill. Located within TDLCA Local Character Area B1: Wantsum North Slopes.	Medium

Viewpoint Description	Approximate Easting	Approximate Northing	Reason for Selection	Value
Viewpoint 6: Public footpath (0173/TE32/1), south of Minster	630389	163925	Representative of recreational receptors including PRoW and users of the local railway network along the Kent Coast Line and Ashford- Ramsgate railway lines. Representative of residential receptors on the southern edge of the settlement of Minster. Located within TDLCA Local Character Area E1: Stour Marshes, in close proximity to the boundary of Local Character Area B1: Wantsum North Slopes.	Medium
Viewpoint 7: Sandwich Bay, adjacent to England Coast Path	635304	161602	Representative of recreational users along the Stour Valley Walk recreational route, Coastal Margin Access Land and users of Prince's Golf Club. Located within DDLCA LCA C1: Sandwich Bay.	High

Viewpoint Description	Approximate Easting	Approximate Northing	Reason for Selection	Value
Viewpoint 8: Viewing tower within Richborough Roman Fort ³	632461	160188	Representative of visitors to Richborough Roman Fort. Located within DDLCA LCA H1: Richborough Bluff, in close proximity to the boundaries of LCA A2: Ash Levels and LCA B1: Great Stour Sandwich Corridor.	High
Viewpoint 9: Richborough Road, between Lower Gladstone and Richborough	630277	160906	Representative of users of the local road network along Richborough Road and users of NCN route 1. Representative of scattered residential receptors between the settlements of Lower Goldstone and Richborough. Located within DDLCA LCA D1: Preston, in close proximity to LCA A2: Ash Levels.	Medium

³ To note: viewpoint 8 will be moved to the viewing platform at Richborough Fort for the ES. The viewing platform was not accessible when undertaking winter site photography for the purposes of the PEIR.

Viewpoint Description	Approximate Easting	Approximate Northing	Reason for Selection	Value
Viewpoint 10: Saxon Shore Way, on the River Stour, southwest of Minster	629850	162960	Representative of recreational users along the Saxon Shore Way recreational route. Located on the boundary of TDLCA Local Character Area E1: Stour Marshes and DDLCA LCA A2: Ash Levels.	Medium
Viewpoint 11: Thorne Hill, south of the A299	632730	165480	Representative of scattered residential receptors to the east of the settlement of Minster and roads users including from Way Hill, Thorne Hill and the A299 corridor. Located within TDLCA Local Character Area A1: Manston Chalk Plateau, in close proximity to Local Character Area B1: Wantsum North Slopes.	Medium

Viewpoint Description	Approximate Easting	Approximate Northing	Reason for Selection	Value
Viewpoint 12: Public Bridleway (0173/TE29/1), north of Minster	630642	165510	Representative of recreational users including PRoW and users of the local road network, including the A299 route. Representative of residential receptors on the northern edge of the settlement of Minster. Located on the boundary of TDLCA Local Character Area B1: Wantsum North Slopes and Local Character Area A1: Manston Chalk Plateau.	Medium
Viewpoint 13: Traffic-free cycle route along Chalk Hill (NCN route 15), west of Ramsgate	635873	164707	Representative of recreational users along Chalk Hill and NCN route 15. Representative residential receptors and users of allotments on the southwestern edge of Ramsgate and users of the promoted cycling route Viking Coastal Trail. Located within TDLCA Local Character Area B1: Wantsum North Slopes.	Medium

Viewpoint	Approximate	Approximate	Reason for	Value
Description	Easting	Northing	Selection	
Viewpoint 14: England Coast Path, West Cliff, Ramsgate	636975	164082	Representative of recreational users of the England Coast Path and the promoted cycling route Viking Coastal Trail, at West Cliff, Ramsgate. Located on the edge of TDLCA LCA G1: Ramsgate and Broadstairs Cliffs.	Medium

3.2.7.26 Winter baseline photography has been captured from all of the above representative viewpoints and is contained in **Figures 3.2.8 Representative Viewpoint Photography and Photomontages**.

Future Baseline

- 3.2.7.27 Predicting the future baseline involves a degree of speculation and uncertainty as acknowledged at paragraph 5.33 in GLVIA3 (Ref 3.2.1). It requires projecting forward any trends in change and considering how they may affect the landscape over time. The nature of the future baseline is influenced by a combination of natural and human processes, including climate change. Scoping and consented development proposals are able to influence the future baseline and are discussed in the cumulative assessment in Volume 1, Part 3, Chapter 14, Kent onshore Scheme Inter-Project Cumulative Effects.
- 3.2.7.28 The landscape of the Kent Onshore Scheme study area is predominantly characterised by the Minster marshes and the Ash Levels. These are open, low-lying marshland landscapes in which development is typically sparse. They are agricultural landscapes where pastoral and arable farmland is actively managed. Trees, woodland, scrub and riparian habitats will continue to mature but the inherent character and the contribution that they make to views and visual amenity is unlikely to substantially change.
- 3.2.7.29 Thanet Local Plan policy CC07 (Ref 3.2.17) is broadly supportive of renewable energy developments at Richborough providing they are not detrimental to adjacent nature conservation and heritage assets. It is therefore likely that energy related infrastructure has the potential to expand in this area.
- 3.2.7.30 The undeveloped coast around Pegwell Bay and Sandwich Bay is likely to remain unchanged given its protected status. There could be continued expansion along the western settlement edge of Ramsgate and around Thanet Parkway station area.

3.2.8 Mitigation

3.2.8.1 As set out in **Volume 1, Part 1, Chapter 5, PEIR Approach and Methodology**, mitigation measures fall into one of the three categories: embedded measures; control and management measures; and mitigation measures.

Embedded Measures

- 3.2.8.2 Embedded measures have been integral in reducing the landscape and visual effects of the Proposed Project. Measures that that have been incorporated are:
 - Sensitive routeing and siting of infrastructure and temporary works; and
 - Commitments made within Volume 2, Part 1, Appendix 1.4.F, Outline Schedule of Environmental Commitment and Mitigation Measures.

Control and Management Measures

- 3.2.8.3 The following measures have been included within **Volume 2**, **Part 1**, **Appendix 1.4.A**, **Outline Code of Construction Practice** relevant to the control and management of impacts that could affect landscape and visual receptors:
 - GG03: A Construction Environmental Management Plan (CEMP), a Landscape and Ecological Management Plan (LEMP) and a Construction Traffic Management Plan (CTMP) will be produced prior to construction;
 - GG05: A suitably experienced Environmental Manager will be appointed for the duration of the construction phase. In addition, a qualified and experienced Environmental Clerk of Works (ECoW) will be available during the construction phase to advise, supervise and report on the delivery of the mitigation methods and controls outlined in the CEMP. The ECoW will monitor that the works proceed in accordance with relevant environmental DCO requirements and adhere to the required good practice and mitigation measures. The ECoW will be supported as necessary by appropriate specialists, including ecologists and arboriculturists;
 - GG07: A full photographic and descriptive record of condition (pre-condition survey) will be carried out of the working areas that may be affected by the construction activities prior to those works commencing. This record will be available for comparison following completion of reinstatement works to ensure that the standard of reinstatement at least meets that recorded in the pre-condition survey, and is agreeable with landowners affected by the works;
 - GG08: Land used temporarily will be reinstated where practicable to its preconstruction condition and use unless agreed otherwise. Hedgerows, fences and walls (including associated earthworks and boundary features) will be reinstated to a similar style and quality to those that were removed, with landowner agreement;
 - GG09: Where sensitive features are to be retained within or immediately adjacent to the Order Limits, an appropriate protective area will be established using appropriate fencing and signage and will be inspected, repaired and replaced as necessary. The protective areas will be shown on the Retention and Reinstatement Plans contained within the LEMP;

- GG19: Earthworks and stockpiled soil will be protected by covering, seeding or using water suppression where appropriate;
- GG22: Construction lighting will be of the lowest levels necessary to safely perform each task. It will be designed, positioned and directed to reduce the intrusion into adjacent properties, protected species and habitats;
- GG27: Working areas will be appropriately fenced. The type of fencing installed will depend on the area to be fenced and will take into consideration the level of security required in relation to the surrounding land and public access, rural or urban environment and arable or stock farming. For some locations the fence used may also serve to provide acoustic and visual screening of the work sites and reduce the potential for disturbance of users in the surrounding areas. Fencing will be regularly inspected and maintained and removed as part of the demobilisation unless otherwise specified;
- LV01: The contractor(s) will retain vegetation where practicable. Where
 vegetation is lost and trees cannot be replaced in situ due to the restrictions
 associated with land rights required for operational safety, native shrub planting
 approved by National Grid will be used as a replacement, in accordance with the
 outline vegetation reinstatement plans included within the LEMP;
- LV02: The contractor(s) will apply the relevant protective principles set out in British Standard (BS) 5837:2012: Trees in relation to design, demolition and construction. This will be applied to trees within the Order Limits which will be preserved through the construction phase, and to trees outside of the Order Limits where such measures do not hinder or prevent the use of the relevant working width for construction. All works to high grade trees, including trees under Tree Preservation Orders and veteran trees, will be undertaken or supervised by a suitably qualified arboriculturist.
- LV03: A five-year aftercare period will be established for all reinstatement and mitigation planting;
- LV04: Separation and storage of subsoil and topsoil to ensure no degradation in quality and reinstatement undertaken as soon as possible after completion of construction of each section/area of works;
- LV05: Temporary and separate placement of topsoil and subsoil will be stored adjacent to the trench with the additional height of the subsoil storage used on whichever side requires greater screening benefit, where practicable;
- B04: To control the spread of invasive weeds in accordance with the Wildlife and Countryside Act 1981, any plant or machinery that has been used in areas infested with invasive species (both terrestrial and aquatic), such as Japanese knotweed and Himalayan balsam, will be thoroughly cleaned. Water used to clean vehicles will be controlled to prevent the spread of the plant (through seeds, rhizomes, fragments, etc.). The area will be cordoned off to prevent any inadvertent spreading;
- B07: Where the works require the crossing or removal of hedgerows, the gap will be reduced to a width required for safe working. Where hedge removals are necessary, 'dead hedging' should be used, where practicable, in the interim periods to retain connectivity during construction. Dead hedging can comprise vegetation arisings or artificial provision, such as willow screening panels or

Heras fencing covered in camouflage netting. New hedgerow planting will contain native, woody species of local provenance;

- W03: Riverbank and in-channel vegetation will be retained where not directly affected by installation works. Natural substrate will be provided through temporary watercourse crossings box culverts; and
- TT03: All designated PRoW will be identified, and any potential temporary and/or permanent diversions applied for/detailed in the DCO. All designated PRoWs crossing the working area will be managed with access only closed for short periods while construction activities occur. Any required diversions will be clearly marked at both ends with signage explaining the diversion, the duration of the diversion (for temporary diversions) and a contact number for any concerns.

Mitigation Measures

- 3.2.8.4 Mitigation measures are additional topic and site-specific measures that have been applied to mitigate or offset any likely significant effects. Mitigation measures included that are relevant to landscape and visual receptors are:
 - The design of the converter station and substation, in terms of the building form and the external materials, will be developed alongside consultation and stakeholder feedback. A Design Code for these buildings will be provided with the application for development consent. The Design Code will provide guidance regarding the design intent and design principles that will be adopted and embedded into the detailed proposals of these structures. These would include:
 - Locating the converter station and substation as close to the existing infrastructure at Richborough Energy Park and limiting the incursion into the wider marsh landscape, to improve landscape fit and minimise visual impact;
 - Consideration of the orientation and massing of the converter station and substation in order that existing landscape features can be retained (drainage ditches and SSSI woodland); and
 - Designing the converter station buildings be sympathetic to their surroundings and be integrated into the landscaped setting of the site. Buildings will be clad in appropriate material and colours designed to appear recessive within the landscape, to help integrate the buildings into the landscape and views.
 - Landscape design principles: an outline landscape strategy has been prepared for the converter station and substation site which provides a collaborative approach to delivering landscape and biodiversity mitigation as well as BNG (the latter to be developed post PEIR). It is presented on Figure 1.4.13 Minster 400kV
 Substation and Minster Converter Station Indicative Landscaping Strategy. This outline strategy has been developed in recognition of the local landscape policies and landscape character, considering the opportunities for local landscape and biodiversity enhancement. It will continue to be developed as part of the iterative process of design and assessment post PEIR stage. The principles of the outline landscape strategy, which will inform the future design development for DCO submission, seek to:
 - Respond to both the immediate landscape pattern of the site as well as the wider landscape character;

- Use native woodland planting to provide screening to the converter station and substation in views from the north and northwest whilst providing containment to the converter station and substation site so that it appears visually connected to the Richborough Energy Park rather than the wider marsh landscape;
- Reinforce the pattern of drainage ditches with appropriate marginal planting and establishing a sensitive interface with the wider marsh landscape;
- Provide connectivity with wider blue and green infrastructure networks;
- Protect existing vegetation wherever possible;
- Consider opportunities for advanced planting to provide early establishment of woodland planting;
- Provide an integrated drainage solution with attenuation ponds and swales, planted with marginal wetland species set within a wider context of marshland and native scrub planting to improve the biodiversity value within the site; and
- Monitoring and maintenance of new planting and seeding to ensure successful establishment.

3.2.9 Preliminary Assessment of Effects

- 3.2.9.1 The preliminary assessment of the effects of the Kent Onshore Scheme described in this section considers the embedded, control and management and mitigation measures described in Section 3.2.8.
- 3.2.9.2 Photomontages have been prepared in accordance with the Landscape Institute's Technical Guidance Note 06-19 (Ref 3.2.30) from all the representative viewpoints other than viewpoint 2, which would only experience views of the landfall. The photomontages are contained in Figure 3.2.8 Representative Viewpoint Photography and Photomontages and show the converter station and substation. This includes Type 1: annotated viewpoint photographs and Type 3: photomontages. Further detail should be referred to within Volume 2, Part 3, Appendix 3.2.A, Photomontage Methodology for the Type 3 photomontages and Landscape Institute's Technical Guidance Note 06-19 (Ref 3.2.30) for the difference between Type 1 and Type 3 visualisations. Note that the approximate location of infrastructure shown on the representative viewpoint photography shows the approximate horizontal extent and does not indicate the size of the proposed infrastructure.
- 3.2.9.3 The following four representative viewpoints have been selected to illustrate the three overhead line HVAC options as Type 3 photomontages, and are shown on **Figure 3.2.8 Representative Viewpoint Photography and Photomontages C, D, F and J**. The landscape and visual chapter for the ES will include the chosen overhead line HVAC OHL option for all relevant representative viewpoints.
 - viewpoint 3;
 - viewpoint 4;
 - viewpoint 6; and
 - viewpoint 10.
- 3.2.9.4 The preliminary landscape and visual assessment of the effects of the Kent Onshore Scheme is presented in the following tables. The landscape and visual value judgements are explained within the landscape and visual baseline sections of this chapter of the PEIR, see Section 3.2.7 and **Volume 2, Part 3, Appendix 3.2.B, Landscape and Visual Baseline**. Receptors have been grouped based on similarities in potential effects from the Kent Onshore Scheme. For the landscape and visual chapter within the ES, receptors will be assessed individually for all relevant potential impacts and project phases.
- 3.2.9.5 The landscape and visual chapter within the ES will also include a summary of potential effects on the visual receptor groups within the study area, as outlined in the baseline above, as well as the representative viewpoints as set out below.
- 3.2.9.6 The operational preliminary assessment of effects as follows is focused on year 1 in which mitigation planting is assumed to be minimal and not established. The year 15 assessment within the landscape and visual chapter in the ES will include reference to anticipated growth rates of mitigation vegetation. A precautionary approach will be adopted taking into account the climatic conditions prevalent in Kent.

Construction, Maintenance and Decommissioning

3.2.9.7 Table 3.2.18 presents the preliminary assessment of landscape character effects at construction, maintenance and decommissioning for TDLCA LCA F1 and G1, DDLCA LCA C1 and SCADS C3C and C5A / I1A.

Table 3.2.18: Preliminary assessment of landscape character effects at construction, maintenance and decommissioning for TDLCA LCA F1 and G1, DDLCA LCA C1 and SCADS C3C and C5A / I1A

	Preliminary assessment
Receptor	TDLCA LCA F1 and G1, DDLCA LCA C1 and SCADS C3C and C5A / I1A
Potential Impact	Temporary alteration to landscape character from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting
Proposed Project phase	Construction, maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03

	Preliminary assessment
Preliminary sensitivity	Value: High
	Susceptibility: Very high due to nature and the type of development and the relatively open landscape with less ability to accommodate the anticipated type of change.
	Sensitivity: Very high
Preliminary magnitude	The flat expanses of marsh and mudflat within the LCAs and SCAs would be directly unaffected by the construction of the landfall as a trenchless crossing technique would be used beneath the highly valuable ecologically designated land. Construction activity associated with the construction compound at the landfall would temporarily influence the character along the foreshore. Recreational activities would, however, remain unaffected.
	The cable laying barges present within Pegwell Bay for a temporary and short period of time and out at sea would not affect the characteristic long, panoramic views seaward as they would be within the context of the existing perception of offshore views of wind farms, recreational vessels within the nearshore waters and heavily developed coastal hinterland. The duration of change for all activity would be short-term.
	Associated lighting is expected to be localised and limited to temporary periods at the landfall construction compound or on the cable barges. The three different HVAC OHL options would not result in a difference in magnitude at construction as their construction would have no effect on the setting or perceptual qualities of these LCAs.
	Magnitude: Minor
Preliminary likely significance of effect	Effect: Not Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.8 Table 3.2.19 presents the preliminary assessment of landscape character effects at construction, maintenance and decommissioning for TDLCA LCA E1 and B1 and DDLCA LCA A2.

Table 3.2.19: Preliminary assessment of landscape character effects at construction, maintenance and decommissioning for TDLCA LCA B1 and E1 and DDLCA LCA A2

	Preliminary assessment
Receptor	TDLCA LCA B1 and E1 and DDLCA LCA A2
Potential Impact	Temporary alteration to landscape character from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting
Proposed Project phase	Construction, maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03
Preliminary sensitivity	Value: Medium Susceptibility: Medium due to the large-scale field pattern with the ability to accommodate the type of development proposed. The distinctive and functional drainage ditches increase the susceptibility. The sparse tree cover and dispersed blocks of woodland, the presence of the nearby Richborough Energy Park and the existing OHL lessen the susceptibility.
	Sensitivity: Medium
Preliminary magnitude	Existing landscape elements that would be lost are predominantly limited to hedgerow removal along field boundaries and loss of arable and pastoral land as a result of the construction of the HVDC corridor and the converter station and substation. Tall construction plant would be apparent within the context of the existing OHL and the nearby Richborough Energy Park and activity would take place in a small part of LCA E1 and A2, which would lessen the potential impact. The tall construction plant and stockpiles of materials may temporarily limit localised long-distance views towards the coastline. Construction compounds would be located within the LCA B1 and E1 which would result in the temporary land use change from arable land use but would respect the characteristic pattern of drainage ditches.
	Construction traffic would be out of character in parts of the LCAs where they are currently largely undeveloped. There would be some temporary direct and perceptual changes to recreational use across the LCAs due to the

	Preliminary assessment
	presence of construction plant, for example associated with the construction of the HVAC OHL adjacent to the Saxon Shore Way recreational route adjacent to the River Stour. The duration of change for all activity would be short-term.
	Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction as a similar extent of the LCA and construction machinery and activity is likely for all three. Magnitude: Medium
Preliminary likely significance of effect	Effect: Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.9 Table 3.2.20 presents the preliminary assessment of landscape character effects at construction, maintenance and decommissioning for DDLCA B1, D1 and H1.

Table 3.2.20: Preliminary assessment of landscape character effects at construction, maintenance and decommissioning for DDLCA B1, D1 and H1

	Preliminary assessment
Receptor	DDLCA B1, D1 and H1
Potential Impact	Temporary alteration to landscape character from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting.
Proposed Project phase	Construction, maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03
Preliminary sensitivity	Value for LCA B1: Low Value for LCA D1: Medium Value for LCA H1: High

	Preliminary assessment
	Susceptibility for LCA B1: Medium due to infrastructure already present within the majority of the LCA but acknowledging the broad-leaved trees which are characteristic across the LCA and are more susceptible to the type of development proposed. Susceptibility for LCA D1 and H1: High due to small- scale fields across the LCA for H1 and in parts across LCA D1, which are less able to accommodate the scale of the type of development proposed and may result in more vegetation removal. Sensitivity for LCA B1: Medium Sensitivity for LCA D1: High Sensitivity for LCA H1: High
Preliminary magnitude	The only direct change associated with the Kent Onshore Scheme is the draft Order Limits extending partially into LCA H1 to facilitate construction access to the HVAC OHL, including mobilisation and light vehicles. This would affect a small geographical extent of the LCA. The construction of the HVDC and HVAC corridors, converter station and substation would result in indirect effects on the setting and perceptual aspects of these LCAs with inter-visibility with tall construction plant apparent across the open landscape. This would also be within the context of existing industrial development at Richborough and limited in the more enclosed areas of the LCAs. The duration of change for all activity would be short-term. Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.
Preliminary likely significance of effect	Effect: Not Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.10 Table 3.2.21 presents the preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 2, 7, 13 and 14.

Table 3.2.21: Preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 2, 7, 13 and 14

	Preliminary assessment
Receptor	Representative viewpoints 2, 7, 13 and 14
Potential Impact	Temporary alteration to visual amenity from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting.
Proposed Project phase	Construction, maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03
Preliminary sensitivity	Value for viewpoints 2 and 7: High Value for viewpoints 13 and 14: Medium
	Susceptibility for viewpoints 2, 7, 13 and 14: Very High due to the activity of those recreational users experiencing the view, including within Pegwell Bay Country Park, NCN, along the England Coast Path, coastal margin land and the Stour Valley Walk recreational route, where views are an important part of the experience towards the coastline.
	Sensitivity for viewpoints 2 and 7: Very High Sensitivity for viewpoints 13 and 14: High
Preliminary magnitude	The cable laying barges present within Pegwell Bay for a temporary and short period of time and out at sea would be visible for viewpoints 2, 7 and 14, and largely screened by viewpoint 13 due to intervening coniferous trees but may be visible at other points along the various recreational routes and settlement edge of Ramsgate. This would be within the context of the urbanised coastline which would not detract from the current composition of the views.
	Views of tall construction plant associated with the construction of the converter station, substation and OHL HVAC cable may break the skyline in the distance but would be barely discernible above the intervening existing built form and vegetation and would be in the context of other vertical infrastructure at a similar distance. Such activity would comprise a very small

	Preliminary assessment
	proportion of the typically panoramic coastal views. The duration of change for all activity would be short-term.
	Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.
	Magnitude: Small
Preliminary likely significance of effect	Effect: Not Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.11 Table 3.2.22 presents the preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 8 and 9. Noting that viewpoint 8 would be moved to the viewing platform at Richborough Fort for the DCO submission. The viewing platform was not accessible when undertaking winter site photography for the purposes of the PEIR. Viewpoint 8 presented within the PEIR is taken from the public footpath immediately to the north of Richborough Fort.

	Preliminary assessment
Receptor	Representative viewpoints 8 and 9
Potential Impact	Temporary alteration to visual amenity from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting.
Proposed Project phase	Construction, maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03
Preliminary sensitivity	Value for viewpoint 8: High Value for viewpoint 9: Medium

Table 3.2.22: Preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 8 and 9

	Preliminary assessment
	Susceptibility: Very High due to the activity of those recreational users experiencing the view at Richborough Fort and residential receptors along Richborough Road.
	Sensitivity: High
Preliminary magnitude	Views of tall construction plant would be visible in the background, which would be partial for viewpoint 9 between and potentially above intervening vegetation. Such views would be more direct of construction plant associated with the OHL, HVAC cable, converter station and substation for viewpoint 8, with some screening due to the layering of vegetation within the wider landscape. The views would be within the context of the existing OHL and other vertical elements in the distance.
	Due to the viewpoint locations being located to the south of the Kent Onshore Scheme, the scale of change associated with the OHL HVAC cable, converter station and substation within the view would be a small proportion of the overall panorama. The construction plant associated with the HVDC cable would be largely screened by intervening vegetation. The duration of change for all activity would be short-term.
	Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.
	Magnitude: Small
	The location of viewpoint 8 on the viewing platform at Richborough Fort would have more elevated views towards construction activity but the magnitude is not expected to differ. The assessment will be refined within the ES.
Preliminary likely significance of effect	Effect: Not Significant
	The location of viewpoint 8 on the viewing platform at Richborough Fort would have more elevated views towards construction activity but the significance of effect is expected to remain Not Significant . The assessment will be refined within the ES.
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.

Preliminary assessment

Confidence in prediction High

3.2.9.12 Table 3.2.23 presents the preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 1, 3, 4, 5, 6 and 10.

Table 3.2.23: Preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 1, 3, 4, 5, 6 and 10

	Preliminary assessment
Receptor	Representative viewpoints 1, 3, 4, 5, 6 and 10
Potential Impact	Temporary alteration to visual amenity from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting
Proposed Project phase	Construction, maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03
Preliminary sensitivity	Value for viewpoint 1: Negligible Value for viewpoint 3: Low Value for viewpoint 4, 5, 6 and 10: Medium Susceptibility for viewpoint 1: Negligible as those using the road or working at the Solar Energy Farm would not be focused on the view and where views are not an important part of the experience. Susceptibility for viewpoint 3: High as viewpoint 3 is located on the Saxon Shore Way recreational route, which includes those whose interest is focused on the view but noting the industrial context in this locality. Susceptibility for viewpoints 4, 5 and 6 are located on a public footpath where users are focused on the view. Susceptibility for viewpoint 4, 5, 6 and 10: High as receptors include a public footpath where users are focused on the view, those using the promoted cycling route Viking Coastal Trail where the visual amenity is an important part of the experience and receptors along the Saxon Shore Way recreational route whose attention is focused on the surroundings.

Sensitivity for viewpoint 1: Negligible

	Preliminary assessment
	Sensitivity for viewpoint 3: Medium
	Sensitivity for viewpoints 4, 5, 6 and 10: High
Preliminary magnitude	For viewpoints 1, 3, 5, 6 and 10, views of tall construction plant associated with the OHL, HVAC cable, converter station and substation would be visible in the middle ground and distance above intervening vegetation and built form. This would break the skyline, in the context of other vertical infrastructure also breaking the skyline in close proximity, including a turbine, electricity masts and the existing OHL.
	For all viewpoints, tall construction plant associated with the HVDC cable and landfall may be visible above intervening built form and vegetation, resulting in a proportion of the view including construction activity, dependent on phasing.
	Construction compounds are not likely to be visible from viewpoints 1, 3, 6 and 10 due to intervening mature vegetation and built form. For viewpoint 4, the construction compounds to the north of the converter station and substation would be directly visible in the middle ground beyond the large-scale field enclosure where the viewpoint is located. This would be a non- typical feature not currently in the view which comprises agricultural fields. For viewpoint 5, views of the construction compounds to the north of the converter station and substation would be partially visible in the distance. The duration of change for all activity would be short-term.
	Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.
	Magnitude for viewpoints 1, 3, 5, 6 and 10: Small Magnitude for viewpoint 4: Medium
Preliminary likely significance of effect	Effect for viewpoints 1, 3, 5, 6 and 10: Not Significant Effect for viewpoint 4: Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.13 Table 3.2.24 presents the preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 11 and 12.

	Preliminary assessment
Receptor	Representative viewpoints 11 and 12
Potential Impact	Temporary alteration to visual amenity from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting.
Proposed Project phase	Construction maintenance and decommissioning
Duration	Short-term
Mitigation	GG03, GG05, GG07, GG08, GG09, GG19, GG21, GG25, LV01, LV02, LV03, LV04, LV05, B04, B07, W03 and TT03
Preliminary sensitivity	Value for viewpoints 11 and 12: Medium Susceptibility: Very High due to nearby residential receptors whose interest is focused on their surroundings.
	Sensitivity for viewpoints 11 and 12: High
Preliminary magnitude	For viewpoint 11, tall construction plant would represent a noticeable change in the distance and would largely be set against the wooded backdrop, potentially breaking the skyline in places. Such activity would be within the context of various energy related built form in the distance, including Richborough Energy Park and vertical infrastructure including the wind turbine and the existing OHL. This is not considered to alter the overall composition of the view and would represent a minor part of the overall panorama.
	For viewpoint 12, the tall construction plant would be an unobtrusive change in the composition of the view due to intervening built form associated with Minster and vegetation.
	For viewpoint 11, construction compounds would be visible in a minor part of the panorama, set partially beyond the layered vegetation in the wider landscape. For viewpoint 12, construction compounds are likely to

Table 3.2.24: Preliminary assessment of visual amenity effects at construction, maintenance and decommissioning for representative viewpoints 11 and 12

be fully screened by intervening mature vegetation and built form.The construction plant associated with the HVDC cable would be largely screened by intervening vegetation. The duration of change for all activity would be short- term.Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.Preliminary likely significance of effectEffect for viewpoints 11 and 12: Not Significant assessed if the construction were to commence in any year up to year five.Confidence in predictionHigh		Preliminary assessment
The construction plant associated with the HVDC cable would be largely screened by intervening vegetation. The duration of change for all activity would be short- term.Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.Preliminary likely significance of effectEffect for viewpoints 11 and 12: Not SignificantSensitivity TestThere would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.Confidence in predictionHigh		be fully screened by intervening mature vegetation and built form.
Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.Preliminary likely significance of effectEffect for viewpoints 11 and 12: Not SignificantSensitivity TestThere would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.Confidence in predictionHigh		The construction plant associated with the HVDC cable would be largely screened by intervening vegetation. The duration of change for all activity would be short- term.
Magnitude for viewpoint 11 and 12: SmallPreliminary likely significance of effectEffect for viewpoints 11 and 12: Not SignificantSensitivity TestThere would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.Confidence in predictionHigh		Associated lighting is expected to be localised and limited to temporary periods. The three different HVAC OHL options would not result in a difference in magnitude at construction.
Preliminary likely significance of effectEffect for viewpoints 11 and 12: Not SignificantSensitivity TestThere would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.Confidence in predictionHigh		Magnitude for viewpoint 11 and 12: Small
Sensitivity TestThere would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.Confidence in predictionHigh	Preliminary likely significance of effect	Effect for viewpoints 11 and 12: Not Significant
Confidence in prediction High	Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
	Confidence in prediction	High

Operation

3.2.9.14 Table 3.2.25 presents the preliminary assessment of landscape character effects at operation for TDLCA LCA B1 and E1 and DDLCA LCA A2.

Table 3.2.25: Preliminary assessment of landscape character effects at operation for TDLCA LCA B1 and E1 and DDLCA LCA A2

	Preliminary assessment
Receptor	TDLCA LCA B1 and E1 and DDLCA LCA A2
Potential Impact	Permanent alteration to landscape character as a result of the operational converter station, substation, HVAC OHL and HVDC cable corridor. Permanent alteration to landscape character for directional lighting associated with the converter station and substation.
Proposed Project phase	Operation
Duration	Long-term
Mitigation	See embedded and mitigation measures described in Section 3.2.8.
Preliminary sensitivity	Value: Medium

	Preliminary assessment
	Susceptibility: Medium due to the large-scale field pattern with the ability to accommodate the type of development proposed. The distinctive and functional drainage ditches increase the susceptibility. The sparse tree cover and dispersed blocks of woodland, the presence of the nearby Richborough Energy Park and the existing OHL lessen the susceptibility. Sensitivity: Medium
Preliminary magnitude	Sensitivity: Medium The new permanent infrastructure would be limited to the converter station, substation and overhead HVAC cable, which would result in a permanent land use change from arable fields and new energy infrastructure to the north of Richborough Energy Park. Direct loss of these landscape elements will be small scale and of a localised geographical extent within a relatively small part of the LCA. This change would respect the pattern of drainage ditches and field patterns. It would, however, appear slightly separate from the cluster of energy infrastructure at the Energy Park although within the broad landscape context. The overhead HVAC cable would be within the context of the existing OHL. The HVAC cable would result in new pylons closer to the River Stour and Saxon Shore Way recreational route for a small section, resulting in localised perceptual change. The introduction of additional towers, of potentially varying heights compared with the existing OHL, would locally increase the wirescape. There may be a very small loss of trees associated with the HVDC corridor, otherwise the former land use and he dwareners would be of the wise the former land use and
	 hedgerows would be fully reinstated which may take a short period to re-establish immediately following construction. There are opportunities to include native woodland planting on the northern edge of the converter station and substation to provide landscape integration and partial screening to further integrate the Kent Onshore Scheme within the landscape and reduce perceptual changes as this matures. Native woodland planting along the southern edge of the converter station and substation site would be strengthened along the boundary of the SSSI further providing ecological benefit and strengthening screen planting in views from the

Preliminary assessment

south especially the heritage assets at Richborough Roman Fort.

Opportunities to enhance the riparian vegetation along the River Stour and some of the drainage ditches would provide further local landscape benefit. The mitigation planting would respect and conserve long distance views across the marshes and towards Pegwell Bay. The landscape planting once established would provide containment to the permanent infrastructure of the Kent Onshore Scheme, ensuring that the overall sense of identity and distinctiveness imbued in the marshland landscape is retained. The duration of change for all activity would be long-term.

Permanent external lighting at Minster Converter Station would likely comprise security lighting on sensors and low level egress lighting. This is not considered to significantly affect the landscape character given the converter and substation sites will predominantly appear as a dark site.

The lower height HVAC OHL option (option 1) would result in a relatively higher concentration of additional towers than the two standard height options (options 2 and 3). The proposed OHL towers would be located within an area already including a concentration of OHL and towers and resulting wirescape, but would not be discernible in terms of the magnitude of change between the options.

The two permanent access options would not be discernible in terms of the magnitude of change between the options.

	Magnitude for LCA B1: Small Magnitude for LCA E1 and A2: Medium
Preliminary likely significance of effect	Effect for B1: Not Significant Effect for E1 and A2: Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.15 Table 3.2.26 presents the preliminary assessment of landscape character effects at operation for DDLCA B1, D1 and H1.

Table 3.2.26: Preliminary assessment of landscape character effects at operation for DDLCA B1, D1 and H1

	Preliminary assessment
Receptor	DDLCA B1, D1 and H1
Potential Impact	Permanent alteration to landscape character as a result of the operational converter station, substation, HVAC OHL and HVDC cable corridor. Permanent alteration to landscape character for directional lighting associated with the converter station and substation.
Proposed Project phase	Operation
Duration	Long-term
Mitigation	See embedded and mitigation measures described in Section 3.2.8.
Preliminary sensitivity	Value for LCA B1: Low Value for LCA D1: Medium Value for LCA H1: High Susceptibility for LCA B1: Medium due to infrastructure already present within the majority of the LCA but acknowledging the broad-leaved trees which are characteristic across the LCA and are more susceptible to the type of development proposed. Susceptibility for LCA D1 and H1: High due to small- scale fields across the LCA for H1 and in parts across LCA D1, which are less able to accommodate the scale of the type of development proposed and may result in more vegetation removal. Sensitivity for LCA B1: Medium Sensitivity for LCA D1: High Sensitivity for LCA H1: High
Preliminary magnitude	Effects on the setting of the LCAs and perceptual aspects would be limited and would include inter- visibility with new energy infrastructure in the context of Richborough Energy Park and the existing OHL. The duration of change for all activity would be long-term. Permanent external lighting at Minster Converter Station would likely comprise security lighting on sensors and low-level egress lighting. The lower height HVAC OHL option (option 1) would result in a relatively higher concentration of additional pylons than the two standard

	Preliminary assessment
	height options (options 2 and 3). The proposed OHL pylons would be located within an area already including a concentration of OHL pylons and would not be discernible in terms of the magnitude of change between the options.
	The two permanent access options would not be discernible in terms of the magnitude of change between the options.
	Magnitude: Negligible
Preliminary likely significance of effect	Effect: Not Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.16 Table 3.2.27 presents the preliminary assessment of visual amenity effects at operation for representative viewpoints 2, 7, 13 and 14.

Table 3.2.27: Preliminary assessment of visual amenity effects at operation for representative viewpoints 2, 7, 13 and 14

	Preliminary assessment
Receptor	Representative viewpoints 2, 7, 13 and 14
Potential Impact	Permanent alteration to visual amenity as a result of the operational converter station, substation, HVAC OHL and HVDC cable corridor. Permanent alteration to visual amenity for directional lighting associated with the converter station and substation.
Proposed Project phase	Operation
Duration	Long-term
Mitigation	See embedded and mitigation measures described in Section 3.2.8.
Preliminary sensitivity	Value for viewpoints 2 and 7: High Value for viewpoints 13 and 14: Medium Susceptibility for viewpoints 2, 7, 13 and 14: Very High due to the activity of those recreational users experiencing the view, including within Pegwell Bay Country Park, NCN, along the England Coast Path,

	Preliminary assessment
	recreational route, where views are an important part of the experience towards the coastline.
	Sensitivity for viewpoints 2 and 7: Very High
	Sensitivity for viewpoints 13 and 14: High
Preliminary magnitude	Operational infrastructure, comprising the converter station, substation and OHL HVAC cable are unlikely to be visible for viewpoints 2, 7 and 14 due to distance and intervening vegetation and landform. It is also unlikely that any potential re-establishment of vegetation associated with the HVDC cable would not be visible in views due to intervening built form and vegetation.
	The operational converter station and substation would be visible at a distance along the skyline from viewpoint 13. This would be set behind the existing built form and vegetation surrounding Cliffsend and would occupy a negligible part of the overall wide panorama which would be focused on the coastline. The new infrastructure would be seen within the context of other vertical elements at a similar distance, which appear closer to the coastline, and would not obstruct views towards Pegwell Bay. As above, it is unlikely that any potential re-establishment of vegetation associated with the HVDC cable would be visible. The duration of change for all activity would be long-term.
	Permanent external lighting at Minster Converter Station would likely comprise security lighting on sensors and low-level egress lighting. The lower height HVAC OHL option (option 1) would result in a relatively higher concentration of additional pylons than the two standard height options (options 2 and 3). The proposed OHL pylons would be visible within the context of the existing OHL pylons and would not be discernible in terms of the magnitude of effect between the options.
	The options.
	Magnitude for viewpoint 13: Negligible
Preliminary likely significance of effect	Effect: Not Significant

	Preliminary assessment
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.17 Table 3.2.28 presents the preliminary assessment of visual amenity effects at operation for representative viewpoints 8 and 9. Noting that viewpoint 8 would be moved to the viewing platform at Richborough Fort for the DCO submission. The viewing platform was not accessible when undertaking winter site photography for the purposes of the PEIR. viewpoint 8 presented within the PEIR is taken from the public footpath immediately to the north of Richborough Fort.

	Preliminary assessment
Receptor	Representative viewpoints 8 and 9
Potential Impact	Permanent alteration to visual amenity as a result of the operational converter station, substation, HVAC OHL and HVDC cable corridor. Permanent alteration to visual amenity for directional lighting associated with the converter station and substation.
Proposed Project phase	Operation
Duration	Long-term
Mitigation	See embedded and mitigation measures described in Section 3.2.8.
Preliminary sensitivity	Value for viewpoint 8: High Value for viewpoint 9: Medium Susceptibility: Very High due to the activity of those recreational users experiencing the view at Richborough Fort and residential receptors along Richborough Road.
—	
Preliminary magnitude	There would be distant views within a small part of the overall panorama to the converter station, substation and HVAC OHL cable. The converter station and substation would be set against the rising landform to the north and the HVAC OHL would break the skyline, in the context of other vertical infrastructure in the background, including the existing OHL. Such views would be direct but unobtrusive for viewpoint 8 and would be barely perceptible for viewpoint 9 due to

Table 3.2.28: Preliminary assessment of visual amenity effects at operation for representative viewpoints 8 and 9

	Preliminary assessment
	intervening mature vegetation layered in the surrounding landscape.
	It is unlikely that any potential re-establishment of vegetation associated with the HVDC cable would be visible due to intervening vegetation. The duration of change for all activity would be long-term.
	Permanent external lighting at Minster Converter Station would likely comprise security lighting on sensors and low-level egress lighting. The lower height HVAC OHL option (option 1) would result in a relatively higher concentration of additional pylons than the two standard height options (options 2 and 3). The proposed OHL pylons would be visible within the context of the existing OHL pylons and would not be discernible in terms of the magnitude of effect between the options.
	The two permanent access options would not be discernible in terms of the magnitude of change between the options.
	Magnitude for viewpoint 8: Small
	Magnitude for viewpoint 9: Negligible
Preliminary likely significance of effect	Effect: Not Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.18 Table 3.2.29 presents the preliminary assessment of visual amenity effects at operation for representative viewpoints 1, 3, 4, 5, 6 and 10.

Table 3.2.29: Preliminary assessment of visual amenity effects at operation for representative viewpoints 1, 3, 4, 5, 6 and 10

	Preliminary assessment
Receptor	Representative viewpoints 1, 3, 4, 5, 6 and 10
Potential Impact	Permanent alteration to visual amenity as a result of the operational converter station, substation, HVAC OHL and HVDC cable corridor. Permanent alteration to visual amenity for directional lighting associated with the converter station and substation.
Proposed Project phase	Operation

	Preliminary assessment		
Duration	Long-term		
Mitigation	See embedded and mitigation measures described in Section 3.2.8.		
Preliminary sensitivity	Value for viewpoint 1: Negligible Value for viewpoint 3: Low Value for viewpoint 4, 5, 6 and 10: Medium		
	Susceptibility for viewpoint 1: Negligible as those using the road or working at the Solar Energy Farm would not be focused on the view and where views are not an important part of the experience. Susceptibility for viewpoint 3: High as viewpoint 3 is located on the Saxon Shore Way recreational route, which includes those whose interest is focused on the view but noting the industrial context in this locality. Susceptibility for viewpoints 4, 5 and 6 are located on a public footpath where users are focused on the view. Susceptibility for viewpoint 4, 5, 6 and 10: High as receptors include a public footpath where users are focused on the view, those using the promoted cycling route Viking Coastal Trail where the visual amenity is an important part of the experience and receptors along the Saxon Shore Way recreational route whose attention is focused on the surroundings.		
	Sensitivity for viewpoint 1: Negligible Sensitivity for viewpoints 3 and 5: Medium Sensitivity for viewpoints 4, 5, 6 and 10: High		
Preliminary magnitude	For viewpoints 1, 3, 6 and 10, views of the converter station and substation would be visible above the treeline, breaking the skyline and would appear within the context of existing built form and other vertical infrastructure in the view. For viewpoints 1 and 6, the converter station and substation would appear taller and wider than the existing built form within the view. For viewpoint 3, the converter station and substation would appear at a similar height to the landform rising to the north of the A299.		
	For viewpoint 4, the converter station and substation would be large-scale, new energy infrastructure displacing arable fields in the middle-ground. This would be a noticeable change in the landscape and whilst it would be within the context of other vertical elements and energy infrastructure in the view, it would appear closer to the receptor.		

Preliminary assessment

For viewpoint 1, the OHL HVAC cable would be visible beyond the electricity masts and wind turbine and would appear lower in height and barely perceptible. For viewpoints 3, 5, 6 and 10, the OHL HVAC cable would appear in the background at a lower height than the existing OHL. This would not alter the composition of the view already dominated by vertical, energy infrastructure. For viewpoint 4, the OHL HVAC cable would largely be screened by the converter station and substation.

It is unlikely that any potential re-establishment of vegetation associated with the HVDC cable would be perceptible due to intervening vegetation and built form. There are opportunities to include native woodland planting on the northern edge of the converter station and substation to soften views as this matures, as well as enhancement of riparian vegetation along the River Stour. The duration of change for all activity would be long-term.

Permanent external lighting at Minster Converter Station would likely comprise security lighting on sensors and low level egress lighting. The lower height HVAC OHL option (option 1) would result in a relatively higher concentration of additional pylons than the two standard height options (options 2 and 3). The proposed OHL pylons would be visible within the context of the existing OHL pylons and would not be discernible in terms of the magnitude of effect between the options.

The two permanent access options would not be discernible in terms of the magnitude of change between the options.

	Magnitude for viewpoints 1, 3, 5, 6 and 10: Small Magnitude for viewpoint 4: Medium
Preliminary likely significance of effect	Effect for viewpoints 1, 3, 5, 6 and 10: Not Significant Effect for viewpoint 4: Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.9.19 Table 3.2.30 presents the preliminary assessment of visual amenity effects at operation for representative viewpoints 11 and 12.

Table 3.2.30: Preliminary assessment of visual amenity effects at operation for representative viewpoints 11 and 12

	Preliminary assessment		
Receptor	Representative viewpoints 11 and 12		
Potential Impact	Permanent alteration to visual amenity as a result of the operational converter station, substation, HVAC OHL and HVDC cable corridor. Permanent alteration to visual amenity for directional lighting associated with the converter station and substation		
Proposed Project phase	Operation		
Duration	Long-term		
Mitigation	See embedded and mitigation measures described in Section 3.2.8.		
Preliminary sensitivity	Value for viewpoint 11 and 12: Medium		
	Susceptibility: Very High due to nearby residential receptors whose interest is focused on their surroundings.		
	Sensitivity for viewpoint 11 and 12: High		
Preliminary magnitude	For viewpoint 11, the converter station and substation would be visible in the distance, set against the wooded backdrop, and would represent a new extent of energy infrastructure in the place of agricultural fields. Views of the converter station and substation would be screened in part by intervening vegetation, but views would largel be direct. Views would be within the context of other vertical elements and energy infrastructure in the distance. Views of the OHL HVAC route would be barel perceptible.		
	For viewpoint 12, views of the converter station, substation and OHL HVAC would be barely perceptible in the distance set against a wooded backdrop and within the context of the settlement on Minster in the middle ground and vertical elements in the distance.		
	It is unlikely that any potential re-establishment of vegetation associated with the HVDC cable would be visible. There are opportunities to include native woodland planting on the northern edge of the converter station and substation to soften views as this matures, as well as enhancement of riparian vegetation along the		

	Preliminary assessment
	River Stour. The duration of change for all activity would be long-term.
	Permanent external lighting at Minster Converter Station would likely comprise security lighting on sensors and low level egress lighting. The lower height HVAC OHL option (option 1) would result in a relatively higher concentration of additional pylons than the two standard height options (options 2 and 3). The proposed OHL pylons would be visible within the context of the existing OHL pylons and would not be discernible in terms of the magnitude of change between the options.
	The two permanent access options would not be discernible in terms of the magnitude of change between the options.
	Magnitude for viewpoint 11: Small Magnitude for viewpoint 12: Negligible
Preliminary likely significance of effect	Effect for viewpoint 11 and 12: Not Significant
Sensitivity Test	There would be no difference in the preliminary effects assessed if the construction were to commence in any year up to year five.
Confidence in prediction	High

3.2.10 **Summary**

- 3.2.10.1 Table 3.2.31 below presents a summary of the preliminary assessment of landscape character and visual amenity effects at construction, maintenance and decommissioning.
- 3.2.10.2 Likely significant effects have been identified during construction, maintenance and decommissioning in relation to TDLCA LCAs B1, E1 and A2 and DDLCA LCA A2 and at viewpoint 4.

Table 3.2.31: Summary of the preliminary assessment of landscape character and visual amenity effects at construction, maintenance and decommissioning

Receptor	Sensitivity	Magnitude	Significance of Effect
TDLCA LCA F1 and G1, DDLCA LCA C1 and SCADS C3C and C5A / I1A	Very High	Minor	Not Significant

Receptor	Sensitivity	Magnitude	Significance of Effect
TDLCA LCA B1 and E1 and DDLCA LCA A2	Medium	Medium	Significant
DDLCA B1	Medium	Small	Not Significant
DDLCA D1	High	Small	Not Significant
DDLCA H1	High	Small	Not Significant
Viewpoints 2 and 7	Very High	Small	Not Significant
Viewpoints 13 and 14	High	Small	Not Significant
Viewpoint 8	High	Small	Not Significant
Viewpoint 9	High	Small	Not Significant
Viewpoint 1	Negligible	Small	Not Significant
Viewpoint 3	Medium	Small	Not Significant
Viewpoint 4	High	Medium	Significant
Viewpoint 5, 6 and 10	High	Small	Not Significant
Viewpoints 11 and 12	High	Small	Not Significant

- 3.2.10.3 Table 3.2.32 below presents a summary of the preliminary assessment of landscape character and visual amenity effects at operation.
- 3.2.10.4 Likely significant effects have been identified during operation (Year 1) in relation to TDLCA LCA E1 and DDLCA LCA A2 and viewpoint 4.

Table 3.2.32: Summary of the preliminary assessment of landscape character and visual amenity effects at operation

Receptor	Sensitivity	Magnitude	Significance of Effect
TDLCA LCA B1	Medium	Small	Not Significant
TDLCA LCA E1 and DDLCA LCA A2	Medium	Medium	Significant
DDLCA B1	Medium	Negligible	Not Significant
DDLCA D1	High	Negligible	Not Significant
DDLCA H1	High	Negligible	Not Significant
Viewpoints 2 and 7	Very High	None	Not Significant
Viewpoint 13	High	Negligible	Not Significant
Viewpoint 14	High	None	Not Significant
Viewpoint 8	High	Small	Not Significant
Viewpoint 9	High	Negligible	Not Significant
Viewpoint 1	Negligible	Small	Not Significant

Receptor	Sensitivity	Magnitude	Significance of Effect
Viewpoint 3	Medium	Small	Not Significant
Viewpoint 4	High	Medium	Significant
Viewpoint 5, 6 and 10	High	Small	Not Significant
Viewpoint 11	High	Small	Not Significant
Viewpoint 12	High	Negligible	Not Significant

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