The Great Grid Upgrade

Sea Link

Additional Preliminary Environmental Information

Version A

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nationalgrid

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1. Additional Preliminary Environmental Information

1.1 Introduction

1.1.1 This report provides further Preliminary Environmental Information ('additional PEI') to support the Project Update Document. It sets out the potential for any additional or different likely significant environmental effects associated with the proposed changes to Sea Link (hereafter referred to as the 'Proposed Project'), comparing against those presented within the Preliminary Environmental Information Report ('original PEIR') produced in October 2023 and presented at statutory consultation.

1.1.2 As this report discusses the potential changes to effects identified in the original PEIR, it is recommended that the original PEIR (and its appendices and figures) is reviewed alongside this additional PEI.

1.2 Environmental Impact Assessment

1.2.1 Environmental Impact Assessment (EIA) is a process that is used to identify the likely significant effects that could occur as a result of a project. The information gathered is taken into account by the decision-making body when determining the application for consent. Three main EIA documents are produced as part of the Nationally Significant Infrastructure Project (NSIP) pre-application process:

- Scoping Report: This sets out the likely significant environmental effects from the Proposed Project and proposes the scope (approach and methodology) of the EIA bearing in mind those identified effects. To inform the identification of likely significant environmental effects it presents the data collected to reach those conclusions. National Grid submitted the Scoping Report for the Proposed Project to the Planning Inspectorate in October 2022. The Planning Inspectorate provided a Scoping Opinion (a document concluding their thoughts on the potential for significant environmental effects and what they would want to see as part of an EIA) on behalf of the Secretary of State in December 2022. This included a number of items to be considered when producing the Environment Statement (ES) and the application for development consent.
- Preliminary Environment Information (PEI) Report: This sets out the information that is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the Proposed Project. The original PEIR was published in October 2023 and was used by consultees to inform their consultation responses during the statutory consultation.
- Environmental Statement (ES): The ES is a document that presents the results of the EIA undertaken for the Proposed Project. It identifies the likely significant environmental effects that may result if the Proposed Project were to be implemented, and any proposed mitigation to avoid or reduce those significant environmental effects to a non-significant level (where possible). The ES will be

submitted as part of the application for development consent and will be taken into account during the decision-making process.

1.2.2 An Outline Code of Construction Practice (PEIR Volume 2 Part 1 Appendix 1.4.A) (hereafter referred to as the Outline CoCP) was published as part of the original PEIR during the statutory consultation. This includes the general principles and good practice control and management measures that National Grid Electricity Transmission plc (hereafter referred to as 'National Grid') has made to reduce the construction effects of the Proposed Project on the environment. A final version will be submitted with the ES and the application for development consent. Commitments contained within the Outline CoCP also apply to the changes that are now being proposed to the Proposed Project.

1.2.3 National Grid is also in the process of drafting a suite of management plans for the Proposed Project. These will include further details of how the Proposed Project would be manged during construction, should consent be granted. Management plans and other related documents that will be incorporated as part of the application for development consent, will include but not necessarily be limited to the following (separate plans will be produced for Suffolk and Kent, where relevant):

- Offshore Construction Environmental Management Plan;
- Onshore Construction Environmental Management Plan;
- Outline Landscape and Ecological Management Plan;
- Outline Construction Traffic Management and Travel Plan;
- Outline Air Quality Management Plan;
- Outline Soil Management Plan;
- Outline Noise and Vibration Management Plan;
- Outline Public Rights of Way (PRoW) Management Plan;
- Onshore Written Scheme of investigation (WSI);
- Offshore Written Scheme of Investigation (WSI);
- Marine Archaeological Method Statements;
- Outline Marine Mammal Mitigation Plan;
- Outline Invasive Non-Native Species Management Plan;
- Marine Biosecurity Plan;
- Red Throated Diver Best-Practice Protocol; and
- Greenhouse Gas Management Plan.

1.3 Description of the Proposed Project and Changes Since Statutory Consultation

1.3.1 The plans for the Proposed Project as a whole remain the same as presented during the statutory consultation. The proposals for the Suffolk Onshore Scheme include:

- a connection from the existing transmission network via the proposed Friston substation, including the National Grid part of the substation itself;

- approximately 1.9 kilometres (km) of high voltage alternating current (HVAC) underground cable between the proposed Friston substation and a proposed converter station;
- a 2 Gigawatt (GW) high voltage direct current (HVDC) converter station near Saxmundham;
- approximately 10 km of HVDC underground cable between the proposed converter station near Saxmundham and a transition joint bay approximately 900 metres (m) inshore from landfall, where the cable transitions between onshore and offshore technology; and
- a landfall on the Suffolk coast, between Aldeburgh and Thorpeness.

1.3.2 The proposals for the Offshore Scheme include:

- a subsea HVDC cable route approximately 122 km in length between the Suffolk landfall location and the Kent landfall location.

1.3.3 The proposals for the Kent Onshore Scheme include:

- a landfall point on the Kent coast at Pegwell Bay;
- a transition joint bay approximately 800 m inshore, where the cable transitions between offshore and onshore technology, and approximately 2 km of HVDC underground cable to a proposed converter station near Minster;
- a 2 GW HVDC converter station and substation near Minster; and
- removal of up to 2.2 km of existing HVAC overhead line, and installation or approximately 3.5 km of new HVAC overhead line between the new converter station and substation near Minster and the existing Richborough to Canterbury 400 kV overhead line.

1.3.4 The additional PEI concentrates on the main changes which are proposed across the three aspects of the Proposed Project (Suffolk Onshore Scheme, Kent Onshore Scheme and the Offshore Scheme).

1.3.5 Changes proposed to the Suffolk Onshore Scheme include an alteration to the cable route north of Aldeburgh, confirmation of the proposed access route to the Saxmundham Converter Station and changes to the selected access route and associated bridge over the River Fromus. There are also various proposed changes to construction and maintenance access routes, compounds, and temporary overhead line diversions. New areas of land have also been introduced for environmental mitigation and enhancement. The strategy for coordination with other third-party land proposals in the vicinity has also evolved.

1.3.6 Changes proposed to the Offshore Scheme include refinements to the cable route, the introduction of additional marine areas for construction vessel manoeuvring, and changes to the approach for backfilling marine trenches.

1.3.7 Changes proposed to the Kent Onshore Scheme include an increase of the overall maximum height of the Minster Converter Station and confirmation of the type of pylon intended to be used for the connection to the Richborough to Canterbury 400 kV overhead line. A further construction and maintenance access route off Sandwich Road, via the former hoverport, has also been identified. Various other changes to construction and maintenance access routes, compounds and temporary overhead line

diversions are also proposed, as well as new areas of land for environmental mitigation and enhancement.

1.3.8 There is also a proposed change to the construction working hours, to include the possibility of some works being undertaken on Sundays and Bank Holidays as referred to in Section 4: Our Proposals of the Project Update Document.

1.3.9 A range of smaller changes are also proposed, including various refinements, including reductions and increases to the size of the draft Order Limits, which comprise the land required to build and operate the Proposed Project. However, it is considered that such minor changes would not, either individually or in combination, result in any new or different likely significant environmental effects to those presented within the original PEIR. Therefore, they are not considered further in this additional PEI.

1.3.10 Volume 1, Part 1, Chapter 4 Description of the Proposed Project of the original PEIR provides the description of the Proposed Project presented at statutory consultation. For further information, when reviewing the description of the main design changes considered in this additional PEI, refer to Section 4: Our Proposals of the Project Update Document.

1.4 Additional PEI Approach and Method

1.4.1 This report sets out the additional PEI that is relevant in relation to the changes set out in the Project Update Document. The methodology used in this additional PEI follows the same approach that was adopted in the original PEIR (see Volume 1, Part 1, Chapter 5 PEIR Approach and Method). The exception to this is the assessment of co-location with the two National Grid Ventures projects, LionLink and Nautilus, in Suffolk which is no longer embedded as an assessment scenario within the main assessment of the EIA. This is because whilst the Proposed Project continues to allow space in the surrounding area for the delivery and potential co-location of key infrastructure associated with these projects (converter stations at Saxmundham and cable corridors), the draft Order Limits have been narrowed such that they no longer encompass the land necessary for those proposed projects. The reasons for this are explained in Section 4: Our Proposals of the Project Update Document. The assessment of the combined impacts of Sea Link, LionLink and Nautilus will be considered within the cumulative effects assessment to be presented in the ES and will be reliant on the information available for those two other projects at the time of assessment, in line with the methodology for assessing other cumulative developments. This is discussed further in Table 1.1 below in relation to Volume 1, Part 2, Chapter 14 Suffolk Onshore Scheme Inter-Project Cumulative Effects.

1.4.2 The additional PEI has been undertaken in accordance with the EIA Regulations 2017 and therefore focuses on the likely significant environmental effects during the construction phase, the operation and maintenance phase and the decommissioning phase that would be material to a decision to consent the Proposed Project. There are generally no anticipated changes to decommissioning to those set out in the original PEIR. Therefore, decommissioning will not be discussed further in this additional PEI, with the exception of a design change discussed in Table 1.3, relevant to the Offshore Scheme and the benthic ecology assessment.

1.4.3 The additional PEI presented in this report has taken into account the embedded mitigation measures that were identified within the original PEIR, which would help to avoid or reduce significant environmental effects that may otherwise be experienced during the construction and operation phases of the Proposed Project.

1.4.4 Volume 1, Part 1, Chapter 4 Description of the Proposed Project of the original PEIR includes current Proposed Project assumptions regarding the construction programme, construction workforce and vehicles. It also includes information on the working methods, for example how sensitive features would be crossed. These assumptions still apply (unless specified otherwise below) and have been used when assessing the changes presented within this additional PEI. One key assumption that has changed relates to the proposed construction working hours as set out in Section 1.3 above.

1.5 Regulatory and Planning Policy Context

1.5.1 The additional PEI has given due consideration to relevant national policy and local policy, including those outlined in Volume 1, Part 1, Chapter 2 Regulatory and Planning Policy Context of the original PEIR. The additional PEI has considered those environmental topics presented within the relevant National Policy Statements (NPS); the Overarching NPS for Energy (EN-1) and the NPS for Electricity Networks Infrastructure (EN-5). Since the original PEIR was produced and the statutory consultation undertaken, these relevant NPS have been updated and were designated on 17 January 2024. However, the original PEIR did already address these now designated NPS in their draft forms that were available at the time of production of the PEIR.

1.6 Preliminary Environmental Impact of the Changes Since Statutory Consultation

1.6.1 As noted above, the additional PEI of the proposed changes presents whether these are likely to result in new or different significant environmental effects compared with those reported in the original PEIR.

1.6.2 Similarly to the original PEIR, the remainder of this additional PEI has been separated out into the three main areas of the Proposed Project: Suffolk Onshore Scheme (Part 2 of the PEIR) within Section 1.7; Kent Onshore Scheme (Part 3 of the PEIR) within Section 1.8; and the Offshore Scheme (Part 4 of the PEIR) within Section 1.9. A section is also included for Project Wide Effects (Part 5 of the PEIR) within Section 1.11. The proposed change to the working hours for both the Suffolk Onshore Scheme and Kent Onshore Scheme is addressed within Section 1.10.

1.6.3 The environmental assessment undertaken as part of the additional PEI has identified that for a number of the environmental topics, the environmental effects would likely be very similar to those presented within the original PEIR. In these cases, the conclusions have been summarised and are presented below in Table 1.1,Table 1.2 and Table 1.3.

1.6.4 An additional assessment is reported for three of the environmental topics; Landscape and Visual, Ecology and Biodiversity and Cultural Heritage, where there is potential for more substantial differences in the baseline environment and impact assessment compared with that presented within the original PEIR.

1.6.5 The relevant environmental features are shown on the Environmental Constraints Plan which form a standalone document within the targeted consultation.

1.7 Suffolk Onshore Scheme (Part 2 of the PEIR)

1.7.1 The additional PEI concentrates on the main design changes for Suffolk, which are described in Section 4: Our Proposals of the Project Update Document.

1.7.2 The environmental effects that are likely to be very similar to those presented in the original PEIR are presented below in Table 1.1.

Table 1.1: Environmental Topics with Similar Effects to the Original PEIR – Suffolk Onshore Scheme

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
Water Environment	From a water environment perspective, the main design changes are associated with the River Fromus, which is a main river with its tributaries classified as ordinary watercourses. There are areas of Flood Zone 2 (medium) and 3 (high risk) associated with the River Fromus within the draft Order Limits, however the majority of the Proposed Project lies within Flood Zone 1 (low risk of river flooding). The majority of the design changes proposed would have a neutral effect on the water environment, with no change to the assessment presented in the original PEIR for all phases of the Proposed Project. With the implementation of good practice measures set in the Outline CoCP, there would be no likely significant adverse effects on the water environment from any of the proposed changes. There are two design changes which are more beneficial for the water environment than compared with the design presented at statutory consultation. These relate to the changes to the Saxmundham Converter Station access. The western construction and maintenance access route has been selected over the alternative northern route, and this western access has also been revised slightly further north to reduce the interaction with the River Fromus floodplain. At the revised crossing location, the floodplain is narrower in extent, therefore construction works within the functional floodplain can be avoided. There would be no likely significant effects on the water environment resulting from this change, however there would be a positive change (i.e. reduction) in the impact on flood risk. Some works would still be within Flood Zone 3, so there would still be a requirement for some mitigation, but less so than the previous proposed crossing location. The other design change in this location which will have a positive impact on the water environment is that additional land is being included within the draft Order Limits along the banks of the River Fromus either side of this crossing to facilitate watercourse improvements and an existing reservoir has been removed from the draft Order Limits.
Geology and Hydrogeology	The geology across the study area generally comprises various lithologies of the Lowestoft Formation, with limited areas comprising Tidal Flat Deposits, Marine Beach Deposits, Alluvium and Head

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	Deposits. The bedrock geology generally comprises the Crag Formation and Chillesford Church Sand Member with limited areas comprising the Corraline Crag generally at the landfall location. The draft Order Limits are located within a Mineral Consultation Area. The majority of the study area is indicated to have generally remained as undeveloped agricultural land since the earliest mapping reviewed, dated 1885, and therefore there is generally considered to be a very low risk of significant sources of contamination being present. Some small discrete areas of the study area have been identified as a low risk in relation to the potential for existing/historical contamination. The groundwater within the study area comprises the Waveney and East Suffolk Chalk and Crag groundwater body, which was assessed as having a poor status when last assessed in 2019. The draft Order Limits are predominantly located within a Source Protection Zone 3. The aquifer classifications of the geology beneath the study area vary depending on the geology, from a principal aquifer to unproductive strata. There are no major changes to the existing baseline within the draft Order Limits or potential new impacts introduced as a result of the design changes, when compared with that presented in the PEIR. With the implementation of the good practice measures set out within the Outline CoCP, it is considered that the design changes proposed would result in the same effects as those presented in the original PEIR during all phases of the Proposed Project.
Agriculture and Soils	The soil types present within the study area comprise three major types. Along the eastern areas the soil is described as freely draining and slightly acidic sandy soils. Moving westwards the soils around Leiston are categorised as freely draining acid but base-rich highly fertile loamy soils. The north-western section of the proposed site around Saxmundham consists of slowly permeable, and seasonally wet slightly acid but base-rich loamy and clayey soils. The design changes mostly comprise reductions in the draft Order Limits, but new areas of land are also now being included within the draft Order Limits. Overall, it is considered that the change in land area required is likely to be neutral compared to the assessment presented in the original PEIR. The additional land north of the A1094, required for acid grassland creation, will be assessed both from the perspective of the loss of the existing land use practice but also the potential for a different agricultural regime to be undertaken to support the long-term management of this habitat. However, with the implementation of the good practice methods set in the Outline CoCP and the development of an Outline Soil Management Plan, there would be no additional significant adverse effects on agriculture and soils from any of the proposed design changes.
Traffic and Transport	The design changes interact with various parts of the surrounding highway network, including Thorpe Road, B1122 Leiston Road, A1094

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	Aldeburgh Road, B1069 Snape Road, Grove Road, B1121 Main Road (both north and south of Saxmundham) and B1121 The Street. In terms of Public Rights of Way (PRoW), the design changes interact with PRoW E-103/006/0 (west of Thorpe Road), E-103/016/0 (west of B1122 Leiston Road), E-260/013/A (north of A1094 Aldeburgh Road), E-103/001/0 (west of B1122 Leiston Road), E-354/020/0, E-354/036/0 and E-354/002/0 (all west of B1069 Snape Road or east of Grove Road), E-354/022/0 (west of B1069 Snape Road), E-344/034/0 and E-460/001/0 (both east of B1121 Main Road), E-491/010/0 (northeast of The Street), E-491/006/0 (east of B1121 Main Road), E-491/005/0 (due to Saxmundham Converter Station) and E-354/006/0 (due to Friston Substation). The Suffolk Coastal Path, King Charles III England Coast Path and Sandlings Walk are also key walking and cycling routes to be considered. The new accesses/ proposed access works on Thorpe Road, A1094 Aldeburgh Road and Grove Road are expected to be used by a limited number of additional vehicle movements. The smaller compound accessed via B1122 Leiston Road is likely to attract fewer construction vehicles than previously assessed. The removal of the maintenance accesses from the B1122 Leiston Road and B1069 Snape Road would also reduce vehicle movements on these parts of the network. The removal of the construction access from the B1121 Main Road to the north of Saxmundham would reduce construction vehicle movements on this part of the network. The southern access on the B1121 Main Road to the south of Saxmundham would be retained, and any additional construction vehicle movements associated with the landscaping strategy at the converter station are expected to be limited. Construction vehicles would no longer be required to use part of the B1121 The Street after limiting the use of this access to the operational phase only. The trenchless methods at the landfall would minimise any impacts on PRoW E-103/006/0, the Suffolk Coastal Path and the King Charles III England Coast Path. A number of PRoW (E-103/006/0, E-491/005/0, E-354/036/0, E-354/002/0, E-491/006/0 and E-354/006/0), as well as Sandlings Walk, would still require similar management and mitigation as proposed in the original PEIR as a result of the design changes. However, a number of PRoW would require less management and mitigation as a result of the design changes (reducing the number of potential interactions/ conflict points with road users) including PRoW E-103/001/0, E-354/020/0, E-260/013/A, E-354/022/0, E-344/034/0, E-460/001/0 and E-491/010/0, including as a result of the revised strategy for coordination and colocation. Several potential PRoW diversion routes have been identified where PRoW closures and diversions would be necessary. A new PRoW corridor has also been identified for the operational phase, with the aim of improving PRoW connectivity. In conclusion, there is a positive change in terms of a reduction in adverse impacts on traffic and transport during construction and

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	operation as a result of the design changes compared to those presented in the original PEIR. This is following the reduction in the area of the draft Order Limits, the removal of several access points and fewer PRoW interactions. Whilst some new access points have been identified, a limited number of additional vehicle movements are expected to be associated with each of these and no additional impacts are expected on the surrounding highway network. Should any additional mitigation or management be needed, then these measures will be set out within the Outline Construction Traffic Management and Travel Plan and Outline PRoW Management Plan, following further consultation with Suffolk County Council (SCC) highway officers. In addition, further consultation will be carried out with SCC PRoW officers to review potential PRoW diversion routes and any further mitigation where required.
Air Quality	There are no major changes to the existing baseline within the draft Order Limits or potential new types of impacts introduced as a result of the design changes, when compared with that presented in the PEIR. Although in certain cases, the reduction in the area of the draft Order Limits and the removal of several access points has meant that some sensitive receptors are now located further from the Proposed Project. For instance, the high voltage direct current (HVDC) cable route near Leiston Road has been moved further from nearby residential properties. The removal of the option of the northern access S-BM12 also avoids the need for construction vehicles to use the B1121 Main Road to the north of Saxmundham, therefore, reducing construction traffic emissions for receptors in the vicinity of that access route. Whilst impacts from the realignment of access roads and construction and maintenance compounds require reassessment, they are not likely to result in significant effects from an air quality perspective. Any change in construction vehicle emissions introduced by the design changes is limited and not likely to result in significant effects. With the implementation of the best practice measures set out within the Outline CoCP, it is considered that the design changes proposed would result in similar effects as those presented in the original PEIR during all phases of the Proposed Project, with no likely significant effects as a result of air quality.
Noise and Vibration	There are no major changes to the existing baseline within the draft Order Limits or potential new types of impacts introduced as a result of the design changes, when compared with that presented in the PEIR. Although in certain cases, the reduction in the area of the draft Order Limits and the removal of several access points has meant that some sensitive receptors are now located further from the Proposed Project. For instance, the HVDC cable route near Leiston Road has been moved further from nearby residential properties. The removal of the option of the northern access S-BM12 also avoids the need for construction vehicles to use the B1121 Main Road to the north of

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	Saxmundham, therefore, reducing noise impacts from construction traffic for receptors in the vicinity of that access route. Any change in construction traffic and construction noise and vibration levels introduced by the design changes is limited and not likely to result in significant effects. With the implementation of the best practice measures set out within the Outline CoCP, it is considered that the design changes proposed would result in similar effects as those presented in the original PEIR during all phases of the Proposed Project, with no likely significant effects as a result of noise and vibration.
Socio-economics, Recreation and Tourism	The re-location of the construction compound north of Snape Road would move construction works further away from a farm, reducing impacts on this business receptor. The additional land north of the A1094, required for acid grassland creation, has the potential to adversely impact a new agricultural land holding and its associated business activities, as land would no longer be able to be kept in arable use (although it may be able to be converted to a different agricultural regime). Traffic and Transport above outlines the impacts on PRoW as a result of the design changes. These design changes are not envisaged to lead to material changes to the assessment in terms of the quality of the route and user experience. The preliminary assessment suggests that there may be slight improvements (i.e. reduced adverse effects) on socio-economics, recreation and tourism as a result of the proposed design changes compared to those presented in the original PEIR due to the reduction in the draft Order Limits, moving construction works away from a number of business receptors and fewer PRoW interactions. These changes are likely to result in the same, or a reduction in adverse effects to those presented in the original PEIR. The proposed additional land to the draft Order Limits, north of the A1094, may introduce slight adverse effects on socio-economics in comparison to the PEIR. However, none of these design changes are likely to result in significant adverse effects.
Health and Wellbeing	There are no major changes to the existing baseline within the draft Order Limits or potential new types of impacts introduced as a result of the design changes, when compared with that presented in the PEIR. The Health and Wellbeing technical discipline draws on other technical assessments, particularly Noise and Vibration, Air Quality, Landscape and Visual, Socio-economics, Tourism and Recreation, and Traffic and Transport. Having considered all other relevant topic inputs, no change is expected for health and wellbeing in terms of the conclusion of likely significant effects when compared to the PEIR. In certain cases, the reduction in the area of the draft Order Limits has generally reduced the interaction with PRoW and the removal of several access points has meant that some sensitive receptors are now located further from the Proposed Project. For instance, the

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	HVDC cable route near Leiston Road has been moved further from nearby residential properties. The removal of the option of the northern access S-BM12 also avoids the need for construction vehicles to use the B1121 Main Road to the north of Saxmundham, therefore, reducing construction traffic emissions for receptors in the vicinity of that access route. This would be a positive change (i.e. reduction) to health and wellbeing as a result of a reduced noise and air pollution. Similarly, the re-location of construction works further away from a farm north of Snape Road may also result in a reduced adverse effect.
Suffolk Onshore Scheme Intra-Project Cumulative Effects	Given the conclusions of the above technical assessments, no new or different likely significant intra-project cumulative effects have been identified compared with those included in the original PEIR.
Suffolk Onshore Scheme Inter-Project Cumulative Effects	No new or different significant effects have been identified compared with those included in the original PEIR. As noted in paragraph 1.4.1 above, the consideration of the combined impacts of the Proposed Project together with LionLink and Nautilus will now be assessed within the cumulative effects assessment in the ES, in line with the cumulative assessment undertaken for any other cumulative development. This means that the magnitude of some of the effects presented in each topic chapter within the original PEIR may be reduced where co-location is no longer considered, with effects being attributed instead to LionLink and Nautilus, as relevant, in the inter-project cumulative effects assessment. The overall cumulative effect of Sea Link with these other projects is anticipated to remain the same as presented in the original PEIR.

Additional Assessment

Landscape and Visual

Existing Baseline

1.7.3 Volume 1, Part 2, Chapter 2 Landscape and Visual of the original PEIR presented the results of the preliminary landscape and visual effects assessment arising from the Suffolk Onshore Scheme. This included setting out a preliminary magnitude of effect level for each of the landscape and visual receptors and whether such effects were anticipated to be significant.

1.7.4 The Suffolk Onshore Scheme lies within several published Landscape Character Areas (LCA), including LCAs B4: Fromus Valley, L1: Heveningham and Knodishall Estate Claylands, K3: Aldringham and Friston Sandlands and D4: Thorpeness to Aldeburgh. It is also located within the Seascape Character Type 03: Nearshore Waters.

1.7.5 There are a range of visual receptors within the study area with potential for views of the Suffolk Onshore Scheme, including residential receptors (settlements and scattered properties), recreational receptors (users of the PRoW) network, long distance trails and

visiting the Area of Outstanding Natural Beauty (AONB)), road and railway users and those working in the landscape.

Summary of Key Changes for Landscape and Visual

1.7.6 The majority of the proposed design changes are not considered to introduce new or different significant effects to those identified within the original PEIR during construction or operation. Those that could are the increased scale of the bridge across the River Fromus and the introduction of temporary towers during construction to facilitate overhead line (OHL) works at Friston.

1.7.7 The proposed bridge across the River Fromus would be located through existing plantation woodland in close proximity to the B1121, existing PRoW and within the setting of Hurts Hall (Grade II listed building). The bridge would facilitate the temporary and permanent access route and would have a maximum bridge parapet height of 6 m above ground level when measured from the ground level at the abutments of the bridge. The approach ramps to the bridge could be up to 80 m in length as a worst-case. The height and dimensions of the bridge are currently being discussed with the Environment Agency (EA).

1.7.8 The bridge over the River Fromus would be visible from recreational receptors on local PRoW to the west of the B1121 and road receptors travelling along the B1121 on the approach to and leaving Saxmundham. The key visual receptors with the potential to experience this design change were represented by Viewpoint 2 in the original PEIR. In addition, there are three locally important views as cited within the published Saxmundham Neighbourhood Plan which reference views to Hurts Hall and St John's Church, Saxmundham within an open farmland setting backed by wooded rising land, as important scenic aspects to the views. The bridge would be located within LCA B4: Fromus Valley. The objectives for this LCA relate to enhancing views to church towers and the scenic approach to Saxmundham with views of Hurts Hall and its grounds and minimising poplar plantations.

1.7.9 In the assessment scenario where the proposed Friston Substation is built as part of the Proposed Project, temporary towers would be required to facilitate OHL works at Friston. These would be located near to the existing OHL alignment in the vicinity of the proposed substation. The temporary structures could be temporary towers (similar to standard towers in terms of foundation and structure) or they could be masts which are lighter and require cable stays to support them. A worst-case scenario relating to landscape and visual matters has been adopted for the purposes of this additional PEI, which assumes that the temporary towers would be a different design to the existing OHL. It has also been assumed that there is potential for overlap of temporary and new permanent towers during the construction phase resulting in more towers being present at a given point in time (it is assumed up to three temporary towers would be needed for approximately eight months).

1.7.10 The temporary towers would be visible from residential receptors, recreational receptors along the local PRoW network and those using the local road network in the landscape surrounding the proposed Friston Substation. The key visual receptors with the potential to experience this change were represented by Viewpoints 6 and 7 in the original PEIR. The temporary towers would be located within LCA L1: Heveningham and Knodishall Estate Claylands. The objectives for the LCA include to protect the unspoilt, quiet and essentially undeveloped rural character of the area.

Likely Significant Effects During Construction

1.7.11 The original PEIR reported a preliminary medium magnitude of effect and a significant adverse effect for recreational receptors along the local PRoW network to the west of the B1121 (Viewpoint 2). Due to the increased scale of the bridge now proposed over the River Fromus, the increased construction activity has the potential to have a higher magnitude of effect on sensitive receptors within the vicinity, including the local PRoW network. The construction activity associated with the bridge would increase the scale of change within the view in the context of Hurts Hall and St John's Church, Saxmundham and such changes would be in closer proximity to the receptor than the construction activity associated with the converter station site and potentially viewed in combination with it. The removal of vegetation to facilitate the construction of a larger bridge, including both plantation vegetation and mature woodland, has the potential to further open up views toward the converter station site and increase the focus towards this activity. The effects to such recreational receptors in the locality would remain as a significant adverse effect, as reported within the original PEIR.

1.7.12 The original PEIR reported a preliminary medium magnitude of effect and a significant adverse effect at construction within LCA B4: Fromus Valley. Due to the increased scale of the bridge over the River Fromus, the increased construction activity and associated vegetation removal, has the potential to have a higher magnitude of effect on the LCA. The construction activity would occupy a larger area in closer proximity to the setting of Hurts Hall and within the parkland landscape, which is a special quality and feature of the LCA. The increased scale of the bridge would result in further plantation vegetation removal and whilst this is expressed as positive for the LCA within the published assessment, the removal of the mature woodland vegetation along a section of the River Fromus, would alter the vegetation network, which is stated in the published assessment as contributing to the natural heritage value of the LCA. The effects to the LCA would remain as a significant adverse effect, as reported within the original PEIR.

1.7.13 For the scenario in which the proposed Friston Substation would be built as part of the Suffolk Onshore Scheme, the original PEIR reported a medium to large magnitude of effect and a significant adverse effect at construction for residential receptors, recreational receptors along the local PRoW network and those using the local road network in the landscape surrounding the proposed Friston Substation (Viewpoints 6 and 7). The temporary OHL towers would introduce a new structure into the view, temporarily increasing the wirescape present in views for a short period of time, although this would be seen within the context of existing construction activity associated with the proposed Friston Substation. This has the potential to have a higher magnitude of effect on the visual receptors in the locality. The effects to such receptors in the locality would remain as a significant adverse effect, as reported within the original PEIR.

1.7.14 For the scenario in which the proposed Friston Substation would be built as part of the Suffolk Onshore Scheme, the original PEIR reported a very large magnitude of effect and a significant adverse effect at construction for LCA L1: Heveningham and Knodishall Estate Claylands. The temporary OHL towers would introduce a new component in a small part of the LCA which would have effects on scenic quality and tranquillity but would be within the context of other construction activity associated with the proposed Friston Substation. The magnitude of effect presented in the original PEIR was the highest level of magnitude, therefore this would not increase as a result of the new temporary towers. The effects to the LCA would remain as a significant adverse effect, as reported within the original PEIR.

Likely Significant Effects During Operation and Maintenance

1.7.15 The original PEIR reported a preliminary medium magnitude of effect and a significant adverse effect at operation for recreational receptors along the local PRoW network to the west of the B1121 (Viewpoint 2). Due to the increased scale of the bridge over the River Fromus, there is the potential to have a higher magnitude of effect on the receptors within the local PRoW network as a bridge of this footprint and height would remain prominent within views within the local landscape even once the mitigation planting is established. The removal of the plantation and woodland vegetation to facilitate the construction of the bridge structure has the potential to further open up views toward the converter station site and consequently direct views toward the permanent infrastructure. The effects on such recreational receptors in the locality would remain as a significant adverse effect, as reported within the original PEIR.

1.7.16 The original PEIR reported a preliminary medium magnitude of effect and a significant adverse effect at operation within LCA B4: Fromus Valley. Due to the increased scale of the bridge, there is the potential to have a higher magnitude of effect on the LCA as a bridge of this footprint and height would remain an incongruent feature within the local landscape even once the mitigation planting is established. The removal of vegetation would permanently alter the vegetation network along the River Fromus which contributes to the natural heritage value of the LCA. Landscape planting around the bridge would assist in lessening this effect in the long-term. This would be within the setting of Hurts Hall and within the parkland landscape, which is a special quality and feature of the LCA. The effects to the LCA would remain as a significant adverse effect, as reported within the original PEIR.

1.7.17 The temporary OHL towers would not be in place during the operational phase of the Suffolk Onshore Scheme, so would not result in any change to the operational effects assessment of visual receptors or landscape character reported within the original PEIR.

Ecology and Biodiversity

Existing Baseline

1.7.18 Volume 1, Part 2, Chapter 3 Ecology and Biodiversity of the original PEIR presented the preliminary likely significant effects of the Suffolk Onshore Scheme on ecology and biodiversity. Key information from this is provided below where considered relevant to the proposed design changes.

1.7.19 At the time of writing the PEIR, the Phase 1 Habitat Survey reports had been produced, and the first season of non-breeding and breeding bird surveys had been completed. The main results of the Phase 1 Habitat Survey and the bird surveys were discussed in the PEIR.

1.7.20 At time of writing this additional PEI, the second season of non-breeding bird surveys has been completed, indicating an assemblage very similar to that identified in the first season. A full report is being produced and will form part of the ES. Other surveys identified in Table 2.3.6 of Volume 1, Part 2, Chapter 3 Ecology and Biodiversity of the original PEIR are ongoing, including a second season of breeding bird surveys.

1.7.21 The additional areas included in the draft Order Limits for this consultation are very similar in terms of habitat to those already considered in the original PEIR and therefore are not expected to introduce new species or habitats into consideration in the ES. Key findings of results to date are:

- Dormouse surveys have been undertaken in suitable habitat across the Suffolk Onshore Scheme. No evidence of dormouse has been found to date;
- Trees with bat roost potential have been identified and further surveys to confirm the presence of roosts in affected trees will be undertaken during summer 2024 following the most recent Bat Survey Guidelines;
- Breeding birds of note present within or close to the draft Order Limits include nesting skylark in arable fields and acid grassland, and several pairs of nesting woodlark (not restricted to Sandlings Special Protection Area (SPA)) recorded in grassland close to the draft Order Limits. Woodlark is a Wildlife and Countryside Act Schedule 1 species as well as being a qualifying interest of Sandlings SPA;
- Wintering birds of note present within the draft Order Limits include populations of white-fronted goose, gadwall, shoveler, teal, wigeon, pintail, lapwing and golden plover. The first five of these species are qualifying non-breeding features of either Alde-Ore Estuary SPA or Minsmere-Walberswick SPA and several are also qualifying features of Leiston-Aldeburgh Site of Special Scientific Interest (SSSI). The populations of the first six species were found within North Warren Royal Society for the Protection of Birds (RSPB) Reserve. The populations of lapwing and golden plover were also found on inland arable areas. Neither species is a qualifying interest of any SPA or SSSI in the area;
- Reptile surveys are being completed at the time of writing. Acid grassland adjacent to Sandlings SPA/Leiston-Aldeburgh SSSI and north of Aldeburgh Golf Course supported a low population of grass snake and adder and a good population of slow worm and common lizard;
- Bat activity surveys will be undertaken in summer 2024;
- Riparian mammal, fish and aquatic invertebrate surveys are being undertaken of the River Fromus, Hundred River and other relevant watercourses. These surveys are ongoing;
- Terrestrial invertebrate surveys are being undertaken of the acid grassland adjacent to Sandlings SPA/Leiston-Aldeburgh SSSI and north of Aldeburgh Golf Course during spring/summer 2024. These surveys are ongoing;
- Badger surveys have been undertaken. Records of setts are confidential to avoid persecution and therefore are not publicly disclosed; and
- Great crested newt surveys are not being undertaken as Natural England has agreed to the use of the District Level Licensing Scheme for Suffolk.

1.7.22 There are five SPAs, SACs or Ramsar sites within 10 km of the draft Order Limits. This includes Sandlings SPA, close to the landfall and construction compound. There are seven ecological SSSIs within 5 km of the draft Order Limits, the closest of which is Leiston-Aldeburgh SSSI which is to be traversed by the proposed Suffolk Onshore Scheme using trenchless techniques and covering the same area as Sandlings SPA. RSPB North Warren Reserve is located adjacent to the Aldeburgh landfall and associated construction compound. It supports a wide range of breeding and non-breeding birds as well as other wildlife. There are 17 non-statutory County Wildlife Sites (CWS) or roadside nature reserves within 2 km of the draft Order Limits.

Summary of Key Changes for Ecology and Biodiversity

1.7.23 The main design changes of potential ecological significance are as follows. There is a refinement to the location and layout of the proposed construction compound at the landfall on land south of North Warren RSPB Reserve which reduces the size of the compound and moves it further from the RSPB Reserve, Leiston-Aldeburgh SSSI and Sandlings SPA. A proposed access route has been added which traverses the boundary of Sandlings SPA and Leiston-Aldeburgh SSSI, using an existing track for foot access and a small number of 4x4 vehicle movements for monitoring purposes during the trenchless cable installation.

1.7.24 The additional land north of the A1094, would enable provision of acid grassland as long term habitat improvement. The proposed relocation of the other construction compounds would still continue to impact areas of arable land as with the original PEIR.

1.7.25 The bridge across the River Fromus would be increased in scale, resulting in more land take from terrestrial ecological features. There is also the proposed introduction of temporary OHL towers to facilitate OHL works at the proposed Friston Substation, which would be located near to the existing OHL alignment in the vicinity of the proposed substation.

Likely Significant Effects During Construction

1.7.26 The original PEIR included Volume 1, Part 5, Chapter 3 Habitat Regulations Assessment Screening Report. That report concluded that likely significant effects on SPAs and SACs in Suffolk (particularly Sandlings SPA but also Minsmere-Walberswick Heaths & Marshes SPA/SAC and Alde-Ore & Butley Estuaries SPA) could not be dismissed without further investigation. This was primarily due to the potential for noise and visual disturbance impacts on Sandlings SPA but was also related to potential impacts on functionally-linked habitat. The proposed design changes would not change the overall conclusions of that screening assessment, although as noted below the disturbance impacts on Sandlings SPA may be reduced and an area is identified for long-term provision of acid grassland to offset the temporary loss of acid grassland foraging habitat for SPA birds and other features due to the construction works south of Sandlings SPA.

1.7.27 The refinement to the construction compound on land south of North Warren RSPB Reserve reduces the size of the compound and moves it further from the RSPB Reserve, Leiston-Aldeburgh SSSI and Sandlings SPA. This, coupled with noise and visual mitigation measures, would address the disturbance impact on these designated sites identified in the original PEIR and render it to be non-significant. Noise modelling will be submitted with the ES to support this conclusion. A proposed access route has been added which traverses the boundary of Sandlings SPA and Leiston-Aldeburgh SSSI. However, this is an existing track and would be required only for foot access and small numbers of 4x4 vehicles for monitoring purposes during the trenchless cable installations, with no vegetation clearance is required. Therefore, no likely significant effects are anticipated as a result of this change.

1.7.28 The additional land north of A1094 is beneficial as it is intended to enable provision of acid grassland as long term habitat improvement, contiguous with other areas of acid grassland/heathland to offset the temporary loss of acid grassland south of Sandlings SPA, to improve the extent of foraging habitat for SPA woodlark and nightjar in the long-term and account for the time which would be taken for the compound area south of Sandlings SPA to recover following works. The relocation of the construction compound north of Snape Road moves it from one arable area to another in close vicinity. It does

not change the impacts and effects reported in the original PEIR. Confirmation of a western access route into the proposed Saxmundham Converter Station site removes the need to assess the other access options included in the original PEIR, while the construction compound proposed in the location of the western access route to the west of the River Fromus only affects arable land and does not introduce any new significant effects. The ecological effects of the northern and western access routes presented in the original PEIR were not materially different in that both would involve a crossing of the River Fromus.

1.7.29 Relocation of the proposed Saxmundham Converter Station and cable construction compound would not materially affect ecological impacts or survey area. The outline Landscape and Ecology Management Plan to be submitted with the ES will provide further detail on the landscape and ecological mitigation proposals at the proposed Saxmundham Converter Station site.

1.7.30 A larger and relocated bridge over the River Fromus would involve more land take from terrestrial ecological features. At this stage it is assumed that there is potential for a significant adverse effect as a result of this design change, however this will be considered further within the ES subject to the ongoing surveys, further bridge design and consideration of mitigation measures. The delivery of habitat improvements associated with Biodiversity Net Gain (BNG) along the River Fromus in this location would have a positive impact on ecology.

1.7.31 The introduction of temporary towers to facilitate OHL works at the proposed Friston Substation does not change the ecological impacts reported in the original PEIR as it replaces the existing OHL towers with other temporary towers near to the existing OHL alignment. Although it may introduce new temporary towers such that the number of towers in this location may increase at a given time, this section of OHL is not on a flyway for vulnerable species and there would be no increase in the number of actual OHL compared to the baseline. The temporary towers are in arable land and there is therefore no significant net increase in loss of ecological habitat.

Likely Significant Effects During Operation and Maintenance

1.7.32 The original PEIR considered the potential for significant effects through disturbance, pollution/spillages, and shading of the River Fromus due to the new bridge crossing for the permanent access. No mitigation was identified as being necessary for operational disturbance, and standard pollution controls as required by The Environmental Damage (Prevention and Remediation) (England) Regulations 2015 and the Environmental Permitting (England and Wales) Regulations 2016. Appropriate design was identified as being able to avoid shading impacts on the River Fromus from the new bridge. The proposal to increase the height of the bridge would not make these potential effects from shading worse, although as discussed earlier the land take due to the bridge embankments could be significant from a terrestrial ecology perspective.

Cultural Heritage

Existing Baseline

1.7.33 Volume 1, Part 2, Chapter 4 Cultural Heritage of the original PEIR presented the existing baseline for the historic environment. Since the submission of the PEIR, additional non-intrusive field surveys have been undertaken to inform the baseline, as well as assist with the identification of possible impacts. These have included a review of aerial photographs, and geophysical survey. Intrusive works have been limited to the

archaeological monitoring of Ground Investigation works, while a phase of evaluation trenching is to be undertaken.

1.7.34 In most cases, the non-intrusive surveys have built on information already held on the sources such as the Suffolk Historic Environment Record, with previously recorded assets further defined. However, a number of new areas of potential archaeology have been identified including the fields to the east of Saxmundham where the proposed converter station is to be located. This field contains traces of what appear to be small enclosures and associated structures, as well as trackways, and these have been tentatively dated to the medieval period.

1.7.35 New areas of potential archaeological remains were also identified to the east of Grange Farm, north of the B1069, and north of Hill Farm.

Summary of Key Changes for Cultural Heritage

1.7.36 In a number of areas, the draft Order Limits have been reduced, resulting in a reduced physical impact on heritage assets. This includes the area of previously recorded archaeological remains at Gorse Hill which are currently assumed to be of National Significance by the Suffolk County Council archaeological advisor and Historic England (including ADB014, ADB202, and ADB068).

1.7.37 The draft Order Limits have also been reduced in areas where the geophysical survey has identified previously unrecorded remains including the proposed converter station site near Saxmundham, and north of the B1069.

1.7.38 An area where the draft Order Limits has increased is for the additional land north of the A1094, required for additional acid grassland habitat. This area has not been subject to archaeological evaluation to date and as such there is limited information available. As a worst-case it is possible this land could require topsoil stripping if it has been extensively fertilised in the past, so there is potential to impact on previously unrecorded remains that might survive in the area.

1.7.39 The proposed permanent access to Saxmundham Converter Station has now been defined as approaching from the west rather than north. As such, the removal of the option of construction access from the B1121 Main Road to the north of Saxmundham removes any potential physical impacts on assets recorded in this area from any further consideration, as well as possible impacts on setting that may have resulted from this option. However, the proposed amendment to the crossing of the River Fromus and the increased height of the bridge in the selected western access route has the potential to result in an increased impact on the setting of Hurst Hall, a Grade II listed building.

Likely Significant Effects During Construction

1.7.40 There is the potential for the Proposed Project to result in physical impacts on newly recorded assets identified through geophysical survey undertaken since the original PEIR, including the large complex to the east of Saxmundham. However, it is assumed that the new features recorded would not be of national significance based on current information, and that it would be possible to mitigate any impacts through standard mitigation measures (i.e. excavation, recording, and publication), such that there would not be any new likely significant adverse effects. Planned trial trenching will provide further information.

1.7.41 Where the draft Order Limits have been reduced in the Gorse Hill area, this results in a reduced physical impact on heritage assets. However, at this stage pending the results

of the trial trenching, the previously recorded archaeological remains at Gorse Hill are currently assumed to be of national significance and so the resulting effect is still considered to be significant adverse.

1.7.42 For the additional land north of the A1094, as a worst-case it is possible this could require topsoil stripping in order to create the additional acid grassland habitat. This has the potential to impact on previously unrecorded remains. This area of land is to be subject to further investigation to understand the baseline and ascertain the potential for any significant adverse effects. It topsoil stripping is required, the depth and amount would be minimised and would go no deeper than the farmer would normally require for ploughing. Otherwise, it would be a case of cultivating and reseeding the land. It is acknowledged that standard ploughing has the potential to have already been deep enough to have resulted in damage to archaeological deposits/heritage assets. The ES will report on the final significance of the effect from an archaeology perspective following the further assessment and once the approach to creating the grassland habitat has been confirmed.

Likely Significant Effects During Operation and Maintenance

1.7.43 The proposed bridge crossing required for the access road to cross the River Fromus has the potential to result in an increased impact on the setting of Hurts Hall, a Grade II listed building. This, however, should be limited as a result of existing retained tree cover as well as the distance between the proposed bridge and Hurts Hall. It is therefore, not likely to result in a significant adverse effect, but this will be kept under review and assessed within the ES as more design details emerge.

1.8 Kent Onshore Scheme (Part 3 of the PEIR)

1.8.1 The additional PEI concentrates on the main design changes for Kent Onshore Scheme, which are described in Section 4: Our Proposals of the Project Update Document.

1.8.2 The environmental effects that are likely to be very similar to those presented in the original PEIR are presented below in Table 1.2.

Table 1.2: Environmental Topics with Similar Effects to the Original PEIR – Kent Onshore Scheme

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
Water Environment	From a water environment perspective, the main feature is the River Stour which is a main river, with its tributaries classified as ordinary watercourses. The area north of the River Stour is drained by a network of ordinary watercourses of the Minster Marshes. There are areas of Flood Zone 2 (medium) and 3 (high risk) associated with the River Stour within the draft Order Limits. The majority of the design changes proposed would have a neutral effect on the water environment, with no change to the assessment presented in the original PEIR for all phases of the Proposed Project.

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	The ground raising at the Minster Substation and Converter Station site has the potential to change the current land drainage regime, however, with the implementation of the good practice methods set out in the Outline CoCP, there would be no likely significant effects on the water environment. The changes are likely to result in no new or different effects to those presented in the original PEIR for construction and operation. The creation of new wetland areas/scrapes as foraging habitat for birds, and the inclusion of the River Stour channel for BNG watercourse enhancements within the draft Order Limits would deliver a positive impact on the Water Environment. Overall, the changes are likely to result in beneficial effects on the Water Environment during operation. The temporary towers introduced to facilitate OHL works would be located in the wetland area within Flood Zone 3. As the towers are not permanent, there would only likely be additional temporary effects during construction. These effects would be mitigated, for example, through implementation by the appointed contractor of a Flood Warning and Evacuation Plan for work sites in Flood Zone 3 and through temporary storage of materials so as not to form continuous barriers to floodplain flows. Therefore, there would be no change to the overall significance of effect on the water environment.
Chapter 7: Agriculture and Soils	The soil types present within the study area are predominantly described as loamy and clayey soils of coastal flats with naturally high groundwater. These soils are formed in the tidal flat deposits. Where these drift deposits are absent (along the alignment of Richborough Way) the soils are described as freely draining slightly acid loamy soils formed directly on the solid geology. The design changes include reductions in the draft Order Limits, but also additional land required. However, as these are relatively small changes compared to the overall scale of the Proposed Project, it is considered that the change in land area required is likely to be neutral compared to the assessment presented in the original PEIR. The requirement for land use change from arable to wetland as ecological mitigation, will be assessed within the ES both as a loss of arable land but also in terms of the potential for a different agricultural management regime to be undertaken as part of the long-term management of this land. With the implementation of the good practice methods set in the Outline CoCP and the development of an outline Soil Management Plan, there would be no additional significant adverse effects on agriculture and soils from any of the proposed design changes.
Chapter 8: Traffic and Transport	The design changes interact with various parts of the surrounding highway network including Sandwich Road, the A256, Jutes Lane, Richborough Road and Marsh Farm Road. In terms of PRoW, the design changes interact with PRoW TE39 (west of the A256), TE26

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	(north bank of the River Stour), EE42 (south bank of the River Stour), TE35 and TE36 (both south of Marsh Farm Road). The Viking Coastal Trail, National Cycle Network, Contra Trail, King Charles III England Coast Path and Saxon Shore Way are also key walking and cycling routes to be considered. The new construction and maintenance access on Sandwich Road is expected to be used by a limited number of additional vehicle movements. The removal of the construction and maintenance access from Jutes Lane (except for during utility connection works) would reduce vehicle movements on this part of the network. The trenchless methods at the landfall would minimise any impacts on the A256, avoiding any potential road or lane closures. The main access on the A256 for the construction works associated with Minster Substation and Converter Station, pylons and OHL would be retained. Any additional construction vehicle movements associated with the landscaping strategy and additional earthworks at the converter station, the installation of temporary towers to facilitate the OHL works and the River Stour watercourse enhancements are expected to be limited and/or the anticipated peak traffic flows are not anticipated to change significantly. In addition, the use of standard height lattice lowers (compared to low-height option) is not expected to result in any changes, on the basis that the same type and size vehicles would be used. Any additional construction vehicle movements associated with the creation of the new wetland scrapes as foraging habitat for birds (via Richborough Road) or the installation of the temporary towers (via Marsh Farm Road) are expected to be limited both in number and size, to allow these to be suitably accommodated by the local highway network. A couple of railway level crossings would continue to be used by construction traffic (similar vehicle types/ numbers) and these would therefore need to be carefully managed. The trenchless methods at the landfall would minimise any impacts on the Viking Coastal Trail, Contra Trail, King Charles III England Coast Path and the National Cycle Network. These would need to be carefully managed where these are crossed by the new construction and maintenance access on Sandwich Road. A number of PRoW (TE39, TE35 and TE36) would require similar management and mitigation as a result of the design changes. PRoW TE39 would need to be temporarily diverted to accommodate the cable installation works and relocated construction compound to the west of the A256 and a temporary diversion route has been identified. The diverted route would need to be carefully managed where this is crossed by access/ haul roads. PRoW TE26 and EE42, as well as Saxon Shore Way would no longer need to be closed and diverted following the design changes, other than potentially when the OHL are installed. In conclusion, there may be slight improvements (i.e. reduced adverse effects) for traffic and transport during the construction (temporary) phase as a result of the design changes compared to those presented in the original PEIR following the commitment to trenchless works

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	beneath the A256, the removal of the Jutes Lane access point (except for utility works) and fewer PRoW interactions. Whilst some new access routes have been identified, a limited number of additional vehicle movements are expected to be associated with each of these and no additional impacts are expected on the surrounding highway network. Should any additional mitigation or management be needed, then these measures will be set out within the Outline Construction Traffic Management and Travel Plan and Outline PRoW Management Plan, following further consultation with Kent County Council (KCC) highway officers. In addition, further consultation will be carried out with KCC PRoW officers to review the potential PRoW diversion route and any further mitigation where required. There is expected to be no change to the traffic and transport findings presented in the original PEIR following the design changes during the operational (permanent) phase.
Chapter 9: Air Quality	There are no major changes to the existing baseline within the draft Order Limits or potential new types of impacts introduced as a result of the design changes, when compared with that presented in the original PEIR. The new construction and maintenance access and construction compound off Sandwich Road, via the former hoverport in Pegwell Bay, has the potential to change construction vehicle and dust emissions. However, this is unlikely to result in any changes in terms of conclusions of significant effects, provided construction traffic avoids Ramsgate Air Quality Management Area (AQMA). Whilst impacts from other design changes require reassessment, such as the relocation of the main cable construction compound, ground raising at the Minster Substation and Converter Station site and the introduction of new wetland scrapes, they are not likely to result in significant effects from an air quality perspective. Any change in construction vehicle emissions introduced by the design changes is expected to be limited and any changes in Non-Road Mobile Machinery (NRMM) and construction dust emissions are not likely to result in significant effects. With the implementation of the best practice measures set out within the outline CoCP, it is considered that the design changes proposed would result in similar effects as those presented in the original PEIR during all phases of the Proposed Project, with no likely significant effects as a result of air quality.
Chapter 10: Noise and Vibration	There are no major changes to the existing baseline within the draft Order Limits or potential new types of impacts introduced as a result of the design changes, when compared with that presented in the PEIR. Any change in construction traffic and construction noise and vibration levels introduced by the design changes is limited and not likely to result in significant effects. With the implementation of the best practice measures set out within the Outline CoCP, it is considered

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	that the design changes proposed would result in similar effects as those presented in the original PEIR during construction. There is a potential change in operational noise levels due to the ground raising at the Minster Substation and Converter Station site, due to changes to screening effects and propagation. However, this is not likely to result in a significant effect.
Chapter 11: Socio-economics, Recreation and Tourism	The removal of Jutes Lane as a construction and maintenance route would avoid interference with Great Oaks Small School (a Special Educational Needs (SEN) school), potentially reducing construction impacts on a sensitive community facility. The introduction of a new construction and maintenance access road from Sandwich Road via the former hoverport would move construction away from Pegwell Bay Country Park, potentially reducing impacts on an open space receptor. However, this design change would require additional land within the draft Order Limits located near a number of residential properties, potentially introducing impacts to these sensitive receptors. In terms of PRoW, as outlined by Traffic and Transport, the trenchless methods at landfall would minimise any impacts on the Viking Coastal Trail, Contra Trail, King Charles III England Coast Path and the National Cycle Network. These would need to be carefully managed where these are crossed by the new access and access route on Sandwich Road. A number of PRoW (TE39, TE35 and TE36) would require similar management and mitigation as a result of the main design changes. PRoW TE39 would need to be temporarily diverted to accommodate the cable installation works and relocated construction compound to the west of the A256 and a temporary diversion route has been identified. The diverted route would need to be carefully managed where this is crossed by access/ haul roads. PRoW TE26 and EE42, as well as Saxon Shore Way would no longer need to be closed and diverted following the design changes, other than potentially when the OHL are installed. However, the introduction of temporary towers to facilitate OHL works in the wetland area may have the potential to adversely alter the user experience and quality on existing PRoW TE26 and EE42. The preliminary assessment suggests that there may be slight improvements (i.e. reduced adverse effects) on socio-economics, recreation and tourism as a result of the proposed changes compared to those presented in the original PEIR due to avoiding Great Oaks SEN School, moving construction works away from an open space receptor and fewer PRoW interactions. These changes are likely to result in the same, or less adverse effects to those presented in the original PEIR. The proposed changes for additional land to the draft Order Limits close by to residential receptors and temporary towers nearby to PRoW, may introduce slightly more adverse effects in comparison to the original PEIR. However, it is unlikely that these changes would create any new significant effects.

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
Chapter 12: Health and Wellbeing	There are no major changes to the existing baseline for health and wellbeing within the draft Order Limits or potential new types of impacts introduced as a result of the design changes, when compared with that presented in the original PEIR. The Health and Wellbeing assessment draws on other technical assessments, particularly Noise and Vibration, Air Quality, Landscape and Visual, Socio-economics, Tourism and Recreation, and Traffic and Transport. Having considered all other relevant topic inputs, no change is expected for health and wellbeing in terms of any new or more adverse significant effects when compared to the original PEIR. The design changes interact with Sandwich Road, the A256, Jutes Lane, Richborough Road, and Marsh Farm Road. Whilst some changes to access routes have been identified, a limited number of additional vehicle movements are expected to be associated with each of these and no additional impacts are expected on the surrounding highway network. Limited additional vehicle movements would therefore mean no significant effect on noise and air pollution. As outlined by Air Quality, any potential change in NRMM emissions and construction dust emissions is unlikely to be significant. Hence, it can be concluded there would be no significant effect on health and wellbeing. However, it should be ensured that construction traffic avoids Ramsgate AQMA. In certain cases, there has been a reduction in the area of the draft Order Limits, which would reduce the impact on heritage sites. Access to heritage sites and green spaces is beneficial to health and wellbeing and therefore it is possible there may be a benefit (i.e. reduced adverse effects) from this change compared with the design presented in the original PEIR. There is also a potential benefit (i.e. reduced adverse effects) compared with the design presented in the original PEIR, as a result of the removal of Jutes Lane as a construction and maintenance route. This design change would move construction works to avoid interfering with Great Oaks SEN School, which could reduce impacts on a sensitive community facility, important to community health and wellbeing. Additionally, the introduction of a new construction and maintenance access road from Sandwich Road via the former hoverport would move construction away from Pegwell Bay Country Park, potentially reducing impacts on an open space receptor. Access to open space is important to a community's health and wellbeing. It should be noted however that this design change would require additional land within the draft Order Limits near to a number of residential properties, which could introduce impacts to these sensitive receptors, although they are not likely to result in significant effects. The preliminary assessment suggests that on balance there may be slight improvements (i.e. reduced adverse effects) on Health and Wellbeing as a result of the proposed changes compared to those presented in the original PEIR due to the reduction in the draft Order Limits, moving construction works away from a number of sensitive

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	receptors such as Great Oaks SEN School and fewer PRoW interactions.
Chapter 13: Kent Onshore Scheme Intra-Project Cumulative Effects	Given the conclusions of the above technical assessments, no new or different significant intra-project cumulative effects have been identified compared with those included in the original PEIR.
Chapter 14: Kent Onshore Scheme Inter-Project Cumulative Effects	No new or different significant effects have been identified compared with those included in the original PEIR. At this stage, no additional cumulative developments have been identified for consideration, but the list of cumulative developments will be kept under review and updated as necessary (including feedback from relevant authorities) and reported and assessed in the ES.

Additional Assessment

Landscape and Visual

Existing Baseline

1.8.3 Volume 1, Part 3, Chapter 2 Landscape and Visual of the original PEIR presented the results of the preliminary landscape and visual effects assessment arising from the Kent Onshore Scheme. This included setting out a preliminary magnitude of effect level for each of the landscape and visual receptors and whether such effects were anticipated to be significant.

1.8.4 The proposed Kent Onshore Scheme lies within several published LCA, including LCAs B1: Wantsum North Slopes, E1: Stour Marshes, F1: Pegwell Bay, A2: Ash Levels, C1: Sandwich Bay and H1: Richborough Bluff. It is located within Seascape Character Type C5A / I1A: Sandwich and Pegwell Bays.

1.8.5 There are a range of visual receptors within the study area with potential for views of the Kent Onshore Scheme, including residential receptors (settlements and scattered properties), recreational receptors (users of the PRoW network, long distance trails, cycle networks and areas such as Country Parks and Richborough Roman Fort), road and railway users and those working in the landscape.

Summary of Key Changes for Landscape and Visual

1.8.6 The majority of the proposed design changes are not considered to introduce new or different significant effects to those identified within the original PEIR during construction or operation. Those that could are the proposed ground level raising at the Minster Substation and Converter Station site, the introduction of temporary towers within the wetland area to facilitate OHL works and the inclusion of the River Stour channel within the draft Order Limits for potential watercourse and BNG enhancements.

1.8.7 The ground is to be raised at the converter station and substation site by up to 2 m above existing ground level. The maximum building height presented in the original PEIR was up to 26 m plus roof equipment (such as lightning protection, aerials, walkways and fall arrest equipment), therefore the design change considers that the overall height would be 28 m above existing ground level plus roof equipment. This design change has the potential to affect various landscape and visual receptors across the study area. The key receptors are considered to be recreational users along the local PRoW network which was represented in the original PEIR by Viewpoint 4 and LCA E1: Stour Marshes.

1.8.8 Temporary towers or masts to facilitate OHL works would be located near to the existing alignment of the OHLs to the south of the River Stour. The temporary fixtures could be temporary towers (similar to standard towers in terms of foundation and structure) or they could be masts which are lighter and require cable stays to support them. A worst-case scenario relating to landscape and visual matters has been adopted for the purposes of this additional PEI, this assumes that the temporary towers would be a different design to the existing OHL. It has also been assumed that there is potential for overlap of temporary and new permanent towers during the construction phase resulting in more towers being present at a given point in time.

1.8.9 The temporary towers would be visible from recreational receptors, including those walking along the local PRoW network and the Saxon Shore Way. The key visual receptors associated within this change were represented by Viewpoints 3 and 10 in the original PEIR. The temporary towers would be located within LCA A2: Ash Levels. The objectives for the LCA include to conserve the open landscape and to enhance the wildlife associated with wetlands and agricultural fields.

Likely Significant Effects During Construction

1.8.10 The original PEIR reported a medium magnitude of effect and a significant adverse effect for recreational receptors along the local PRoW network (Viewpoint 4) and LCA E1: Stour Marshes. A Screened Zone of Theoretical Visibility (ZTV) has been produced to take into consideration the ground being raised at the converter station and substation by up to 2 m above existing ground level. This has been compared to the Screened ZTV presented within the original PEIR and the extent of theoretical visibility across the study area is comparable. Further details will be provided within the ES. There is some increased theoretical visibility associated with the additional 2 m in height version, however this is predominantly associated with seascape receptors which would be at some distance from the construction works at the converter station and substation during the construction period resulting in limited effects to landscape character or visual amenity. It is considered that the increased height would not have a discernible effect on landscape character and visual amenity, such that it is not considered that there would be a change to the effects reported in the original PEIR.

1.8.11 The original PEIR reported a small magnitude of effect and a non-significant adverse effect for recreational receptors along the local PRoW network and Saxon Shore Way in the landscape surrounding the new temporary towers (Viewpoints 3 and 10). The temporary towers would introduce new structures into the view, which would be seen within the context of existing construction activity associated with the substation and converter station to the north-east. The temporary towers have the potential to contrast with the existing OHL and could be present at the same time as the new permanent towers, which would result in an increased concentration of wirescape. There is the possibility that the temporary towers, albeit temporary and seen within the context of the existing towers, may increase the magnitude of effect experienced during construction

for a temporary period of time during construction which might trigger a short term and temporary significant effect, which was not reported within the original PEIR.

1.8.12 The original PEIR reported a medium magnitude of effect and a significant adverse effect at construction for LCA A2: Ash Levels. The temporary towers would introduce a new component in a small part of the LCA which would have effects on the open landscape character but would be within the context of existing construction activity associated with the converter station and substation to the north-east and the existing OHL. There is the potential for a localised increase in the magnitude of effect in a small part of the LCA. The effects to the LCA would remain as a significant adverse effect, as reported within the original PEIR.

Likely Significant Effects During Operation and Maintenance

1.8.13 The original PEIR reported a medium magnitude of effect and a significant adverse effect at operation for recreational receptors along the local PRoW network (Viewpoint 4) and LCA E1: Stour Marshes. A Screened ZTV has been produced to take into consideration the ground being raised at the converter station and substation up to 2 m above existing ground level. This has been compared to the Screened ZTV presented within the original PEIR and the extent of theoretical visibility across the study area is comparable. There is some increased theoretical visibility associated with the additional 2 m in height version, however this is predominantly associated with seascape receptors which would be at some distance from the operational converter station and substation resulting in limited effects to landscape character or visual amenity. It is considered that the increased height would not have a discernible effect on landscape character and visual amenity, such that it is not considered that there would be a change to the effects reported in the original PEIR.

1.8.14 The temporary OHL towers would not be in place during the operational phase of the Kent Onshore Scheme, so would not result in any change to the operational effects assessment of visual receptors or landscape character reported within the original PEIR.

Ecology and Biodiversity

Existing Baseline

1.8.15 Volume 1, Part 3, Chapter 3 Ecology and Biodiversity of the original PEIR presented the preliminary likely significant effects of the Kent Onshore Scheme on ecology and biodiversity. Key information from this is provided below where considered relevant to the proposed design changes.

1.8.16 At the time of writing the PEIR the Phase 1 Habitat Survey reports had been produced, and the first season of non-breeding and breeding bird surveys had been completed. The main results of the Phase 1 Habitat Survey and the bird surveys were discussed in the PEIR.

1.8.17 At time of writing this additional PEI, the second season of non-breeding bird surveys has been completed, indicating an assemblage very similar to that identified in the first season. A full report is being produced and will form part of the ES. Other surveys identified in Table 3.3.7 of Volume 1, Part 3, Chapter 3 Ecology and Biodiversity of the original PEIR are ongoing, including a second season of breeding bird surveys.

1.8.18 The additional areas included in the draft Order Limits for this consultation are very similar in terms of habitat to those already considered in the original PEIR and therefore

are not expected to introduce new species or habitats into consideration in the ES. Key findings of results to date are:

- Dormouse surveys have been undertaken in suitable habitat across the Kent Onshore Scheme. No evidence of dormouse has been found to date;
- Trees with bat roost potential have been identified and further surveys to confirm the presence of roosts in high potential trees will be undertaken during summer 2024 following the most recent Bat Survey Guidelines;
- Breeding birds of note present within or close to the draft Order Limits include nesting Cetti's warbler (a Wildlife & Countryside Act Schedule 1 species) in ditches across the draft Order Limits and the River Stour, nesting kingfisher (also a Wildlife & Countryside Act Schedule 1 species) on the River Stour, and pairs of nesting marsh harrier (nesting off site but foraging around the survey area), cuckoo and skylark, with recorded numbers of these three species across the survey area being of at least district importance. Skylark (two pairs) is the only one of these species recorded likely nesting in the footprint of the permanent infrastructure (the Minster Substation and Converter Station). Several further skylark pairs were recorded nesting in the fields north of the proposed Minster Substation and Converter Station site in which a construction compound would be situated;
- During wintering bird surveys and vantage point surveys of the proposed section of new OHL, non-breeding hen harrier, marsh harrier, skylark and lapwing were noted to use the inland areas occasionally in numbers comparable to county peak data. This included a single record of a flock of 700 lapwings. A flock of 370 golden plover were recorded flying over railway between proposed Minster Substation and Converter Station site and the fields to the west in December 2022. These are a qualifying feature of the Thanet Coast & Sandwich Bay SPA and 370 birds constitutes over 1% of the SPA population. The field in which the proposed Minster Substation and Converter Station is located is therefore assumed to be functionally-linked to the SPA and habitat creation to offset the loss of this habitat is therefore included in the changes being consulted on as part of this additional PEI;
- Reptile surveys are being completed at the time of writing. A low population of slow worm and common lizard has been recorded around the restored grazing marshes along the River Stour valley;
- Bat activity surveys will be undertaken in summer 2024;
- Riparian mammal, fish and aquatic invertebrate surveys are being undertaken of the River Stour and other relevant watercourses that would be traversed by the works or subject to drainage outfalls. These surveys are ongoing but evidence of water vole and beaver has been recorded;
- Terrestrial invertebrate surveys are being undertaken during spring/summer 2024. These surveys are ongoing;
- Badger surveys have been undertaken. Records of setts are confidential to avoid persecution and therefore are not publicly disclosed; and
- Great crested newt surveys are not being undertaken as Natural England has agreed to use of the District Level Licensing Scheme for Kent.

1.8.19 There are two SPAs, SACs or Ramsar sites within 10 km of the draft Order Limits. These are Thanet Coast & Sandwich Bay SPA/Sandwich Bay SAC, which would be traversed using trenchless methods, and Stodmarsh SAC/SPA/Ramsar site which lies

6-7 km west of the draft Order Limits. There is a single ecological SSSI within 5 km of the draft Order Limits. This is Sandwich Bay to Hacklinge Marshes SSSI. This would also be traversed through trenchless methods at the coast, while an inland part of the SSSI designated for its neutral grassland habitat lies 20m south of the proposed Minster Substation and Converter Station. There are four non-statutory local wildlife sites within 2 km of the draft Order Limits. The largest of these is Ash Level and South Richborough Pasture (site DO21), which overlaps with the proposed Kent Onshore Scheme south of the River Stour, specifically where the new proposed OHL would connect into the existing 400kV Canterbury to Richborough OHL.

Summary of Key Changes for Ecology and Biodiversity

1.8.20 The main design changes of ecological significance are as follows. The construction access route through Pegwell Bay saltmarsh would be removed and an alternative access introduced which avoids the saltmarsh entirely. Although a short stretch of it passes through the Sandwich Bay SAC/Thanet Coast & Sandwich Bay SPA/Ramsar boundary, this is an existing track that has no SAC features or habitat supporting SPA birds. This would be accompanied by new laydown areas in the hardstanding of the hoverport. There would be a slight re-alignment of the HVDC cable route north between the A256 and golf course, and the introduction of a trenchless technique beneath the A256, as well as relocation of the main cable construction compound from north of the proposed Minster Substation and Converter Station, removing the main construction compound from Minster Marshes.

1.8.21 There would be re-alignment of the construction and maintenance haul road from the existing level crossing to a proposed bailey bridge across the River Stour. An approximately 11 ha area of long-term improved habitat in the form of seasonally flooded grassland and new riverside scrapes would be introduced on land south of part of the existing Richborough to Canterbury 400 kV OHL, to offset the permanent loss of functionally-linked arable habitat for wintering golden plover due to the proposed Minster Substation and Converter Station. It has been confirmed that standard height lattice towers would be used for the new OHL. Temporary towers are also now required south of the River Stour to facilitate the connection of the new section of OHL line to the existing Richborough to Canterbury 400 kV OHL without breaking the existing electricity circuit. The River Stour channel is now also included within the draft Order Limits for the purposes of BNG and watercourse enhancements.

Likely Significant Effects During Construction

1.8.22 The original PEIR included Volume 1, Part 5, Chapter 3 Habitat Regulations Assessment Screening Report. That report concluded that likely significant effects on Thanet Coast & Sandwich Bay SPA and Stodmarsh SPA could not be dismissed without further investigation and (in the case of Thanet Coast & Sandwich Bay SPA) provision of mitigation. This was primarily due to the potential for noise and visual disturbance impacts on Thanet Coast & Sandwich Bay SPA and loss of functionally linked habitat for golden plover of that SPA, and the potential for collision risk of birds due to the new section of OHL. The proposed design changes would not change the conclusions of that screening assessment. While temporary towers for the existing OHL are included, these are to replace the towers that need to be removed while also maintaining an electricity circuit and are located in a zone already subject to vantage point surveys and bird collision risk analysis.

1.8.23 The removal of the construction access route through Pegwell Bay saltmarsh and the introduction of a new construction and maintenance access road from Sandwich Road

via the hoverport for post-installation access to the mudflats for any monitoring would avoid any direct effects on the saltmarsh. Although a short stretch of it passes through the Sandwich Bay SAC/Thanet Coast & Sandwich Bay SPA/Ramsar boundary, this is an existing track that has no SAC features or habitat supporting SPA birds. The new laydown areas on the hoverport and adjacent to access off Sandwich Road are unlikely to introduce any new significant adverse effects.

1.8.24 The slight re-alignment of the HVDC cable route north between the A256 and golf course, and the introduction of a trenchless technique beneath the A256 would not materially impact ecological receptors beyond the proposals in the original PEIR. Relocation of the main cable construction compound from north of the proposed Minster Substation and Converter Station removes the main construction compound from Minster Marshes, which reduces the overall footprint in that area. This is ecologically preferred as the habitats alongside the A256 where it is proposed to be relocated are not part of the Minster Marshes landscape.

1.8.25 The re-alignment of the construction and maintenance haul road from the existing level crossing to a proposed bailey bridge across the River Stour reduces the number of access tracks. The bridge across the River Stour was part of the original PEIR proposals. A reduction in the number of access routes, relying solely on the route parallel to the railway line and removing the route further west that traverses several arable fields reduces the ecological zone of impact of the Proposed Project.

1.8.26 The principal ecologically relevant change introduced for the additional PEI is the introduction of approximately 11 ha of long-term improved habitat in the form of seasonally flooded grassland and new riverside scrapes to offset the permanent loss of functionally-linked arable habitat for wintering golden plover due to the proposed Minster Substation and Converter Station (permanent loss) and the construction compound (temporary loss) in addition to construction period disturbance of surrounding fields. This would be achieved through converting arable land (of lower value to golden plover than wet grassland), as has already been undertaken under Natural England stewardship.

1.8.27 In order to maximise its value, this new habitat would be contiguous with those areas already restored to wet grassland in the Lower Stour Wetlands Biodiversity Opportunity Area. The area of provision has been calculated to be appropriate to offset the permanent loss due to the Minster Substation and Converter Station and its maintenance would be secured for the lifetime of the Proposed Project. In addition to addressing the loss of golden plover habitat, the restored area would also benefit other wetland non-breeding birds (notably lapwing) and when dry during the spring and summer would also be of value for nesting skylark. The need for this habitat creation was identified in the original PEIR, this additional PEI identifies the land parcel in question.

1.8.28 The use of standard height lattice towers for the new OHL, rather than the low-height option, has been partly informed by consideration of ecological impacts. Vantage point surveys and a collision risk assessment have been undertaken. Given the limited difference in height (approximately 10m) between standard height and low height towers the analysis indicates there is little difference in the collision risk posed. However, with standard height towers, fewer towers are required which reduces both temporary and permanent habitat loss from the grazing marsh habitat south of the River Stour.

1.8.29 Temporary towers are required south of the River Stour to facilitate the connection of the new section of OHL to the existing Richborough to Canterbury 400 kV OHL whilst

maintaining the operation of the existing electricity circuit. Since these towers are to hold the existing line they do not add a new collision risk. Much of the work would be in areas of arable land, with only the western extent of works (two towers) in areas of wet grassland/grazing marsh. Any habitat loss would be small scale (the footprints of the towers) and temporary (approximately two years). This is not considered to be ecologically significant in the long-term.

1.8.30 The inclusion of the River Stour channel within draft Order Limits is ecologically positive as its purpose is to deliver potential watercourse enhancements (independent of any ecological mitigation requirements) for purposes of BNG.

Cultural Heritage

Existing Baseline

1.8.31 Volume 1, Part 3, Chapter 4 Cultural Heritage of the original PEIR presented the existing baseline for the historic environment. Since the submission of the PEIR, additional non-intrusive field surveys have been undertaken to inform the baseline, as well as assist with the identification of possible impacts. These have included a review of aerial photographs, and geophysical survey. Intrusive works have been limited to the archaeological monitoring of Ground Investigation works, while a phase of evaluation trenching has commenced in June 2024.

1.8.32 In most cases, the non-intrusive surveys have built on information already held on the sources such as the Kent Historic Environment Record, with previously recorded assets further defined. This includes the Ebbsfleet Lane site where an extensive site dating from the prehistoric and Roman periods has been recorded.

1.8.33 No new archaeological features were recorded in the lower Minster Marshes area, but this could be a result of masking deposits/alluvium in this area.

Summary of Key Changes for Cultural Heritage

1.8.34 In a number of areas, the draft Order Limits have been reduced as a result of the design changes and this would result in a reduced physical impact on heritage assets. This includes areas of the Minster Marshes landscape, as well as archaeological remains recorded in the elevated areas around Ebbsfleet Lane.

1.8.35 While the draft Order Limits have been reduced in some areas with a trenchless technology adopted for the crossing of the A256, a larger construction compound has now been proposed in an area of known archaeological remains to the west of the A256, while a new field has been included to accommodate a reception pit for the A256 crossing. Complex archaeological remains have previously been recorded in this area, and as such there is the potential for additional physical impacts. Additional land is also required to create new riverside scrapes on land south of part of the existing Richborough to Canterbury 400 kV OHL. Further information on the groundworks and potential foundations for the Minster Substation and Converter Station is also now available and so is considered below.

Likely Significant Effects During Construction

1.8.36 There is the potential for the Kent Onshore Scheme to result in physical impacts on the previously recorded archaeological remains around the Ebbsfleet Lane area to the west of the A256. The larger construction compound now proposed to the west of the A256 is

located in an area of complex archaeological remains, while a new field has been included to accommodate a reception pit for the A256 crossing.

1.8.37 Evaluation trenching is being undertaken, and this will provide additional information relating to the significance of the archaeological remains in this area. However, based on current knowledge the additional land take in this area would result in a larger footprint resulting in greater loss of archaeological remains. It should be possible to mitigate any impacts through standard mitigation measures (i.e. excavation, recording, and publication), although as the remains in this area are deemed to be of national importance, the residual effect may be significant adverse.

1.8.38 It is currently assumed that the use of trenchless technologies would go below the depth of archaeological remains and therefore remove the potential for physical impacts, although there is the potential for physical impacts on palaeo-environmental deposits. Further evaluation work to assess the potential of deeper palaeo-environmental remains is being undertaken.

1.8.39 The potential use of piling for the foundations of the Minster Substation and Converter Station has the potential to result in physical impacts on both buried archaeological deposits near the surface, and deeper palaeo-environmental deposits associated with the former Wantsum Channel. Evaluation trenching is being undertaken to assess the potential for buried remains to survive within the top 1-1.5m, although geophysical survey has not identified any features.

1.8.40 An additional phase of evaluation work to assess the potential of deeper palaeo-environmental remains is being designed. An initial review of data collected as part of the Site Investigation works has been undertaken and this suggests that the deposits are not of high potential. However, as the data has not been assessed by a geo-archaeologist and the value/sensitivity of deposits are not completely understood at this stage, a worst-case scenario has been adopted for this additional PEI and it is assumed the deposits are of high value/sensitivity. As a result, any piling provisionally has the potential to result in the loss of a relatively large area of potential archaeological and palaeo-archaeological deposits, resulting in a significant effect. This will be considered in the ES following further investigation.

1.8.41 Any ground disturbance associated with creating new riverside scrapes has the potential to result in physical impacts on heritage assets, however, it is assumed the scrapes can be micro-sited to avoid previously recorded assets. It is also assumed that the shallow nature of the scrapes should mean that any disturbance to previously unrecorded heritage assets would be limited as disturbance would be above the archaeological horizon. Archaeological monitoring would be undertaken when the scrapes are created to record any features that might be uncovered. As a result, no significant effects are predicted.

Likely Significant Effects During Operation and Maintenance

1.8.42 No additional impacts on setting have been identified since the submission of the original PEIR. The increased height of the Minster Substation and Converter Station site should not result in any additional significant adverse effects on the setting of heritage assets. Further detail will be provided in the ES, once the visualisations of the Minster Substation and Converter Station site are available and the setting assessment has been undertaken. However, it is not expected that the slight change in height will result in a new significant effect at this stage.

Geology and Hydrogeology

Existing Baseline

1.8.43 Volume 1, Part 3, Chapter 6 Geology and Hydrogeology of the original PEIR presented the existing baseline for geology and hydrogeology. The geology across the study area generally comprises Tidal Flat Deposits and Beach and Tidal Flat Deposits, with limited areas comprising Head Deposits. The bedrock geology generally comprises the Thanet Formation. The Sandwich and Hacklinge Marshes SSSI is indicated to be a Geological Conservation Review site which is located within the draft Order Limits.

1.8.44 The majority of the study area is indicated to have generally remained as undeveloped agricultural land since the earliest mapping reviewed, dated 1885, and therefore there is generally considered to be a very low risk of significant sources of contamination being present. Some small discrete areas of the study area have been identified as a low to high risk in relation to the potential for existing/historical contamination based on the current and/or historical land use, however based on the Preliminary Contamination Risk Assessment no sites were assessed as having a moderate or above risk to sensitive receptors.

1.8.45 The groundwater within the study area comprises the East Kent Tertiaries groundwater body, which was assessed as having a poor overall status when last assessed in 2019. The draft Order Limits are predominantly not located within a groundwater Source Protection Zone with the exception of a temporary construction compound (and associated access off Sandwich Road) that is located within a groundwater Source Protection Zone (SPZ) 1. The aquifer classifications of the geology beneath the study area varies depending on the geology, from a principal aquifer to secondary undifferentiated aquifer.

Summary of Key Changes for Cultural Heritage

1.8.46 The majority of the proposed design changes are not considered to introduce new or different significant effects to those identified within the original PEIR during construction or operation. The original PEIR included a consideration of the potential for a piled foundation at Minster Substation and Converter site extending below ground into the Chalk, so the additional detail provided on this in the targeted consultation does not alter the conclusions presented in the original PEIR.

1.8.47 However, the introduction of a construction compound (and associated access off Sandwich Road) within a groundwater SPZ 1 has the potential to introduce new or different significant effects during construction.

Likely Significant Effects During Construction

1.8.48 The design changes proposed are generally likely to result in the same effects as those presented in the original PEIR during construction, with the implementation of the good practice measures set out within the Outline CoCP. The exception to this is the temporary construction compound located within a groundwater SPZ 1, where there is potential for significant adverse effects in relation to hydrogeology. This construction compound will be subject to consultation with both the EA and relevant water company, and further assessment (as appropriate) to identify any required mitigation.

1.9 Offshore Scheme (Part 4 of the PEIR)

1.9.1 The additional PEI concentrates on the main design changes for the Offshore Scheme, which are described in Section 4: Our Proposals of the Project Update Document.

1.9.2 The environmental effects that are likely to be very similar to those presented in the original PEIR are presented below in Table 1.3.

Table 1.3: Environmental Topics with Similar Effects to the Original PEIR – Offshore Scheme

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
Chapter 2: Physical Environment	The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR. However, the re-routing of the Offshore Scheme to avoid the Goodwin Sands Marine Conservation Zone (MCZ) reduces impacts to the known and potential physical receptors located within the area. Upon approach to Pegwell Bay, the draft Order Limits have been widened in order to accommodate temporary construction activities (anchors, jack-up legs, and vessels). No different impacts have been identified on the coastline morphology and the Proposed Project is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. Areas across the offshore route have been identified as high-risk shipping areas (KP35.089 to KP57.887 ('SUNK') and KP81.301 to KP96.343 (North Foreland)). The use of rock as trench backfill is preferred for these KP ranges, to protect the lowered cable within the trench. The additional rock emplacement being proposed to backfill the marine cable trench should not overtop the top of the trench, i.e. above Original Seabed Level. No different impacts have been identified on the seabed morphology and is likely to result in the same effects (no new or different effects) to those presented in the original PEIR for rock protection. The introduction of the new access route via the former Ramsgate International Hoverport for any operation and maintenance activities is likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 3: Benthic Ecology	The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR. However, the re-routing of the Offshore Scheme to avoid the Goodwin Sands MCZ reduces impacts to the known and potential benthic receptors located within the area. Upon approach to Pegwell Bay, the draft Order Limits have been widened in order to accommodate temporary construction activities (anchors, jack-up legs, and vessels). No different impacts have been

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	identified on benthic receptors and the Proposed Project is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. Ground investigations have confirmed the use of Horizontal Directional Drilling (HDD) at both landfalls. In Kent, this technique would avoid the sensitive saltmarsh habitats in the upper intertidal area. However, due to the extent of the intertidal area at Pegwell Bay, impacts during cable trenching would affect both intertidal and subtidal habitats until it reaches the HDD exit pit. Therefore, impacts to intertidal habitats such as mudflats including temporary and physical disturbance, temporary increased suspended sediment concentrations during construction, operation and decommissioning are to be scoped back into the EIA and reported on in the ES. There are no likely significant adverse effects anticipated. Areas across the offshore route have been identified as high-risk shipping areas (KP35.089 to KP57.887 ('SUNK') and KP81.301 to KP96.343 (North Foreland). The use of rock as trench backfill is preferred for these KP ranges, to protect the lowered cable within the trench. Rock should not overtop the top of the trench, i.e. above Original Seabed Level. The habitats around the SUNK and North Foreland are considered to be subtidal coarse and mixed sediments. No different impacts have been identified on benthic receptors and the Proposed Project is likely to result in the same effects (no new or different effects) to those presented in the original PEIR for rock protection. The introduction of the new access route via the former Ramsgate International Hoverport for any operation and maintenance activities now avoids the saltmarsh habitat at Pegwell Bay. However, temporary disturbance to the surrounding mudflats is anticipated between the cable and hoverport if access is required to the cable. The primary access during construction is still marine-based, however there would need to be increased availability of this access at low stages of the tidal cycle for prompt access and egress to the mudflats in the event of an operational issue. Activities would be emergency call-outs in the first instance and would then be designed on the nature of the repairs / remediation works, and may require excavators, quad bikes and trailers, as well as potentially transport of specialist equipment. Therefore, impacts to intertidal mudflat habitats are to be scoped back into the EIA and reported on in the ES. There are no likely significant adverse effects anticipated.
Chapter 4: Fish and Shellfish	The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR. Upon approach to Pegwell Bay, the draft Order Limits have been widened in order to accommodate temporary construction activities (anchors, jack-up legs, and vessels). No different impacts have been identified on fish and shellfish to those presented in the original PEIR.

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	Areas across the offshore route have been identified as high-risk shipping areas (KP35.089 to KP57.887 ('SUNK') and KP81.301 to KP96.343 (North Foreland). The use of rock as trench backfill is preferred for these KP ranges, to protect the lowered cable within the trench. The additional rock emplacement being proposed to backfill the marine cable trench should not overtop the top of the trench, i.e. above Original Seabed Level. No different impacts have been identified on fish and shellfish receptors and the Proposed Project is likely to result in the same effects (no new or different effects) to those presented in the original PEIR for rock protection. The introduction of the new access route via the former Ramsgate International Hoverport for any operation and maintenance activities now avoids the saltmarsh habitat at Pegwell Bay. This is likely to result in the same effects (no new or different effects) on fish and shellfish to those presented in the original PEIR.
Chapter 5: Marine Mammals	The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR. Upon approach to Pegwell Bay, the draft Order Limits have been widened in order to accommodate temporary construction activities (anchors, jack-up legs, and vessels). No different impacts have been identified on marine mammals to those presented in the original PEIR. Areas across the offshore route have been identified as high-risk shipping areas (KP35.089 to KP57.887 ('SUNK') and KP81.301 to KP96.343 (North Foreland). The use of rock as trench backfill is preferred for these KP ranges, to protect the lowered cable within the trench. The additional rock emplacement being proposed to backfill the marine cable trench should not overtop the top of the trench, i.e. above Original Seabed Level. No different impacts have been identified on the seabed morphology and the Proposed Project is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. The widening of the draft Order Limits on approach to Pegwell Bay to accommodate temporary construction activities (anchors, jack-up legs and vessels) is likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 6: Ornithology	The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR. Upon approach to Pegwell Bay, the draft Order Limits have been widened in order to accommodate temporary construction activities (anchors, jack-up legs, and vessels). No different impacts have been identified on ornithological receptors to those presented in the original PEIR. Areas across the offshore route have been identified as high-risk shipping areas (KP35.089 to KP57.887 ('SUNK') and KP81.301 to

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	KP96.343 (North Foreland). The use of rock as trench backfill is preferred for these KP ranges, to protect the lowered cable within the trench. Rock should not overtop the top of the trench, i.e. above Original Seabed Level. No different impacts have been identified on the seabed morphology and is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. The introduction of the new access route via the former Ramsgate International Hoverport for any operation and maintenance activities now avoids the saltmarsh habitat at Pegwell Bay. The primary access during construction is still marine-based, however there would need to be increased availability of this access at low stages of the tidal cycle for prompt access and egress to the mudflats in the event of an operational issue. Activities would be emergency call-outs in the first instance and would then be designed on the nature of the repairs / remediation works, and may require excavators, quad bikes and trailers, as well as potentially transport of specialist equipment. This is likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 7: Marine Archaeology	The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR. However, the re-routing of the Offshore Scheme to avoid the Goodwin Sands MCZ reduces impacts to the known and potential archaeological receptors located within this culturally significant area. The widening of the draft Order Limits on approach to Pegwell Bay to accommodate temporary construction activities (anchors, jack-up legs and vessels) is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. However, due to the potential for additional archaeological remains in this area, it is recommended that the following surveys are undertaken at Pegwell Bay to enhance the baseline of the ES and associated appendices with regards to the known and potential marine archaeology resource: • an archaeological walkover survey is to be undertaken of the additional intertidal area to identify potential marine and coastal archaeological assets. • a drone gradiometer survey is to be undertaken of the additional area to identify magnetic anomalies including potential unexploded ordnance from the Second World War; a common feature on this coastline. It is also recommended that an archaeological watching brief is undertaken whilst trenching activities take place at the Kent landfall (and potentially the Suffolk landfall depending on the chosen installation methodology) to record archaeological material that is encountered. The additional rock placement to backfill the marine cable trench is likely to result in the same effects (no new or different effects) to those

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	presented in the original PEIR, with specific regard to indirect changes to the hydrodynamic and sedimentary regimes, as considered within the Physical Environment assessment. The introduction of the new access route via the former Ramsgate International Hoverport for any operation and maintenance activities is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. However, due to the potential for additional archaeological remains in this area, it is recommended that the following survey is undertaken at Pegwell Bay to enhance the baseline of the ES and associated appendices with regards to the known and potential marine archaeology resource: • an archaeological walkover survey is to be undertaken of the proposed access route leading from the intertidal area up to the mean high-water mark, to identify potential marine and coastal archaeological assets. Due to the modern nature of the structural remains of the hoverport (dating to between 1969 and 1987), it is unlikely that earlier archaeological material would be identified in this area, however the laydown area adjacent to Sandwich Road may need to be visited as part of the onshore cultural heritage assessment.
Chapter 8: Shipping and Navigation	Refinements to the offshore cable route include the avoidance of aggregate extraction areas, Harwich Deep Water Channel, and the SUNK pilot station. These changes are to reduce the impact of the Proposed Project on shipping and navigation receptors, however, these may result in different effects than those presented in the original PEIR, in particular relating to increased proximity to the Sunk deep water anchorage area. These potential different effects are to be discussed in the ES, but are unlikely to be significant. Upon approach to Pegwell Bay, the draft Order Limits have been widened in order to accommodate temporary construction activities (anchors, jack-up legs, and vessels). This is likely to result in the same effects (no new or different effects) to those presented in the original PEIR. Additional rock emplacement to backfill marine cable trench in high-risk areas is intended to reduce the impact of the Proposed Project on shipping and navigation receptors. The effects may however be different to those presented in the original PEIR and so shall be discussed in the ES, but are unlikely to be significant. The introduction of the new access route via the former Ramsgate International Hoverport for any operation and maintenance activities is likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 9: Commercial Fisheries	The changes are likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 10: Other Sea Users	Various refinements to the offshore cable route include the avoidance of aggregate extraction areas, Harwich Deep Water Channel, and the

Topic	Discussion on Key Features of the Existing Baseline, any Changes to Potential Impacts and Receptors and Conclusion in terms of Likely Significant Effects
	SUNK pilot station. These changes are to reduce the impact of the Proposed Project on other sea users and are likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 11: Offshore Scheme Intra-Project Cumulative Effects	These changes are likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 12: Offshore Scheme Inter-Project Cumulative Effects	These changes are likely to result in the same effects (no new or different effects) to those presented in the original PEIR.

1.10 Extended Working Hours for the Onshore Scheme

1.10.1 As described in the Project Update Document, in Section 4: Our Proposals, the proposed core working hours set out at statutory consultation did not include Sundays or bank holidays. However, to accommodate contractor requirements and to give the flexibility to deliver the programme on time, a need has been identified to include 7am to 5pm on Sundays and bank holidays within the core working hours. Whilst this change is to give the flexibility to carry out works when and where needed, it is not expected that construction activity would take place on every Sunday or bank holiday. There would be restrictions on the type of activity that can occur on these days. What remains unchanged is the need to potentially undertake certain activities outside core hours.

1.10.2 These extended working hours introduced since the statutory consultation only apply to the Suffolk Onshore and Kent Onshore schemes. The statutory consultation and the original PEIR already presented and assessed the potential for 24 hour working for the Offshore Scheme. In addition, within the original PEIR a sensitivity test was considered within the Traffic and Transport chapters as to whether the outcome of the assessment would change if working on Sunday and bank holidays was permitted to provide flexibility in the programme.

1.10.3 For the majority of the technical assessments presented in the original PEIR, these extended working hours do not alter the conclusions in terms of likely significant environmental effects. This includes the Landscape and Visual, Ecology and Biodiversity, Cultural Heritage, Water Environment, Geology and Hydrogeology, Agriculture and Soils and Climate Change assessments.

1.10.4 For Traffic and Transport, these extended working hours have the potential to result in significant adverse effects to Severance, Pedestrian Delay, Non-Motorised User Amenity, Fear and Intimidation, Driver Delay and Road Safety if unmitigated and without restrictions. Construction activity is not anticipated to take place regularly on Sundays and bank holidays and has been included to provide flexibility to carry out works when and where they are needed. Therefore, Sunday and bank holiday working is generally expected to be less intense than works at other times (e.g. during the week). However, further details of the anticipated frequency of traffic movements on Sundays and bank holidays are to be confirmed, and because baseline traffic volumes are generally lower on a Sunday the potential for significant adverse effects as a result of a higher

proportional uplift in traffic levels cannot be ruled out at this stage. Sunday and bank holiday working will be subject to further consultation with the local authorities. To mitigate the potential for adverse effects, restrictions and other measures will be applied where required and included as part of the Outline Construction Traffic Management and Travel Plan. The ES will include further details of anticipated vehicle movements on these days with these mitigation measures applied.

1.10.5 For Noise and Vibration, there are potential implications arising from extending the construction working hours, but they are not expected to alter the conclusions in the original PEIR. Sundays and bank holidays are regarded as more sensitive than weekday daytime periods and therefore works during these periods are more likely to exceed noise threshold levels. Construction activity is not anticipated to take place regularly on Sundays and bank holidays and has been included to provide flexibility to carry out works when and where they are needed. Therefore, Sunday and bank holiday working is generally expected to be less intense than works at other times (e.g. during the week), and subject to restrictions where required, including a commitment for no percussive piling during these periods. Consideration of the higher sensitivity of these time periods will also factor into the contractor's consideration of best practicable means (BPM) to reduce the effects of noise and vibration. Although there is a greater likelihood for exceedance of threshold noise levels during these periods, the temporal threshold for significant effects is not likely to be exceeded at any receptors due to the extended working hours where BPM are employed to reduce the effects of construction noise and vibration. Additional significant adverse effects are therefore not expected. The ES will include an assessment of potential noise and vibration impacts during the extended construction working hours.

1.10.6 For Air Quality, these extended working hours are not expected to alter the conclusions in the original PEIR. In the original PEIR, it was concluded that there is potential for significant effects from construction vehicle movements and therefore a detailed air assessment will be undertaken which will help determine the significance of effects. As the construction activities themselves are not changing, and therefore the associated vehicles over the course of the construction period are unlikely to change, the extended working hours are unlikely to cause a significant change in vehicle emissions compared to the working hours proposed in the original PEIR. In terms of impacts from construction dust, the assessment in the original PEIR determined the level of mitigation required to ensure there would be no significant adverse effects. The impacts from construction dust will be assessed again and reported within the ES, and any changes in mitigation will be incorporated into the Onshore Construction Environmental Management Plan and Outline Air Quality Management Plan.

1.10.7 For the Socio-economics, Recreation and Tourism and the Health and Wellbeing assessments these extended working hours have the potential to result in significant adverse effects to PRoW if unmitigated and without restrictions. Sundays and bank holidays are typically days where residents and visitors are more likely to frequent recreational PRoW. Therefore, there may be greater adverse effects on receptors accessing these recreational PRoW. Construction activity is not anticipated to take place regularly on Sundays and bank holidays and has been included to provide flexibility to carry out works when and where they are needed. Therefore, Sunday and bank holiday working is generally expected to be less intense than works at other times (e.g. during the week). However, further details of the anticipated construction activities on Sunday and bank holiday are to be confirmed, and therefore the potential for significant adverse effects cannot be ruled out at this stage. Sunday and bank holiday working will be subject to further consultation with the local authorities. To mitigate the

potential for adverse effects, restrictions and other measures will be applied where required.

1.11 Project Wide Effects (Part 5 of the original PEIR)

Table 1.4: Project Wide Effects

Topic	Discussion on Key Features of the Existing Baseline, any Changes of Potential Impacts and Receptor and Conclusion in terms of Likely Significant Effects
Chapter 1: Climate Change	The effects of the Proposed Project on climate change are assessed by means of a lifecycle greenhouse gas (GHG) assessment. The effects of climate change on the Proposed Project are assessed by means of a climate change risk assessment (CCRA). In the context of the lifecycle GHG assessment, the design changes may cause variations in quantities of construction materials, thereby potentially resulting in variations in the embodied carbon associated with the Proposed Project. Similarly, the design changes may cause variations in the GHG emissions associated with construction activities. However, these variations are anticipated to be immaterial relative to the whole-life GHG footprint of the Proposed Project. Therefore, these changes are not anticipated to change the conclusions of likely significant effects of the lifecycle GHG assessment. In the context of the CCRA, the design changes are not anticipated to be substantive enough to impact the climate change risks associated with the Proposed Project. Furthermore, the resolution of the baseline and projection data for CCRA is not granular enough to be impacted by these design changes. Therefore, these changes are not anticipated to change the conclusions of likely significant effects of the CCRA. The changes are likely to result in no new or different significant effects to those presented in the original PEIR.
Chapter 2: Combined Effects of Onshore and Offshore Elements of the Proposed Project	Given the conclusions of the above technical assessments, no new or different significant combined effects have been identified compared with those included in the original PEIR.
Chapter 3: Habitat Regulations Screening Report	The Habitat Regulations Assessment Screening Report, included in the PEIR, concluded that likely significant effects on SPAs and SACs in Suffolk (particularly Sandlings SPA but also Minsmere-Walberswick Heaths & Marshes SPA/SAC and Alde-Ore & Butley Estuaries SPA) could not be dismissed without further investigation. This was primarily due to the potential for noise and visual disturbance impacts on Sandlings SPA but was also related to potential impacts on functionally-linked habitat. The proposed design changes would not change the overall conclusions of that screening assessment, although

Topic	Discussion on Key Features of the Existing Baseline, any Changes of Potential Impacts and Receptor and Conclusion in terms of Likely Significant Effects
	disturbance impacts on Sandlings SPA may be reduced and an area has now been identified for long-term provision of acid grassland to offset the temporary loss of acid grassland foraging habitat for SPA birds and other features due to the construction works south of Sandlings SPA. The Report also concluded that likely significant effects on Thanet Coast & Sandwich Bay SPA and Stodmarsh SPA could not be dismissed without further investigation and (in the case of Thanet Coast & Sandwich Bay SPA) provision of mitigation. This was primarily due to the potential for noise and visual disturbance impacts on Thanet Coast & Sandwich Bay SPA and loss of functionally linked habitat for golden plover of that SPA, and the potential for collision risk of birds due to the new section of OHL. None of the proposed design changes discussed above in A.7 – A.9 change the conclusions of that screening assessment.
Chapter 4: Marine Conservation Zone (MCZ) Assessment	The re-routing of the Offshore Scheme to avoid the Goodwin Sands MCZ reduces impacts to the known and potential benthic receptors located within the area. The various refinements to the marine cable route are likely to result in the same effects (no new or different effects) to those presented in the original PEIR.
Chapter 5: Water Framework Directive Screening Assessment	The Water Framework Directive Screening Assessment included in the original PEIR concluded that due to the nature of the Proposed Project there is limited potential for project activities to cause future deterioration of WFD waterbodies. In addition, implementation of future measures to improve their status would not be prevented. Temporary effects during construction would be avoided or extensively reduced by implementing the good practice measures. None of the proposed design changes discussed above alter the conclusions of that screening assessment.

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