The Great Grid Upgrade

Sea Link

Preliminary Environmental Information Report

PEIR Non-Technical Summary

Version A
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nationalgrid

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Author	Robyn Jones
Approved by	Betsabe Sanchez
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1. Introduction

1.1 Overview

1.1.1 The Sea Link Project (hereafter referred to as the 'Proposed Project') is a proposal by National Grid Electricity Transmission plc (hereafter referred to as National Grid) to reinforce the transmission network in the South East of England and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon energy generation. New interconnection with mainland Europe, along both the Kent and Suffolk coastlines, also requires additional power flows and grid re-enforcement in East Anglia and South-east regions.

1.2 Purpose of this Non-Technical Summary

1.2.1 The aim of this Non-Technical Summary (NTS) is to enable the local communities and other stakeholders to understand the likely preliminary environmental effects arising from the Proposed Project, as reported in the Preliminary Environmental information Report (PEIR), in a concise manner which is easily understood and accessible by all. Effects are assessed in terms of how 'significant' they would be, and the Environmental Impact Assessment (EIA) is primarily concerned with 'likely significant effects' and not those unlikely to be significant.

1.2.2 This NTS includes a description of the Proposed Project, a summary of the consultation process, and preliminary environmental information relating to the proposed works.

Table 1-1. What's included

Section	What is it about?
1. Introduction	This Introduction chapter introduces National Grid, what the Proposed Project is, where it is located and why it is needed.
2: Main Alternatives Considered	This chapter explains the alternative designs considered to date and provides a summary of how the design has evolved and developed to date.
3: Project Description	This chapter explains how the Proposed Project would be built (should it be consented), what new electricity infrastructure would be implemented and how long construction would take.
4: Approach and Methodology	This chapter explains how the preliminary assessment has been undertaken and how it has been informed by consultation and stakeholder engagement to date.
5: Preliminary Environmental Assessment – Suffolk Onshore Scheme	This chapter provides a summary of the potential environmental effects arising from the Proposed Project in Suffolk which have been identified to date.

Section	What is it about?
6: Preliminary Environmental Assessment – Kent Onshore Scheme	This chapter provides a summary of the potential environmental effects arising from the Proposed Project in Kent which have been identified to date.
7: Preliminary Environmental Assessment – Offshore Scheme	This chapter provides a summary of the potential environmental effects arising from the Proposed Project offshore which have been identified to date.
8: Project-Wide Effects	This chapter provides a summary of the project wide assessments undertaken for the Proposed Project including climate change, combined effects of onshore and offshore elements, Habitats Regulations Screening, Marine Conservation Zone Assessment and Water Framework Directive Assessment
9: Next Steps	This chapter explains what happens next in the EIA process, and how you can have your say on the proposals.

1.3 What is Sea Link?

1.3.1 National Grid is proposing to reinforce the network between Suffolk and Kent via a new, primarily offshore, 2 GW high voltage direct current (HVDC) link. Additionally onshore infrastructure required to deliver the Proposed Project, including converter stations, substations and new underground and overhead electricity lines, will also be installed.

1.3.2 The Proposed Project has been designed to increase the capability of the network to carry low carbon and renewable energy from where it is generated to homes and businesses across the country.

1.4 Who is National Grid?

1.4.1 National Grid owns, builds and maintains the electricity transmission network in England and Wales. Under the Electricity Act 1989, National Grid holds a transmission licence under which it is required to develop and maintain an efficient, coordinated, and economic electricity transmission system.

1.5 Why is Sea Link Needed?

1.5.1 The network in and between East Anglia and the south-east of England needs reinforcing for four main reasons:

- the existing transmission network was not designed to transport electricity from where we increasingly now generate it (largely offshore);
- the growth in offshore wind, interconnectors and nuclear power means that more electricity will be generated in the years ahead than the current network is able to securely and reliably transport;

- as a country, electricity demand is forecasted to at least double by 2050, increasing the amount of energy we need to transport to homes and businesses; and
- upgrading the existing network as it is today (such as through replacing cables to carry more power) will not be enough to carry the amount of future power whilst operating to required standards.

1.5.2 The Proposed Project is just one of several electricity network reinforcements that are needed to ensure the electricity transmission network is fit for the future.

1.6 The Consenting Process for Sea Link

1.6.1 The Planning Act 2008 process was introduced to streamline the decision-making process for major infrastructure projects, making it fairer and faster for communities and applicants alike.

1.6.2 None of the components of the Proposed Project fell within the definition of a 'Nationally Significant Infrastructure Project' (NSIP). In consultation with the relevant Local Planning Authorities (LPA) in Suffolk and Kent, the Proposed Project sought direction from the Secretary of State (SoS) for the Proposed Project to be treated as a development for which development consent is required. This was granted by the SoS.

1.6.3 By progressing the development through the Planning Act 2008 development consent process, it would provide the certainty of a single, unified consenting process and fixed timescales".

1.6.4 The purpose of the PEIR is to provide early information to allow stakeholders and the local community to develop an informed view of the impacts of the Proposed Project. This process involves identifying potentially significant adverse impacts resulting from the Proposed Project, allowing them to be avoided or minimised where possible, as well as identifying any potential beneficial environmental impacts.

1.6.5 The Development Consent Order (DCO) application for the Proposed Project will be submitted by National Grid in Autumn 2024 which will provide details of the Proposed Project and will be accompanied by an Environmental Statement (ES).

2. Main Alternatives Considered

2.1 Introduction

2.1.1 National Grid undertakes options appraisals during the first stage of project development for all new projects. These often identify a number of different approaches the project could take to achieve its stated purpose, also known as its 'Needs Case', and may include different locations, technologies or designs.

2.1.2 Options appraisal is a robust and transparent process that is used to compare options and to assess the positive and negative effects. Options are appraised across a wide range of criteria including environmental, socio-economic, technical and cost factors, as set out in National Grid's approach to options appraisal. The aim is to find a balanced outcome, bearing in mind the range of National Grid's statutory duties. The assessment is documented to provide, in a transparent manner, information upon which decisions are based.

2.1.3 At each stage of the options appraisal process for the Proposed Project, a clearly defined methodology has been used to inform the decision making process. This has included technical inputs from engineers and environmental consultants to inform the decisions and design. Decision making has also taken into account the feedback from prescribed bodies and will continue to take into account the feedback from the prescribed bodies alongside feedback from the local community through an extensive programme of engagement and consultation.

2.1.4 Image 2.1 shows where the options appraisal sits within National Grid's approach to project development and delivery, as set out in the National Grid publication 'Our Approach to Consenting'.

2.1.5 The current Proposed Project design is the result of an iterative process that commenced at project inception in 2019, when the initial need to reinforce the network in the South East of England was identified. Environmental, engineering and economic considerations have influenced the optioneering and design evolution process. There have also been extensive discussions with the relevant statutory and non-statutory stakeholders during the development of the Proposed Project, as well as a round of public non-statutory consultation.

Image 2.1. National Grid's approach to project development and delivery

2.2 Strategic Proposal

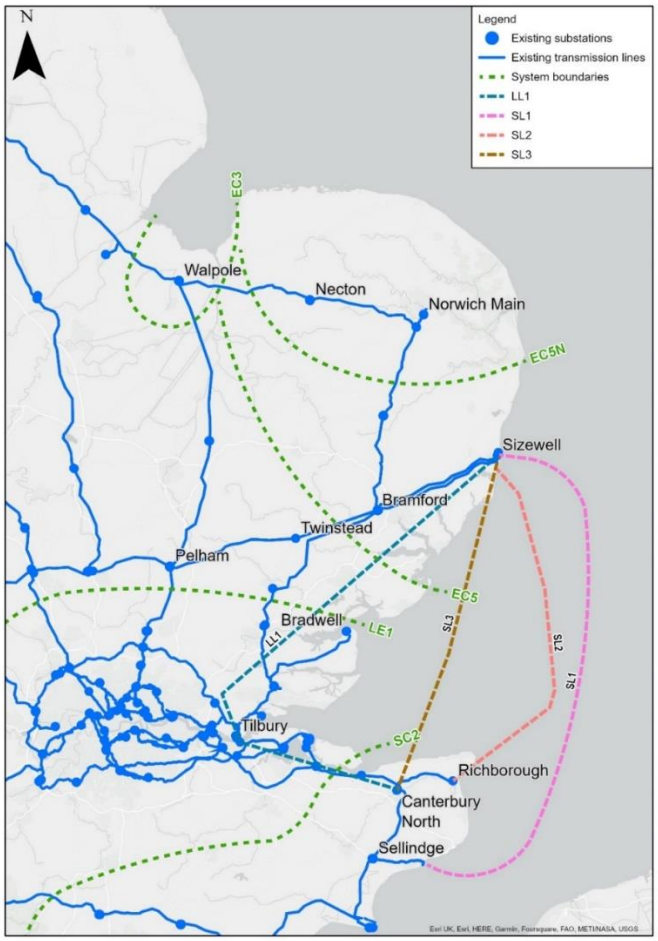
2.2.1 A range of strategic options that might address network needs were identified and appraised at a strategic level. These appraisals considered the likely environmental and socio-economic effects, technical issues, and costs that would be associated with each strategic option.

2.2.2 The need to reinforce the network in the South East of England is driven by a projected increase in interconnector activity between Europe and Kent. Additionally, centres of demand in the South East, including London, are likely to grow. One of the strategic options that was considered was a subsea HVDC link between the South East of England and East Anglia.

2.2.3 Following the identification of the need for the reinforcement to connect into the Sizewell area in East Anglia and into the South East of England, four alternative strategic options were appraised. These are listed below and illustrated on Image 2.2.

- SL1 - Sizewell area and Sellindge substation offshore;
- SL2 - Sizewell area and Richborough substation offshore;
- SL3 - Sizewell area and Canterbury substation offshore; and
- LL1 - Sizewell area and Canterbury substation onshore.

Image 2.2. Schematic of Strategic Options considered for the Proposed Project



2.2.4 As part of the assessment of these four strategic options, National Grid considered the:

- environmental and socio-economic constraints;
- technology options available and the associated technical considerations; and
- the capital and lifetime costs of each option.

2.2.5 SL2 was identified as the preferred strategic option for the Proposed Project.

2.3 Options Identification and Selection

2.3.1 Routeing and siting work was undertaken between 2021 and 2022. The outputs of this process are reported within the Sea Link Corridor and Preliminary Routeing and Siting Study (CPRSS) and Option Selection and Design Evolution Report.

2.3.2 A staged approach was adopted to identify corridors and preliminary routeing and siting options for the Proposed Project, considering environmental and socio-economic factors as well as technical and engineering design considerations, and cost.

2.3.3 Each of the options identified for the converter site option Areas and cable route corridors were appraised in accordance with National Grid's approach to options appraisal. The steps undertaken for the Proposed Project in this staged approach are listed below.

- **Step 1** Identification of the Routeing and Siting Study Area;
- **Step 2** Data Gathering;
- **Step 3** Identification of Landfall Areas of Search;
- **Step 4** Identification of Route Corridors and Site Areas;
- **Step 5** Appraisal of Route Corridors and Site Areas; and
- **Step 6** Identification of the Preferred end-to-end solution.

2.3.4 In Autumn 2022, a non-statutory public consultation was held for a period of eight weeks, between 24 October 2022 and 18 December 2022. This consultation introduced the Proposed Project, explained how National Grid had developed its proposals, and sought the views of the public and stakeholders. Copies of the CPRSS were made available during the 2022 non-statutory consultation.

2.3.5 At statutory consultation, National Grid consulted on five corridor options in Suffolk, these were:

- Suffolk Site 1 Emerging Preference;
- Suffolk Site 3 Emerging Preference;
- Suffolk Site 1 Alternative;
- Suffolk Site 3 Alternative (option 1); and
- Suffolk Site 3 Alternative (option 3).

2.3.6 National Grid consulted on two corridor options for the marine cable, these were:

- Marine Corridor Emerging Preference; and
- Marine Corridor Alternative.

2.3.7 National Grid consulted one corridor in Kent, this was:

- Kent Emerging Preference corridor.

2.3.8 National Grid also consulted on the technology choice in Kent for the High Voltage Alternating Current (HVAC) connection being made by either overhead line or underground cables.

2.3.9 Within the corridors National Grid showed a graduated swathe. The darker areas of the swathe indicated, based information available at the time, a more likely location for the infrastructure within the corridors. This was indicative and subject to further assessment work, and the consultation feedback National Grid received.

2.3.10 The feedback received during the 2022 non-statutory consultation has been carefully reviewed and considered, alongside ongoing environmental and engineering studies. National Grid have also backchecked and reviewed its previous studies to ensure the reasons for the decisions taken have not changed following a review of the non-statutory consultation feedback.

2.3.11 In Suffolk, Site 3 Emerging Preference has been selected as the preferred option. In marine waters, the Marine Corridor Emerging Preference has been selected as the preferred option. In Kent, an overhead line has been selected as the choice of technology for the HVAC connection.

2.3.12 A detailed summary of the routeing and siting appraisal and design evolution relevant to the Proposed Development in Suffolk, Kent and offshore is provided in PEIR **Volume 1 Part 2 Chapter 1 Evolution of the Suffolk Onshore Scheme**, **Part 3 Evolution of the Kent Onshore Scheme** and **Part 4 Evolution of the Offshore Scheme**.

3. Project Description

3.1 Introduction

3.1.1 The Proposed Project involves the reinforcement of the electricity transmission network between Suffolk and Kent, predominantly via offshore high voltage direct current (HVDC) link, but with significant onshore elements to connect into the transmission network. The Proposed Project is split into three distinctive elements, as follows.

3.2 The Suffolk Onshore Scheme

3.2.1 The proposed Suffolk Onshore Scheme would comprise of:

- A connection from the existing transmission network via the proposed Friston Substation, including the substation itself. Friston Substation already has development consent as part of other third-party projects. If Friston Substation has already been constructed under another consent, only a connection into the substation would be constructed by the Proposed Project.
- A HVAC underground cable of approximately 1.7 km in length between the proposed Friston Substation and a proposed converter station (below).
- A 2 GW HVDC converter station up to 26 m high plus external equipment (such as lightning protection and railings for walkways) near Saxmundham.
- A HVDC underground cable connection of approximately 10 km in length between the proposed converter station near Saxmundham, and a transition joint bay (TJB) approximately 900 m inshore from a landfall point (below) where the cable transitions from onshore to offshore technology.
- A landfall on the Suffolk coast (between Aldeburgh and Thorpeness).

3.2.2 The proposals in Suffolk have been developed for Proposed Project as a standalone project, but also include opportunities to co-locate infrastructure for up to two further projects at the converter station, cable corridors and the landfall location.

3.3 Kent Onshore Scheme

3.3.1 The proposed Kent Onshore Scheme would comprise of:

- A landfall point on the Kent coast at Pegwell Bay.
- A TJB approximately 800 m inshore to transition from offshore HVDC cable to onshore HVDC cable, before continuing underground for approximately 2 km to a new converter station (below).
- A 2 GW HVDC converter station, up to 26 m high plus external equipment (such as lightning protection and railings for walkways), near Minster. A new substation would be located immediately adjacent.

- Removal of approximately up to 1 km of existing HVAC overhead line, and installation of approximately 2.25 km of new HVAC overhead line from the substation near Minster and the existing Richborough to Canterbury overhead line.

3.3.2 The Proposed Project also includes modifications to sections of existing overhead lines in Suffolk and Kent, diversions of third-party assets, and land drainage from the construction and operational footprint. It also includes opportunities for environmental mitigation, compensation, and enhancement (which could include hedgerow creation, native tree planting or funding local wildlife groups). The construction phase will involve various temporary construction activities including overhead line diversions, working areas for construction equipment and machinery, site offices, storage, accesses, bellmouths, and haul roads, as well as watercourse crossings and the diversion of public rights of way (PROWs).

3.4 Offshore Scheme

3.4.1 The proposed 130 km marine HVDC cables would be routed from the Suffolk landfall located between the settlements of Aldeburgh and Thorpeness to the Kent landfall located within Pegwell Bay to the south of the settlement of Cliffsend.

3.4.2 The marine HVDC cables would be routed south from the Suffolk landfall through a section of the Outer Thames Estuary SPA and to the west of the existing Greater Gabbard and Galloper offshore wind farms. The cables would head east through the Sunk TSS turning south to route around Margate and Long Sands SAC and between a number of mineral aggregate sites. The marine HVDC cables would then continue south to the east of London Array offshore wind farm and west of Thanet offshore windfarm before turning west to make landfall in Pegwell Bay.

3.4.3 The proposed Offshore Scheme includes three distinct components, which are summarised below:

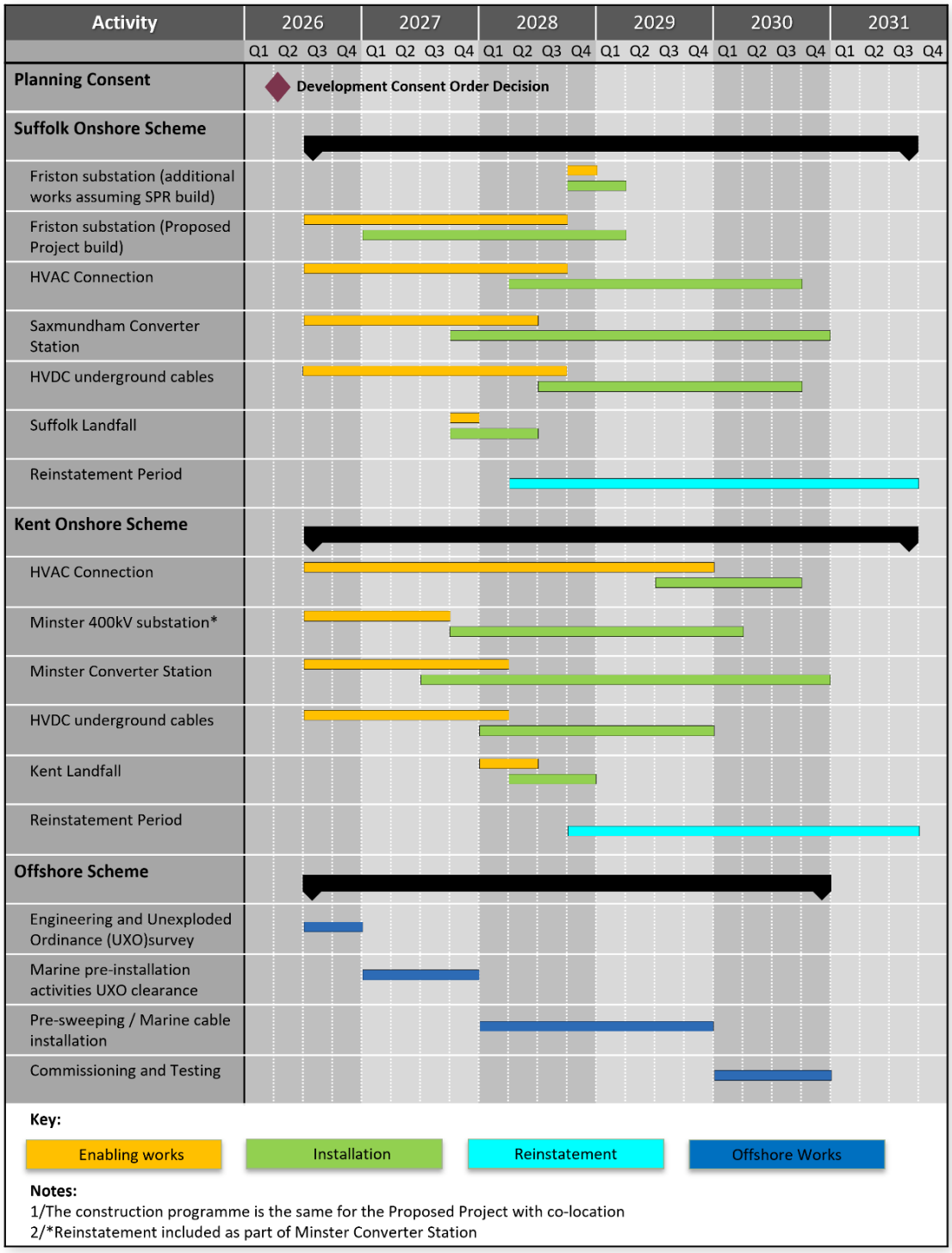
- Suffolk landfall: This is the area where the cable route transitions between the marine and terrestrial environment in Suffolk. This is located between the settlements of Aldeburgh and Thorpeness. Trenchless installation techniques are proposed here to reduce disturbance to the intertidal environment;
- Marine HVDC cable route: This is the cable route from the landfall in Suffolk to the landfall in Kent. The marine HVDC cable route is up to 130 km in length; and
- Kent landfall: this is the area where the cable route transitions between the marine and terrestrial environment in Kent, located in the Pegwell Bay area to the south of the settlement of Cliffsend. Trenchless installation techniques are proposed here to reduce disturbance to the intertidal environment.

3.5 Construction Programme and Timings

3.5.1 Subject to gaining development consent, construction works would be expected to start in 2026 and be functionally completed by the end of 2030 with reinstatement potentially continuing into 2031.

3.5.2 While the phasing of the programme is yet to be confirmed, Table 3-1 provides a high-level indication of the how the Proposed Project may be delivered.

Table 3-1. Indicative construction programme



3.6 Coordination with Third Party Projects

3.6.1 Feedback received during early discussions with LPA's as well as during non-statutory consultation and through the Scoping Opinion identified the need to explore coordination with other energy infrastructure projects that are proposed in the same locality.

3.6.2 National Grid and National Grid Ventures (NGV) have undertaken discussions to explore the opportunities for coordination of their proposed projects in Suffolk, one part of which is co-location of infrastructure. The Proposed Project therefore includes an option to facilitate co-location of infrastructure with NGV's proposed Nautilus and LionLink (formally known as EuroLink) interconnector projects to the extent currently possible.

Co-location can take different forms depending on the specific element of infrastructure being considered. In the case of HVAC/DC cables and landfall, co-location would involve installation of additional ducts to accommodate the NGV projects as part of the Proposed Project (the actual installation of the cables would be the subject of separate consent to be obtained by the NGV projects). In the case of the Saxmundham Converter Station, co-location would involve coordination with NGV projects so that up to three converter stations can be located in the same site; however the additional converter station(s) at Saxmundham would be subject to their own consent and would not form part of the Proposed Project. Detail on the approach taken for co-location of specific Proposed Project elements is provided in PEIR **Volume 1, Part 1, Chapter 4: Description of the Proposed Project.**

4. Approach and Methodology

4.1 Preliminary Environmental Information Report and EIA

4.1.1 The PEIR presents a preliminary assessment of the likely significant environmental effects of the Proposed Project.

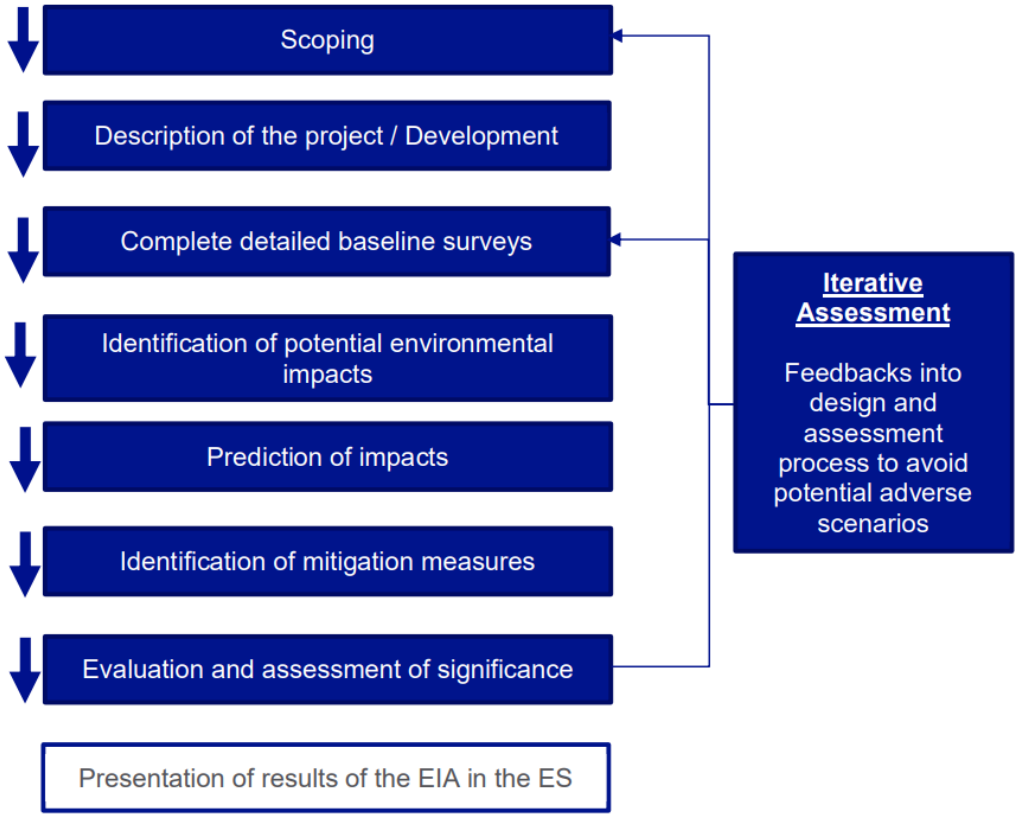
4.1.2 The PEIR has been prepared at a point in time during the Environmental Impact Assessment (EIA) process when the design of the Proposed Project is still being refined, the likely significant environmental effects are still being assessed and the potential for environmental measures is being fed back into the design.

4.1.3 The purpose of the PEIR is to enable members of the public, consultation bodies, and other stakeholders, to develop an informed view of the likely significant effects of the Proposed Project and comment on aspects of interest. Feedback received through the consultation process will be used by National Grid to inform the ongoing development of the Proposed Project design, and additional measures to address any identified significant environmental effects.

4.1.4 The full findings of the EIA process will be presented in an ES that will be submitted as part of the application for development consent.

4.1.5 The EIA process and the iterative nature of assessment and project design is illustrated in Image 4.1.

Image 4.1. The EIA process



4.2 EIA Scoping and Stakeholder Engagement

4.2.1 Central to the delivery of the EIA has been, and will continue to be, the focus on engagement with statutory and non-statutory consultees , community stakeholders, and other interested organisations and individuals.

EIA Scoping Stage

4.2.2 A Scoping Report was submitted to the Planning Inspectorate in October 2022. The Scoping Report identifies the potentially significant effects requiring assessment, determines the subject matter of the assessment and the methodologies for undertaking the assessment. The Planning Inspectorate subsequently provided a Scoping Opinion, which included comments from a range of stakeholders, on behalf of the SoS in December 2022. The Scoping Opinion and the statutory consultee responses have subsequently informed the assessment work and further design evolution undertaken to date.

Informal Consultation and Engagement

4.2.3 In addition to the formal scoping process National Grid has undertaken ongoing stakeholder engagement throughout the development of the Proposed Project. This has included:

- Regular liaison with the relevant Local Authorities and the Marine Management Organisation (MMO), including strategic and topic specific meetings;
- Meeting with statutory stakeholders such as the Environment Agency, Historic England and Natural England, and non-statutory stakeholders such as the RSPB and Port and Harbour Authorities, to update them on the Proposed Project, discuss technical issues and respond to questions.

4.3 PEIR Approach and Methodology

4.3.1 EIA is a process for identifying the likely significant environmental effects (positive and negative) of a proposed development to inform the decision-making process for development consent to be granted.

4.3.2 The EIA considers all relevant topics that may be impacted, such as landscape and historic environment. The topics to be included in the EIA were agreed with the Planning Inspectorate and other stakeholders through the Scoping process described above.

4.3.3 The PEIR presents the preliminary EIA findings which are based on the information available at the time this document was written. A description of the existing 'baseline environment' has been produced for the Proposed Project and where appropriate the area around the boundary, through a combination of desk-based studies, consultation and site-specific surveys.

4.3.4 All 'potential effects' arising from the construction, operation and decommissioning of the Proposed Project are identified as part of the EIA, for example loss of habitat or change in noise levels. The assessment considers the significance of each effect on each 'receptor' (the receiving environment such as water, air, land, or specific species). The assessment is undertaken by EIA specialists such as ecologists and archaeologists. The general approach to determining 'significance' of an effect is to consider the sensitivity of a receptor alongside the nature and severity of the change. A detailed explanation of how

different effects are deemed significant for each aspect is provided in each topic chapter of the PEIR.

4.3.5 All potential effects are considered as part of the EIA process. However, 'likely significant effects' are the key issues that are identified when considering the type of effect and the sensitivity of the environmental receptor.

4.3.6 After the identification of the potential effects, consideration has been given to how those potential effects could be avoided, reduced or offset. This is referred to as mitigation. Mitigation measures include those that are intrinsic to and built into the design of the Proposed Project (also known as 'embedded measures'); good practice control and management measures included within a Code of Construction Practice (CoCP), and other measures that are added to the design purely to mitigate an effect (e.g. landscape planting).

4.3.7 At this preliminary stage the surveys and assessment work have progressed to differing degrees for different technical assessment, and mitigation measures have not all been defined or designed.

4.3.8 Throughout the PEIR, a number of alternative design options (e.g. different construction and/or permanent access options) and assessment scenarios have been considered. For the Suffolk Onshore Scheme, this has included an assessment of the co-location of the Proposed Project with the NGV proposed Nautilus and Lionlink interconnector projects.

4.3.9 EIA also requires the consideration of potential cumulative and interrelated effects:

- Inter project cumulative effects consider the effect of the Proposed Project combined with effects from a number of different projects, on the same single environmental receptor/resource are considered; and
- Intra project cumulative effects are those that arise from multiple impacts and activities from the construction, operation and decommissioning (should the Proposed Project be consented) on the same receptor, or group of receptors.

4.3.10 At this stage a preliminary assessment has been undertaken to identify other planned developments within the area around the Proposed Project which have the potential to result in cumulative effects.

4.4 PEIR Structure

4.4.1 The PEIR is comprised of:

- Non-Technical Summary (this report);
- Volume 1: Main text;
- Volume 2: Appendices; and
- Volume 3: Figures.

5. Preliminary Environmental Assessment- Suffolk Onshore Scheme

5.1 Landscape and Visual

5.1.1 The potential interaction between the Suffolk Onshore Scheme and landscape and visual is assessed in **Volume 1, Part 2, Chapter 2: Landscape and Visual** of the PEIR. Field work has been undertaken during winter 2022 and summer and winter 2023 to inform the scoping process, assess the existing character of the landscape and visit representative viewpoints.

5.1.2 The study area for the landscape and visual assessment of the Suffolk Onshore Scheme comprises an area of 3 kilometres (km) from the draft Order Limits. The landscape varies considerably within the study area. It includes parts of the low-lying and gently undulating coastline comprising marshland and heathland, within the Suffolk Coast and Heaths AONB. Further inland medium to large-scale agricultural fields dominate across relatively higher, undulating land. The landscape of the study area is settled, with a variety of towns, including Leiston and Aldeburgh, smaller villages, including Friston and Knodishall, small clusters of dwellings and scattered properties.

5.1.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect landscape and visual receptors. These include the retention of vegetation where practicable and native shrub planting as a replacement where lost vegetation cannot be replaced. The Proposed Project will also apply a five-year aftercare period, this will be established for all reinstatement and mitigation vegetation planting.

5.1.4 The potential impacts of the Suffolk Onshore Scheme on landscape and visual receptors include temporary alteration to landscape character from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting.

5.1.5 The assessment concluded that effects have the potential to be significant for specific landscape and visual receptors including the Fromus Valley, Heveningham and Knodishall Estate Claylands coastal landscapes, and a number of representative viewpoints for the Proposed Project on its own and the Proposed Project with co-location.

5.2 Terrestrial Ecology

5.2.1 The potential interaction between the Suffolk Onshore Scheme and terrestrial ecology is assessed in **Volume 1, Part 2, Chapter 3: Ecology and Biodiversity** of the PEIR. A desk study has been undertaken, with ecology surveys underway in preparation for the ES.

5.2.2 The majority of the proposed Suffolk Onshore Scheme, west of Aldeburgh golf course, consists of arable crops. Crops recorded present included barley, corn, and salad crops. Fields of amenity grassland grown for turf were also present within and adjacent to the proposed Suffolk Onshore Scheme. There are multiple small woodland blocks across the

survey area, the majority of which are outside of the Suffolk Onshore Scheme draft Order Limits. Numerous scattered mature broadleaved and coniferous trees are present within the survey area including within the proposed Suffolk Onshore Scheme, including field maple, dog rose, oak, lime, turkey oak, sycamore, beech, cherry and Corsican pine. There are areas of neutral grassland across the survey area, and large areas of semi-improved acid grassland in the east of the proposed Suffolk Onshore Scheme.

5.2.3 The Sandlings SPA, Leiston-Aldeburgh Site of Special Scientific Interest (SSSI) and RSPB North Warren Reserve are located adjacent to the Suffolk landfall. Ornithological features at the proposed Suffolk Onshore Scheme include non-breeding wigeon and teal, as well as shelduck, black-tailed godwit, herring gull, gadwall, and shoveler. Breeding birds include lapwing and common snipe, alongside those typical of lowland farmland, with expected species such as skylark and yellowhammer. Atypical species included several pairs of woodlark located on rough pasture/abandoned paddocks bordered on arable fields and holding territory on field edges where sandy soils predominated.

5.2.4 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect terrestrial ecology. These include the assumption that vegetation with the potential to support breeding birds will not be removed during the breeding bird season (March to August inclusive), and where there will be a risk of animal entrapment, a means of escape will be installed into all excavations left open overnight. Additional mitigation includes the installation of visual and noise disturbance mitigation (e.g. close-board fencing) along the boundary between the construction or decommissioning compound and trenchless techniques location west of the North Warren RSPB Reserve, and both the Reserve and Sandlings SPA, should noise modelling indicate this is necessary.

5.2.5 Potential impacts of the proposed Suffolk Onshore Scheme on terrestrial ecology include direct loss (temporary or permanent) of habitats (and bird habitats), disturbance of designated sites, spillages and introduction of non-native species of habitats, and killing and injury of fauna. These will be mitigated through a range of measures including but not limited to using trenchless cable techniques, retaining root structures for hedgerow habitats and reforest areas to compensate for any potential habitat loss.

5.2.6 The assessment concluded that effects have the potential to be significant for specific terrestrial ecology receptors for the Proposed Project on its own and the Proposed Project with co-location including direct and temporary habitat loss and disturbance to designated sites during construction and decommissioning, until the details of the mitigation are developed and finalised. Survey work is ongoing and have commenced for most receptors. However, the first season of non-breeding bird survey and breeding bird survey has been completed and Phase 1 Habitat Survey has been undertaken.

5.3 Cultural Heritage

5.3.1 The potential interaction between the Suffolk Onshore Scheme and cultural heritage is assessed in **Volume 1, Part 2, Chapter 4: Cultural Heritage** of the PEIR. The main data sets that have been utilised for the Cultural Heritage Assessment to date are the Historic England National Heritage List for England for designated assets, and the Suffolk Historic Environment Record (HER) for non-designated assets. A 500 m buffer was applied to the Suffolk Onshore Scheme Boundary, which includes the proposed cable route and other associated works, as the study area to capture information relating to archaeology and cultural heritage.

5.3.2 Twenty-three designated assets have been recorded within the study area, including three Grade I listed buildings and twenty Grade II listed buildings. The majority of the Grade II listed buildings are located within the settlements which surrounds the proposed Suffolk Onshore Scheme, with concentrations in Leiston, Aldeburgh, Thorpeness, Aldringham, Friston, Sternfield and Saxmundham. Aldeburgh, Thorpeness, Leiston, and Saxmundham are also conservation areas. A review of non-designated assets revealed a large number of heritage assets demonstrating evidence of human activity in the area from the early prehistoric period through to the modern period.

5.3.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect cultural heritage receptors. These include the signposting of known archaeological interest/value, or areas where archaeological work is planned to avoid unintentional damage, and where a previously unknown heritage asset is discovered, or a known heritage asset proves to be more significant than foreseen at the time of application, the Project Team will inform the relevant local planning authority.

5.3.4 In most cases it is predicted that careful design should result in direct impacts on most heritage assets being avoided, or only limited areas of large archaeological sites being impacted, with standard mitigation such as archaeological excavation and recording mitigating impacts. The assessment identified that there is the potential for a significant physical impact on the Gorse Hill multi-period site for the Proposed Project on its own and the Proposed Project with co-location.

5.3.5 In most cases, the potential for a significant impact on the setting of designed assets resulting from the proposed Saxmundham Converter Station, as well as other permanent works such as permanent access and the Friston Sub-station, is limited due existing woodland and high hedgerows that provide extensive screening, as well as topography and the existing built environment. This is the same for the co-location option with the exception of Wood Farm Listed Buildings where co-locations could result in a significant effect.

5.4 Water Environment

5.4.1 The potential interaction between the Suffolk Onshore Scheme and the water environment is assessed in **Volume 1, Part 2, Chapter 5: Water Environment** of the PEIR. Baseline conditions of the Proposed Project were established during a desk study. In addition, data requests were made to the Environment Agency, Suffolk County Council and the East Suffolk to provide information to support the assessment. The study area for the PEIR included the Suffolk Onshore Scheme draft Order Limits, together with an additional 500m buffer from this boundary.

5.4.2 The Suffolk Onshore Scheme is situated in the hydrological catchments of the Hundred River and the neighbouring River Fromus, which is a tributary of the River Alde. The Hundred River and River Alde, of which the River Fromus is a tributary, support several abstractions for non-potable irrigation water supplies at the local scale. The Hundred River also receives two sewage discharges. The main sources of flood risk within the Study Area are from the Hundred River, the River Fromus and the River Alde. Flood risk from surface water runoff varies across the Study Area, with most areas at very low risk from this source.

5.4.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect the water environment. This includes the assumption that all works within

main rivers or ordinary watercourses will be in accordance with a method approved under environmental permits issued under the Environmental Permitting Regulations.

5.4.4 Potential impacts of the Suffolk Onshore Scheme on water receptors include pollution, temporary physical disturbance, increased run-off rates and volumes, and temporary loss of floodplain storage/impediment of floodplain flows.

5.4.5 However, the assessment concluded that effects would be not significant in relation to water receptors. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.5 Geology and Hydrogeology

5.5.1 The potential interaction between the Suffolk Onshore Scheme and geology and hydrogeology is assessed in **Volume 1, Part 2, Chapter 6: Geology and Hydrogeology** of the PEIR. A desk study was undertaken drawing on information from existing records including British Geological Survey (BGS) geological mapping, hydrogeological maps, Multi-Agency Geographic Information for the Countryside (MAGIC) interactive map, available historical mapping.

5.5.2 The geology within the Suffolk Onshore Scheme study area is variable. Superficial deposits[1] are predominantly chalky deposits, with sands, gravels, silts and clays, around the river network and boulder clay in other areas. The superficial deposits lie upon bedrock geology, which is predominantly comprised of sands, gravels, silts and clays of the Crag Formation. There are no Regionally Important Geological Sites (RIGS) (also referred to as Local Geological Sites [LoGS]), County Geo-Sites or geological Sites of Special Scientific Interest (SSSI) present within the study area. The superficial geology is classified as up to Secondary A aquifer[2], whilst the bedrock geology of the Crag Group is classified as a Principal Aquifer[3]. The study area is within a Mineral Consultation Area identified within Suffolk County Council (SCC) Minerals and Waste Local Plan.

5.5.3 Earliest available historical mapping indicates the majority of the land comprises undeveloped agricultural land with very low risk of potential sources of significant existing contamination. Three areas/sites within the study area where historical or current land uses may have resulted in existing contamination; two areas of historical pits and land associated with Great Eastern Railway East Suffolk Line and Aldeburgh Branch line.

5.5.4 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect geology and hydrogeology receptors. These include undertaking ground investigations to inform design and storing chemicals and fuels in accordance with best practice guidance. In addition, a Minerals Resource Assessment will be undertaken with the ES to define further measures.

5.5.5 The potential impacts of the Suffolk Onshore Scheme on the Geology and Hydrogeology include:

- Potential sterilisation of safeguarded minerals;

[1] Superficial deposits (which we used to call 'drift') are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 2.6 million years from the present. They rest on older deposits or rocks referred to as bedrock.
[2] *permeable layers that can support local water supplies*
[3] *provide significant quantities of drinking water, and water for business needs*

- Exposure to and/or mobilisation existing potential contamination through ground disturbance during construction and decommissioning activities;
- Mixing of aquifer bodies due to the connection of aquifer units at trenchless crossings; and
- Changes to groundwater levels, quality and recharge rates caused by temporary dewatering during construction and introduction of impermeable surfaces at the Saxmundham Converter Station and Friston Substation.

5.5.6 However, the assessment concluded that effects would be not significant in relation to geology and hydrogeology receptors. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.6 Agriculture and Soils

5.6.1 The potential interaction between the Suffolk Onshore Scheme and agriculture and soils is assessed in **Volume 1, Part 2, Chapter 7: Soils and Agriculture** of the PEIR. The preliminary assessment has considered the likely significant effects of the Suffolk Onshore Scheme on agricultural land (in terms land quality and loss of land for agricultural use); and soil resources (in terms of damage and loss) during construction, maintenance and decommissioning works. The preliminary assessment has considered the geographical area within the draft Order Limits, as this describes the full extent of Suffolk Onshore Scheme.

5.6.2 A desk study was undertaken drawing on information from existing mapping from the Ordnance Survey, Soilscape mapping, Agricultural Land Classification mapping, and maps of agri-environmental and woodland schemes.

5.6.3 Best and most versatile (BMV) agricultural land is classified as land being of Grades 1, 2 and 3a (excellent, very good and good quality), which national policy advises should be avoided where possible. Provisional ALC Mapping shows that the study area comprises Grades 2, 3, and 4 land. Grades 3a and 3b cannot be distinguished to inform site-specific assessments but provides an indication of the likely land classification.

5.6.4 There are areas of land within the study area under Countryside Stewardship (Higher Tier) Agreements, and areas south and east of Leiston under Entry Level plus Higher Level Environmental Stewardship agreements. Therefore, both the ecological and financial effects (via effects on Countryside and Environmental Stewardship grants) on landowners of the proposed Suffolk Onshore Scheme have to be considered in the preliminary environmental assessment.

5.6.5 Measures have been included within restoration of land required temporarily and its return to the preconstruction use is likely to result in the avoidance of long-term impacts on agricultural and soil receptors. In addition to measures set out in **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help control and management of impacts that could affect agriculture and soils receptors. These include undertaking works in accordance with soil management measures such as storing soils in suitable conditions and maintaining access for landowners throughout construction.

5.6.6 The potential impacts of the Suffolk Onshore Scheme on agriculture and soils include temporary and permanent loss of BMV land from agricultural production within the areas required for construction, maintenance and decommissioning works. Temporary losses would be not significant, however, permanent losses of BMV land have the potential to result in significant effects. There is also the potential for construction, maintenance and

decommissioning works to impact soil function and soil quality, however with appropriate management measures followed during these phases, effects are considered to be not significant. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.6.7 Next steps include developing the baseline further for the ES by undertaking detailed agricultural land classification surveys of relevant areas, which will confirm the magnitude of impact on these resources. Should access be refused by landowners and completion of survey work prior to submission of the application for development consent is not possible, the areas of permanent development will be assessed using the desk based methodology.

5.7 Traffic and Transport

5.7.1 The potential interaction between the Suffolk Onshore Scheme and traffic and transport is assessed in **Volume 1, Part 2, Chapter 8: Traffic and Transport** of the PEIR. The study area for the assessment has been defined based on the area where there is likely to be a transport impact resulting from the construction of the Proposed Project. This includes routes along which heavy goods vehicles (HGVs), light goods vehicles (LGVs) and construction worker vehicles will travel during the works programme. Overall, there will be a maximum of 473 vehicles associated with the proposed Suffolk Onshore Scheme per day during the peak of the construction phase (planned for 2029) with an average number of 302 vehicles accessing construction site per day. This includes a maximum of 276 site-based staff vehicles as well as 68 LGVs and 129 HGVs per day.

5.7.2 The most prominent surrounding highway network is the A12, the B1121 to the north and south of Saxmundham, the B1119 and the A1094 to the west of Aldeburgh.

5.7.3 As part of this preliminary environmental assessment, baseline traffic data has been obtained for the surrounding highway network within the study area based on available DfT traffic counts and data publicly available from the East Anglia One North (EA1N) DCO.

5.7.4 Measures have been included within **Volume 2, Part 1 Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect traffic and transport. This includes the creation of **Volume 2, Part 1, Appendix 1.4.B: Outline Construction Traffic Management Plan (Suffolk Onshore Scheme)** which will set out measures to reduce route and journey mileage to and from, as well as around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions.

5.7.5 The assessment concluded that potentially significant effects have been identified for several receptors in terms of severance, pedestrian delay, non-motorised user amenity, driver delay and road safety. This will therefore be reviewed further as part of the ES when updated baseline traffic flows and full data are obtained to increase the confidence of the findings, as well as once a preferred access option has been selected for Saxmundham Converter Station. Additional mitigation will subsequently be identified where necessary to resolve any potentially significant effects.

5.8 Air Quality

5.8.1 The potential interaction between the Suffolk Onshore Scheme and air quality is assessed in **Volume 1, Part 2, Chapter 9: Air Quality** of the PEIR. A review of the existing baseline

has been undertaken to establish an understanding of the baseline air quality environment, to identify areas that are likely to be sensitive to changes in emissions as a result of the Proposed Project. This was established during a desk study and through the use of existing monitoring data collected by East Suffolk Council. The study area included a 350 m buffer from the draft Order Limits and up to 50 m for ecological receptors.

5.8.2 There are a number of human and ecological receptors surrounding the Proposed Project. This includes Saxmundham, a medium size residential area within close proximity to the Proposed Project Order Limits and co-location construction compounds close to the western boundary of the Order limits. Existing air quality data shows no exceedances of air quality mean objectives in 2022, nor for the past five years based on the East Suffolk Council monitoring records.

5.8.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect air quality. This includes the assumption that all vehicles to switch off engines when stationary and prohibiting the burning of waste.

5.8.4 The potential impacts of the Suffolk Onshore Scheme on air quality include construction dust arising from trackout (transportation of dust and dirt onto the public road network), earthworks and construction activities, and increases in Nitrogen Dioxide and particulate matter concentrations.

5.8.5 However, the assessment concluded that effects would be not significant in relation to air quality receptors. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.9 Noise and Vibration

5.9.1 The potential interaction between the Suffolk Onshore Scheme and noise and vibration is assessed in **Volume 1, Part 2, Chapter 10: Noise and Vibration** of the PEIR. A baseline assessment has been informed by a desk study which has drawn on publicly available noise mapping and noise survey data. A buffer of 300 m has been used for the construction noise study area, with a buffer of 100 m for construction vibration impacts. A 1 km buffer has been applied for operation noise impacts.

5.9.2 Noise sensitive receptors within the study area include built up residential areas such as Saxmundham to the west, Friston to the south, Goldfair Green to the south, Aldeburgh to the southeast, Sizewell to the northeast and Leiston to the northeast. The Suffolk Onshore Scheme noise and vibration study area includes a mix of predominantly residential and rural environments. The noise climate is therefore relatively quiet away from main transport routes. It is assumed that existing vibration levels are negligible in the study area.

5.9.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect noise and vibration. This includes the assumption that construction working will be undertaken within the agreed working hours and, construction traffic routes, access tracks, and construction haul routes will be surveyed for damage and irregularities (e.g. potholes) that may lead to vibration from construction traffic.

5.9.4 The potential impacts of the Suffolk Onshore Scheme on noise and vibration include potential noise and vibration impacts from construction activities, increased road traffic noise and vibration due to the additional contribution from construction traffic on the public

highway, and impact of operational noise from the proposed Saxmundham Converter Station.

5.9.5 However, the assessment concluded that effects would be Not Significant in relation to noise and vibration receptors. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.10 Socio-Economic, Recreation and Tourism

5.10.1 The potential interaction between the Suffolk Onshore Scheme and socio-economics is assessed in **Volume 1, Part 2, Chapter 11: Socio-economic Recreation and Tourism** of the PEIR. Baseline data illustrating the existing conditions within and surrounding the Suffolk Onshore Scheme Boundary has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications.

5.10.2 The impacts of the Suffolk Onshore Scheme with respect to socio-economics recreation and tourism are considered at varying spatial levels according to the likely spatial extent of the effect under consideration. The baseline for this topic includes the population and deprivation, employment, recreational routes and public rights of way (PRoW), residential properties, local businesses, visitor attractions, community facilities, open space, development land and accommodation facilities.

5.10.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect socio economics, recreation, and tourism. This includes informing members of the community and local businesses about the works through active community liaison.

5.10.4 The potential impacts of the Suffolk Onshore Scheme on socio economics, recreation, and tourism include the generation of direct and indirect temporary employment opportunities, temporary closure/diversion resulting in changes in access to the wider PRoW network, and the temporary closure or diversion resulting in changes in journey times, and travel patterns.

5.10.5 However, the assessment concluded that effects would be not significant in relation to on socio economics, recreation, and tourism receptors. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.11 Health and Wellbeing

5.11.1 The potential interaction between the Suffolk Onshore Scheme and human health is assessed in **Volume 1, Part 2, Chapter 12: Health and Wellbeing** of the PEIR. In order to understand the existing health and wellbeing baseline, data illustrating the existing health and wellbeing conditions has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications.

5.11.2 The study areas for the assessment of potential health and wellbeing effects have been defined to include human populations likely to be at risk from the possible direct and indirect health impacts that might arise from the Suffolk Onshore Scheme. The baseline for this topic includes population, ethnicity, deprivations, health profiles, local health priorities, settlements, healthcare and education facilities, employment, PRoW, existing traffic and transport, air quality, noise and landscape.

5.11.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that

could affect health and wellbeing. This includes measures to manage dust, waste, water, noise, vibration and soil during construction, and informing members of the community and local businesses about the works through active community liaison.

5.11.4 The potential impacts of the Suffolk Onshore Scheme on health and wellbeing include the creation of additional jobs, potential temporary extra demand on healthcare services, increased traffic flows and severance effects, extra demand on social infrastructure and potential influences on air quality during construction.

5.11.5 However, the assessment concluded that effects would be not significant in relation to on health and wellbeing. These effects would be the same for the Proposed Project on its own or the Proposed Project with co-location.

5.12 Intra- Project Cumulative Effects

5.12.1 Overall, **Volume 1, Part 2, Chapter 13 Intra-project Cumulative Effects** of the PEIR presented the preliminary intra-project cumulative effects assessment for the Suffolk Scheme. This considered the potential significant cumulative effects that may arise from the Proposed Project (where a single receptor is affected by multiple aspects of a project, worsening the effect). Where a receptor has been identified as only experiencing one effect or where only one topic has identified effects on that receptor, there is no potential for intra-cumulative effects.

5.12.2 The potential intra- cumulative effects on residential receptors during the construction and operational phase of the Proposed Project was considered as significant. This is predominantly due to the temporary and permanent alteration to the aesthetic and visual features near of the surrounding properties due to the proposed Suffolk Onshore Scheme. The same visual effect also helped judge the users of roads as well as PRoW as another significant intra- project cumulative effect.

5.12.3 Among the ecological receptors, the intra- cumulative effects were also considered significant due to the direct loss and disturbance of specific ecological receptors that were assessed.

5.13 Inter-Project Cumulative Effects

5.13.1 **Volume 1, Part 2, Chapter 14 Inter-project Cumulative Effects** of the PEIR presented the preliminary inter-project cumulative effects assessment for the Suffolk Onshore Scheme. This considered the potential significant cumulative effects that may arise from the proposed Suffolk Onshore Scheme with ‘other developments’.

5.13.2 The short-listed developments included in this chapter were:

- Sizewell C- main development site;
- Sizewell C- other developments;
  - Sizewell Link Road-Bridge across rail tracks;
  - A12 bypass;
  - Yoxford roundabout and other highway improvements;
  - Park and Rides (Northern and Southern);
  - Freight Management Facility at Seven Hills;

  - Rail upgrades to Saxmundham and Leiston Branch Line and Rail extension route;
- Sizewell B relocated facilities;
- East Anglia ONE North and East Anglia TWO Offshore Windfarms;
- Nautilus Offshore Interconnector;
- Lionlink Offshore Interconnector;
- High Lodge Leisure;
- Croft Farm and buildings;
- Park Farm Solar Farm;
- Rock Barracks Heath Road Solar Farm;
- Solar Farm, Parham, Suffolk;
- Town Farm Solar Farm;
- UKZ139 BC Wissett Solar Farm;
- Brundish Manor Solar Farm;
- Proposed reservoir, Grange Farm;
- Residential Development, Darsham Station;
- Residential Development, Brightwell Lakes;
- High Lodge Leisure;
- Saxmundham to Peasenhall Water Mains Installation; and
- Saxmundham South Green Neighbourhood.

5.13.3 The preliminary cumulative effects assessment concluded that effects are considered to be likely for landscape and visual, and traffic and transport receptors with other developments.

5.13.4 Topics including terrestrial ecology, agriculture and soils, air quality, socio-economics and health and wellbeing have not been able to undertake a full assessment at this stage until further data is available.

5.14 Summary

5.14.1 Table 5-1 provides a summary of the preliminary assessment of likely significant effects associated with the Suffolk Onshore Scheme for both scenarios, the assessment of the Proposed Project only and the assessment of co-location with NGV projects.

Table 5-1. Summary of the preliminary environmental assessment for the Suffolk Onshore Scheme

Topic	Preliminary Likely Significant Effects (Y/N)?	Comment
Landscape and Visual	Y	**Proposed Project Only:** Preliminary significant effects were identified for the Fromus Valley, Heveningham and Knodishall Estate Claylands coastal landscapes, and a number of representative viewpoints. No significant effects were identified on the Suffolk Coast and Heaths AONB.
	Y	**Co-location:** Preliminary significant effects were identified for the Fromus Valley, Heveningham and Knodishall Estate Claylands coastal landscapes, and a number of representative viewpoints.
Terrestrial Ecology	Y	**Proposed Project Only:** Preliminary significant effects were identified for direct loss of habitats (broadleaved and mixed woodland, acid grassland and hedgerows) and bird habitats, and the disturbance of protected sites until the details of the mitigation are developed and finalised.
	Y	**Co-location:** As for the Proposed Project without co-location.
Cultural Heritage	Y	**Proposed Project Only:** The preliminary assessment suggests there is the potential for a significant physical impact on the Gorse Hill multi-period site.
	Y	**Co-location:** As for the Proposed Project without co-location with the exception of Wood Farm Listed Buildings
Water Environment	N	**Proposed Project Only:** No preliminary likely significant effects have been identified for the Proposed Project.
	N	**Co-location:** As for the Proposed Project without co-location.
Geology and Hydrogeology	N	**Proposed Project Only:** No preliminary likely significant effects have been identified for the Proposed Project.
	N	**Co-location:** As for the Proposed Project without co-location.
Agriculture and Soils	Y	**Proposed Project Only:** The preliminary assessment has shown that there is the potential for significant effects in relation to the permanent loss of BMV land.
	Y	**Co-location:** As for the Proposed Project without co-location.
	Y	**Proposed Project Only:** Preliminary significant effects were identified for severance, pedestrian delay, non-

Topic	Preliminary Likely Significant Effects (Y/N)?	Comment
Traffic and Transport		motorised user amenity, driver delay and road safety co-location during construction and decommissioning.
	Y	**Co-location:** As for the Proposed Project without co-location.
Air Quality	N	**Proposed Project Only:** No preliminary likely significant effects have been identified for the Proposed Project.
	N	**Co-location:** To be determined following detailed modelling. Not significant based on available data to date.
Noise and Vibration	N	**Proposed Project Only:** No preliminary likely significant effects have been identified for the Proposed Project.
	N	**Co-location:** As for the Proposed Project without co-location.
Socio-Economics	N	**Proposed Project Only:** No preliminary likely significant effects have been identified for the Proposed Project.
	N	**Co-location:** As for the Proposed Project without co-location.
Health and Wellbeing	N	**Proposed Project Only:** No preliminary likely significant effects have been identified for the Proposed Project.
	N	**Co-location:** As for the Proposed Project without co-location.
Intra-project Cumulative Effects	Y	Preliminary likely significant intra-project cumulative effects on residential receptors during the construction and operational phase of the Proposed Project have been identified predominantly due to the temporary and permanent alteration to the aesthetic and visual features near of the surrounding properties.
Inter-project Cumulative Effects	Y	Preliminary likely significant inter-project cumulative effects have been identified between the Proposed Project and a number of other developments based on available data.

6. Preliminary Environmental Assessment- Kent Onshore Scheme

6.1 Landscape and Visual

6.1.1 The potential interaction between the Kent Onshore Scheme and landscape and visual is assessed in **Volume 1, Part 3, Chapter 2: Landscape and Visual** of the PEIR. Field work has been undertaken during winter 2022 and summer and winter 2023 to inform the scoping process, assess the existing character of the landscape and visit representative viewpoints.

6.1.2 The study area for the landscape and visual assessment of the Kent Onshore Scheme comprises an area of 3 kilometres (km) from the draft Order Limits, including the converter station, substation, HVAC overhead line (OHL) cable and from the proposed landfall. The landscape varies within the study area. It includes low-lying landform within the Ash Levels and Minster Marshes in the southern and central part. This landscape comprises a series of drainage ditches separating small to medium sized field enclosures, within the former Wantsum Channel. The landscape rises towards the settlement of Minster, comprising some comparatively larger scale field enclosures. The landscape also includes the low-lying coastal areas extending around Pegwell Bay which are characterised by larger intertidal areas of marsh and mudflat along the coastline.

6.1.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect landscape and visual receptors. These include the retention of vegetation where practicable and native shrub planting as a replacement where lost vegetation cannot be replaced. The Proposed Project will also apply a five-year aftercare period will be established for all reinstatement and mitigation planting.

6.1.4 The potential impacts of the Kent Onshore Scheme on landscape and visual receptors include temporary alteration to landscape character from the introduction of construction activity including compounds, temporary accommodation and access tracks, construction plant and vehicle movements, topsoil stripping and earthworks, storage of materials and lighting.

6.1.5 The assessment concluded that effects have the potential to be significant for landscape character areas Wantsum North Slopes, Stour Marshes and Ash Levels, and well as one viewpoint east of Minster for the Proposed Project.

6.2 Terrestrial Ecology

6.2.1 The potential interaction between the Suffolk Onshore Scheme and terrestrial ecology is assessed in **Volume 1, Part 3, Chapter 3: Ecology and Biodiversity** of the PEIR. A desk study has been undertaken, with ecology surveys underway in preparation for the ES.

6.2.2 The vast majority of the proposed Kent Onshore Scheme consisted of arable land in active use. The eastern fields were in use for corn production at the time of survey, the northern fields for salad crops, and the remainder was mixture of different young crops.

The woodland within the proposed Kent Onshore Scheme was dominated by English oak with lower amounts of ash and hawthorn with the latter more prevalent in the understory. English ivy, bramble and common nettle dominated the majority of the forest floor, with a few more notable species such as Lords and Ladies and stinking iris also recorded within this habitat. Wet ditches were present throughout the proposed Kent Onshore Scheme delineating the field edges through several land parcels. Beyond St Augustine's golf course, saltmarsh was present within the most eastern part of the Kent Onshore Scheme.

6.2.3 Ornithological features at the Kent Onshore Scheme include Cetti's warbler, fieldfare, kingfisher, marsh harrier and redwing. A wide range of other notable species have been recorded during the breeding season, many of them likely breeding within the survey area (although not necessarily within the proposed Kent Onshore Scheme). The intertidal zone was of considerable significance. Dunlin, cormorant, oystercatcher and sanderling were recorded in large numbers.

6.2.4 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect terrestrial ecology. These include the assumption that vegetation with the potential to support breeding birds will not be removed during the breeding bird season (March to August inclusive), and where there will be a risk of animal entrapment, a means of escape will be installed into all excavations left open overnight. Additional mitigation measures include the Annual monitoring for the presence of nesting Cetti's warbler and kingfisher within the watercourses within Kent Onshore Scheme boundary during construction (as territory distribution may change) and take steps (such as removing habitat outside the nesting season and introducing buffer zones or noise barriers during the nesting season) to ensure that no disturbance of nesting pairs occurs.

6.2.5 Potential impacts of the Kent Onshore Scheme on terrestrial ecology include direct loss (temporary or permanent) of habitats, spillages and introduction of non-native species of habitats, and killing and injury of fauna.

6.2.6 The assessment concluded that effects have the potential to be significant for specific terrestrial ecology receptors through the direct loss of specific habitats and bird habitats during construction until the details of the mitigation are developed and finalised. Survey work is ongoing or has yet to commence for most receptors. However, the first season of non-breeding bird survey and breeding bird survey has been completed and extended Phase 1 habitat survey has been undertaken. Impacts on fauna are still being investigated.

6.3 Cultural Heritage

6.3.1 The potential interaction between the Kent Onshore Scheme and cultural heritage is assessed in **Volume 1, Part 3, Chapter 4: Cultural Heritage** of the PEIR. The main datasets that have been utilised for the Cultural Heritage Assessment to date are the Historic England National Heritage List for England for designated assets, and the Kent HER for non-designated assets. A 500 m buffer was applied to the Kent Onshore Scheme Boundary, which includes the proposed cable route and other associated works, as the study area to capture information relating to archaeology and cultural heritage.

6.3.2 A total of ten designated assets were recorded within the 500m study area. Nine of which are listed buildings, with the remaining asset being a scheduled monument. The Scheduled Monument is Richborough, which consists of a Saxon shore fort, Roman port and other associated remains dating from the Iron Age through to the medieval period located in an elevated position to the south of the Kent Onshore Scheme. The listed

buildings are all Grade II listed, with most dating to the post-medieval period. The majority are farmhouses and associated agricultural buildings. A total of 427 non-designated heritage assets were recorded within the study area on the Kent HER.

6.3.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect cultural heritage receptors. These include the signposting of known archaeological interest/value, or areas where archaeological work is planned to avoid unintentional damage, and where a previously unknown heritage asset is discovered, or a known heritage asset proves to be more significant than foreseen at the time of application, the Project Team will inform the relevant local planning authority.

6.3.4 The preliminary assessment of likely significant effects resulting from the Kent Onshore Scheme assessed the potential for direct physical impacts and impacts on the setting of both designated and non-designated assets resulting from the construction and operational phases of the Kent Onshore Scheme.

6.3.5 In most cases it is predicted that careful design should result in most heritage assets being avoided, or only limited areas of large archaeological sites being impacted, with standard mitigation such as archaeological excavation and recording mitigating impacts. There is the potential for a significant impact on the possible Roman port at Ebbsfleet Farm. While there is also the potential for there to be views of the converter station from Roman Richborough Castle and associated settlement, these views are not expected to result in a significant impact to the monument through changes to its setting.

6.4 Water Environment

6.4.1 The potential interaction between the Kent Onshore Scheme and the water environment is assessed in **Volume 1, Part 3, Chapter 5: Water Environment** of the PEIR. Baseline conditions of the Proposed Project were established during a desk study. In addition, data requests have been made to the Environment Agency, Kent County Council and the River Stour internal drainage board to provide information to support the assessment. The Study Area includes all land within the Kent Onshore Scheme draft Order Limits, together with an additional 500m buffer from this boundary.

6.4.2 The Kent Onshore Scheme is situated in the hydrological catchment of the River Stour. The River Stour is a designated main river that rises as the Great Stour in Lenham and flows towards and through Canterbury, where it becomes tidal, finally discharging to the sea at Pegwell Bay. The river has extensive areas of floodplain. In addition to the River Stour, within the Study Area there are networks of watercourses that drain the marshes. Key watercourses include the Minster Stream to the north and the Richborough Stream to the south of the Stour.

6.4.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect the water environment. This includes the assumption that all works within main rivers or ordinary watercourses will be in accordance with a method approved under environmental permits issued under the Environmental Permitting Regulations.

6.4.4 Potential impacts of the Kent Onshore Scheme on water receptors include pollution, temporary physical disturbance, increased run-off rates and volumes, temporary loss of floodplain storage/impediment of floodplain flows and temporary deterioration of water quality.

6.4.5 However, the assessment concluded that effects would be not significant in relation to water receptors.

6.5 Geology and Hydrology

6.5.1 The potential interaction between the Kent Onshore Scheme and geology and hydrogeology is assessed in **Volume 1, Part 3, Chapter 6: Geology and Hydrogeology** of the PEIR. A desk study was undertaken drawing on information from existing records including BGS geological mapping, hydrogeological maps, MAGIC interactive map, available historical mapping.

6.5.2 The geology within the Kent Onshore Scheme is variable. Superficial deposits are predominately mud and/or sand and soft silty clay, with layers of sand, gravel and peat. Along the eastern boundary of the draft Order Limits around Pegwell Bay, shingle, sand, silt and clay are present. The majority of the study area within the Kent Onshore Scheme is shown to be underlain by bedrock comprising silty fine-grained sand, with sandy silt, silt or sandy, silty clay. There are no RIGS, however the Sandwich Bay to Hacklinge Marshes SSSI is designated as a Geological Conservation Review Site and forms the eastern part of the draft Order Limits, at Pegwell Bay. There are no groundwater Source Protection Zones (SPZs) within the draft Order Limits for the Kent Onshore Scheme.

6.5.3 The majority of the draft Order Limits for the Kent Onshore Scheme and the study area is indicated to have remained as undeveloped/agricultural land since the earliest available historical mapping.

6.5.4 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect geology and hydrogeology receptors. These include undertaking ground investigations to inform design and storing chemicals and fuels in accordance with best practice guidance. In addition, a Minerals Resource Assessment will be undertaken and submitted with the ES to define further measures.

6.5.5 The potential impacts of the Suffolk Onshore Scheme on the Geology and Hydrogeology include:

- Damage to/destruction of sites of geological importance through physical destruction during construction where the built development directly interacts with the designated site;
- Exposure to existing potential contamination through ground disturbance during construction and decommissioning activities;
- The mobilisation of existing contamination, during general construction/ decommissioning, impacting on land and/or groundwater quality; and
- Mixing of aquifer bodies due to the connection of aquifer units at trenchless crossings.

6.5.6 However, the assessment concluded that effects would be not significant in relation to geology and hydrogeology receptors.

6.6 Agriculture and Soils

6.6.1 The potential interaction between the Kent Onshore Scheme and agriculture and soils is assessed in **Volume 1, Part 3, Chapter 7: Soils and Agriculture** of the PEIR. The

preliminary assessment has considered the likely significant effects of the Kent Onshore Scheme on agricultural land (in terms land quality and loss of land for agricultural use); and soil resources (in terms of damage and loss) during construction, maintenance and decommissioning works. The preliminary assessment has considered the geographical area within the draft Order Limits, as this describes the full extent of Kent Onshore Scheme.

6.6.2 A desk study was undertaken drawing on information from existing mapping from the Ordnance Survey, Soilscape mapping, Agricultural Land Classification mapping, and maps of agri-environmental and woodland schemes.

6.6.3 Provisional ALC Mapping shows that the study area comprises Grade 2 land. Grades 3a and 3b cannot be distinguished to inform site-specific assessments but provides an indication of the likely land classification. Land use appears to be principally arable, with small areas of pasture on either side of the River Stour, and St Augustine's golf course east of Richborough Way. The soil types present within the study area are predominantly described as loamy[4] and clayey soils of coastal flats with naturally high groundwater.

6.6.4 There are areas of land within the study area under Countryside Stewardship (Higher Tier) Agreements and areas south of the River Stour under Entry Level plus Higher Level Environmental Stewardship agreements. Small areas of land east of Richborough Way (associated with the golf course) are also under Woodland Grant schemes. Consequently this land has both ecological value as well as financial value for landowner via financial incentives of the grant scheme. This therefore is factored into the impact assessment of the proposed Kent Onshore Scheme.

6.6.5 Measures have been included within restoration of land required temporarily and its return to the preconstruction use is likely to result in the avoidance of long-term impacts on agricultural and soil receptors., in addition to measures set out in **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help control and the management of impacts that could affect agriculture and soils receptors. These include undertaking works in accordance with soil management measures such as storing soils in suitable conditions and maintaining access for landowners throughout construction.

6.6.6 The potential impacts of the Kent Onshore Scheme on agriculture and soils include temporary and permanent loss of BMV land from agricultural production within the areas required for construction, maintenance and decommissioning works. Temporary losses would be Not Significant, however, permanent losses of BMV land have the potential to result in Significant effects. There is also the potential for construction, maintenance and decommissioning works to impact soil function and soil quality, however with appropriate management measures followed during these phases, effects are considered to be Not Significant.

6.6.7 Next steps include developing the baseline further for the ES by undertaking detailed agricultural land classification surveys of relevant areas, which will confirm the magnitude of impact on these resources. Should access be refused by landowners and completion of survey work prior to submission of the application for development consent is not possible, the areas of permanent development will be assessed using the desk based methodology.

[4] Denoting or relating to a fertile soil of clay and sand containing humus.

6.7 Traffic and Transport

6.7.1 The potential interaction between the Kent Onshore Scheme and traffic and transport is assessed in **Volume 1, Part 3, Chapter 8: Traffic and Transport** of the PEIR. The study area for the assessment has been defined based on the area where there is likely to be a transport impact resulting from the construction of the Proposed Project. This includes routes along which an estimated 122 HGVs, 98 LGVs and 292 construction worker vehicles will travel during the daily peak of the works programme.

6.7.2 The study area includes a number of roads including the A256 Richborough Way, A299 Hengist Way, Sandwich Road, Jutes Lane, Ebbsfleet Lane, Ebbsfleet Lane North and Brook Lane. As part of this PEIR, baseline traffic data has been obtained for the surrounding highway network within the study area based on available Department for Transport traffic counts.

6.7.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect traffic and transport. This includes the creation of **Volume 2, Part 1, Appendix 1.4.C: Outline Construction Traffic Management Plan (Kent Onshore Scheme)** which will set out measures to reduce route and journey mileage to and from, as well as around site, and prevent nuisance to the residents, businesses and the wider community caused by parking, vehicle movements and access restrictions.

6.7.4 The assessment concluded that no significant effects have been identified as a result of the Proposed Project on transport and access during any phase with the proposed mitigation in place.

6.8 Air Quality

6.8.1 The potential interaction between the Kent Onshore Scheme and air quality is assessed in **Volume 1, Part 3, Chapter 9: Air Quality** of the PEIR. A review of the existing baseline has been undertaken to establish an understanding of the baseline air quality environment, to identify areas that are likely to be sensitive to changes in emissions as a result of the Proposed Project. This was established during a desk study and through the use of existing monitoring data collected by Dover District Council and Thanet District Council. The study area included a 350 m buffer from the draft Order Limits and up to 50 m for ecological receptors.

6.8.2 There are a number of human and ecological receptors surrounding the Proposed Project. The closest receptors to the Minster converter station and substation are Great Oaks Small School. The closest ecological receptor is Sandwich Bay to Hacklinge Marshes SSSI. Existing air quality data shows no exceedances of air quality mean objectives in the most recent reports, however, 11 exceedances have been recorded since 2017.

6.8.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect air quality. This includes the assumption that all vehicles to switch off engines when stationary and prohibiting the burning of waste.

6.8.4 The potential impacts of the Kent Onshore Scheme on air quality include construction dust arising from trackout (transportation of dust and dirt onto the public road network), earthworks and construction activities, and increases in Nitrogen Dioxide and particulate matter concentrations.

6.8.5 However, the assessment concluded that effects would be not significant in relation to air quality receptors.

6.9 Noise and Vibration

6.9.1 The potential interaction between the Kent Onshore Scheme and noise and vibration is assessed in **Volume 1, Part 3, Chapter 10: Noise and Vibration** of the PEIR. A baseline assessment has been informed by a desk study which has drawn on publicly available noise mapping and noise survey data. A buffer of 300 m has been used for the construction noise study area, with a buffer of 100 m for construction vibration impacts. A 1 km buffer has been applied for operation noise impacts.

6.9.2 Noise sensitive receptors within the study area include built-up residential areas at Ebbsfleet to the northeast and Minster to the northwest. The study area includes a mix of residential, rural, industrial, and commercial environments. The noise climate is therefore expected to vary throughout the study area. The main sources of noise include road traffic from the A256 which runs between Ramsgate to the north and Dover to the south. Vibration impacts are assessed against fixed thresholds. It is assumed that existing vibration levels are negligible in the study area.

6.9.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect noise and vibration. This includes the assumption that construction working will be undertaken within the agreed working hours and, construction traffic routes, access tracks, and construction haul routes will be surveyed for damage and irregularities (e.g. potholes) that may lead to vibration from construction traffic.

6.9.4 The potential impacts of the Kent Onshore Scheme on noise and vibration include potential noise and vibration impacts from construction activities, increased road traffic noise and vibration due to the additional contribution from construction traffic on the public highway, and impact of operational noise from the proposed substation and converter station. Overall, when mitigation measures were applied including noise enclosures and plant selection the noise and vibration impact at all stages of the Proposed Project were reduced to being not significant.

6.10 Socio-Economic, Recreation and Tourism

6.10.1 The potential interaction between the Kent Onshore Scheme and socio-economics is assessed in **Volume 1, Part 3, Chapter 11: Socio-economic Recreation and Tourism** of the PEIR. Baseline data illustrating the existing conditions within and surrounding the Kent Onshore Scheme Boundary has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications.

6.10.2 The impacts of the Kent Onshore Scheme with respect to socio-economics recreation and tourism are considered at varying spatial levels according to the likely spatial extent of the effect under consideration. The baseline for this topic includes the population and deprivation, employment, recreational routes and PRoW, residential properties, local businesses, visitor attractions, community facilities, open space, development land and accommodation facilities.

6.10.3 Measures have been included within **Appendix 1.4.A Outline Code of Construction Practice** which would help the control and management of impacts that could affect socio

economics, recreation, and tourism. This includes informing members of the community and local businesses about the works through active community liaison.

6.10.4 The potential impacts of the Kent Onshore Scheme on socio economics, recreation, and tourism include the generation of direct and indirect temporary employment opportunities, temporary closure/diversion resulting in changes in access to the wider PRoW network, and the temporary closure or diversion resulting in changes in journey times, and travel patterns.

6.10.5 However, the assessment concluded that effects would be not significant in relation to on socio economics, recreation, and tourism receptors.

6.11 Health and Wellbeing

6.11.1 The potential interaction between the Kent Onshore Scheme and human health is assessed in **Volume 1, Part 3, Chapter 12: Health and Wellbeing of** the PEIR. In order to understand the existing health and wellbeing baseline, data illustrating the existing health and wellbeing conditions has been collected through a desk-based research exercise using publicly available sources, documents, and web-based applications.

6.11.2 The study areas for the assessment of potential health and wellbeing effects have been defined to include human populations likely to be at risk from the possible direct and indirect health impacts that might arise from the Kent Onshore Scheme. The baseline for this topic includes population, ethnicity, deprivations, health profiles, local health priorities, settlements, healthcare and education facilities, employment, PRoW, existing traffic and transport, air quality, noise and landscape.

6.11.3 Measures have been included within **Volume 2, Part 1, Appendix 1.4.A: Outline Code of Construction Practice** which would help the control and management of impacts that could affect health and wellbeing. This includes measures to manage dust, waste, water, noise, vibration and soil during construction, and informing members of the community and local businesses about the works through active community liaison.

6.11.4 The potential impacts of the Kent Onshore Scheme on health and wellbeing include the creation of additional jobs, potential temporary extra demand on healthcare services, increased traffic flows and severance effects, extra demand on social infrastructure and potential influences on air quality during construction.

6.11.5 However, the assessment concluded that effects would be not significant in relation to on health and wellbeing.

6.12 Intra-Project Cumulative Effects

6.12.1 **Volume 1, Part 3, Chapter 13 Intra-project Cumulative Effects** of the PEIR presented the preliminary intra-project cumulative effects assessment for the Kent Onshore Scheme . This considered the potential significant cumulative effects that may arise from the Proposed Project where a single receptor is affected by multiple aspects of a project, worsening the effect. Where a receptor has been identified as only experiencing one effect or where only one topic has identified effects on that receptor, there is no potential for intra-project cumulative effects.

6.12.2 Overall, residential receptors and PRoW had a potentially significant intra- project cumulative effect due to the temporary and permanent alteration to the aesthetic and

visual features in proximity to these receptors. Furthermore, the intra- cumulative effect on ecological receptors were classed as potentially significant.

6.12.3 Among the ecological receptors, the intra-project cumulative effects were considered significant due to the direct loss and disturbance of many ecological receptors that were assessed.

6.13 Inter-Project Cumulative Effects

6.13.1 **Volume 1, Part 3, Chapter 14 Inter-project Cumulative Effects** of the PEIR presented the preliminary inter-project cumulative effects assessment for the Kent Onshore Scheme. This considered the potential significant cumulative effects that may arise from the proposed Kent Onshore Scheme with 'other developments'.

6.13.2 The short-listed developments included in this chapter were:

- Manston Airport;
- Residential Development, Canterbury Road, Ramsgate, Kent;
- Stonelees Golf Course Expansion;
- Residential Development, Hoo Farm;
- Richborough Energy Park;
- Goshall Valley Solar Farm; and
- Solar Farm southwest of Solton Manor Farm.

6.13.3 The preliminary cumulative effects assessment concluded that effects are considered to be unlikely for the Kent Onshore Scheme.

6.13.4 Topics including terrestrial ecology, agriculture and soils, air quality, socio-economics and health and wellbeing have not been able to undertake a full assessment at this stage until further data is available.

6.14 Summary

6.14.1 Table 6-1 provides a summary of the preliminary assessment of likely significant effects associated with the Kent Onshore Scheme.

Table 6-1. Summary of the preliminary environmental assessment for the Kent Onshore Scheme

Topic	Preliminary Likely Significant Effects (Y/N)?	Comment
Landscape and Visual	Y	Preliminary significant effects were identified on the landscape character areas Wantsum North Slopes, Stour Marshes and Ash Levels, and well as one viewpoint east of Minster.
Terrestrial Ecology	Y	Preliminary significant effects were identified for the direct loss of specific habitats and bird

Topic	Preliminary Likely Significant Effects (Y/N)?	Comment
		habitats during construction until the details of the mitigation are developed and finalised.
Cultural Heritage	Y	The preliminary assessment suggests there is the potential for a significant physical impact on the possible Roman port at Ebbsfleet Farm.
Water Environment	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Geology and Hydrogeology	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Agriculture and Soils	Y	The preliminary assessment has shown that there is the potential for significant effects in relation to the permanent loss of BMV land for the Proposed Project.
Traffic and Transport	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Air Quality	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Noise and Vibration	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Socio-Economics	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Health and Wellbeing	N	The preliminary likely significance of effect is not significant for the Proposed Project.
Intra-Cumulative	Y	The preliminary intra-cumulative effects assessment concluded that there were potential significant residual effects for residential and ecological receptors, and public rights of way.
Inter-Cumulative	N	The preliminary inter-cumulative effects assessment concluded that there were no preliminary significant effects based on available data.

7. Offshore Preliminary Environmental Assessment

7.1 Physical Environment

7.1.1 The potential interaction of the proposed Offshore Scheme with the physical marine environment is assessed in **Volume 1, Part 4, Chapter 2: Physical Environment** of the PEIR. Information and data from a wide range of sources has been collated and used to inform the environmental baseline assessment. A bespoke survey covering the entire of the proposed Offshore Scheme Boundary has been undertaken which provides detailed information on the seabed geology, surficial sediments, bathymetry, water quality, sediment transport, bedforms (i.e., sandwaves) and other seabed features. The presence of boulders, wrecks, and seabed protection, associated with existing cables, have also been mapped.

7.1.2 Control and management measures, embedded and additional mitigation measures have been built into the proposed Offshore Scheme to avoid and/or reduce impacts to the physical environment. For example, cable protection features (e.g., rock placement, mattresses and grout bags) will be installed only where considered necessary for the safe operation of the Proposed Project.

7.1.3 The potential impacts of the proposed Offshore Scheme on the physical environment include increases in suspended sediment concentrations (SSC), changes to seabed bathymetry and morphology, changes to physical environment features of interest and changes in water quality. With the implementation of mitigation and control and management measures, the preliminary likely significance of effect on the receptors for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall are all considered to be not significant.

7.2 Benthic Ecology

7.2.1 **Volume 1, Part 4, Chapter 3: Benthic Ecology** of the PEIR assesses the potential interaction of the proposed Offshore Scheme with benthic ecology (organisms that live on the sea floor). The appraisal establishes a baseline of subtidal benthic ecology.

7.2.2 The subtidal benthic habitats identified along the proposed Offshore Scheme were generally dominated by areas of mud and sand in the northernmost sections of the route. Further south, the sediment becomes more mixed with the presence of soft rock in nearshore areas.

7.2.3 Several subtidal habitats are listed as habitats of conservation importance. The Annex I habitat, ‘sandbanks which are slightly covered by sea water all the time’ is observed within the Offshore Scheme but is not specifically protected under any designated site. Moreover, habitats listed under Section 41 of the Natural Environment Research Council (NERC) Act 2006 identified - ‘communities on circalittoral rock’ and ‘subtidal sands and gravels’, at several locations throughout the proposed Offshore Scheme.

7.2.4 The proposed Offshore Scheme is located partially within the Goodwin Sands Marine Conservation Zone (MCZ) which is designated for several habitats including ‘subtidal

sands', although grab samples found that fauna was sparse within the MCZ. Additional relevant designated sites are located outside of the proposed Offshore Scheme but within the study area are Thanet Coast MZC (located > 1 km southwest of the proposed Offshore Scheme).

7.2.5 Control and management, and embedded mitigation measures have been built into the proposed Offshore Scheme to avoid and / or minimise impacts to benthic ecology. For example, where possible, cable protection materials will be selected to match the environment and the Proposed Project will ensure the sensitive routeing and siting of infrastructure and temporary works.

7.2.6 The potential impacts of the proposed Offshore Scheme on benthic ecology include temporary physical disturbance to subtidal benthic habitats and species, temporary increase in suspended sediment concentration (SSC), sediment deposition, reductions in marine water quality, the accidental introduction of invasive non-native species, electromagnetic field (EMF) and thermal emissions. The preliminary assessment of effects indicates that after embedded, control and management mitigation measures, there are no likely significant effects for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall on benthic ecology present within the proposed Offshore Scheme Boundary.

7.3 Fish and Shellfish Ecology

7.3.1 The potential interaction between the proposed Offshore Scheme and fish and shellfish is assessed in **Volume 1, Part 4, Chapter 4: Fish and Shellfish** of the PEIR

7.3.2 The assessment establishes a baseline of species-specific information, spawning and nursery grounds, relevant designated sites and species, and species important for commercial fisheries. Fish and shellfish receptors taken forward for appraisal have been determined based upon potential activity/receptor interactions (source – pathway – receptor).

7.3.3 Control and management, and embedded mitigation measures have been built into the proposed Offshore Scheme to avoid and/or minimise impacts to fish and shellfish. For example, the target burial of the cable will be 1.5m as required by MMO guidelines. Where necessary target burial depth may be greater than 1.5m and up to 2.5m, subject to local geology and obstructions to minimise the effects of electromagnetic fields (EMF) on fish receptors.

7.3.4 The potential impacts of the proposed Offshore Scheme on fish and shellfish include permanent loss of fish and shellfish habitat due to placement of hard substrates on the seabed, and temporary physical disturbance to fish and shellfish habitat. With the implementation of embedded mitigation and control and management measures, the preliminary likely significance of effect on the receptors are all considered to be not significant for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.4 Marine Mammals

7.4.1 The potential interaction between the proposed Offshore Scheme and marine mammals is assessed in **Volume 1, Part 4, Chapter 5: Marine Mammals** of the PEIR.

7.4.2 The assessment establishes a baseline of two groups of marine mammals occurring in UK waters, namely cetaceans (whales, dolphins and porpoises) and pinnipeds (seals). A

total of 28 cetacean species have been observed and two species of seal are present in UK waters; however, most are occasional visitors and within the northern European continental shelf. This baseline also considers the two seal species present in the UK, the harbour seal and grey seal.

7.4.3 Control and management measures, and embedded and additional mitigation measures have been built into the proposed Offshore Scheme to avoid and/ or minimise impacts to marine mammals. For example, adherence to Joint Nature Conservation Committee (JNCC) guidelines, where appropriate, regarding the minimisation of impacts from underwater sound generated from known project activities, of geophysical surveys and Unexploded Ordnance (UXO).

7.4.4 The potential impacts of the proposed Offshore Scheme on marine mammals include underwater sound, potential for indirect effects through impacts to prey species and vessel collisions. With the implementation of mitigation and control and management measures, the preliminary likely significance of effect on the receptors are all considered to be Not significant for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.5 Ornithology

7.5.1 **Volume 1, Part 4, Chapter 6: Ornithology** of the PEIR assesses the potential interaction of the proposed Offshore Scheme with ornithological receptors.

7.5.2 The proposed Offshore Scheme directly passes through six sites that are designated nationally or internationally for the protection of seabirds and waterbirds. These are the Outer Thames Estuary SPA, Thanet Coast and Sandwich Bay SPA, Thanet Coast and Sandwich Bay Ramsar, Sandwich and Pegwell Bay National Nature Reserve (NNR), Sandwich Bay to Hacklinge Marshes SSSI, and Leiston-Aldeburgh SSSI. A further six sites intersect with the Study Area, these being Minsmere-Walberswick SPA, Minsmere-Walberswick Ramsar, Minsmere-Walberswick Heaths and Marshes SSSI, Alde-Ore Estuary SPA, Alde-Ore Estuary Ramsar and Alde-Ore Estuary SSSI.

7.5.3 The breeding season for seabirds varies between species but broadly extends between April and August, with the core breeding period between May and July, during which time their distribution offshore is constrained by the need to return to their breeding sites. Non -breeding birds within the Study Area include Red-Throated Diver.

7.5.4 Control and management measures and embedded and additional mitigation have been built into the proposed Offshore Scheme to avoid and/or reduce impacts to ornithological receptors. For example, vessels will avoid rafting birds (where birds sit, often in groups, on the water) and areas with high densities of birds and existing shipping lanes will be utilised for vessel transiting routes to avoid additional disturbance. Furthermore, to avoid cumulative effects with other projects, the construction works (excluding trenchless installation techniques at landfall) will be timed to ensure the overwintering period of the red-throated diver is avoided, in the months of January – March within the Outer Thames Estuary SAC.

7.5.5 The potential impacts of the proposed Offshore Scheme on ornithological receptors include direct disturbance and displacement of birds associated with sound, visual impacts and presence of vessels, and direct loss and disturbance of seabed habitat (including, associated prey) used by foraging seabirds and waterbirds. With the implementation of mitigation and control and management measures, the preliminary likely significance of effect on the receptors are all considered to be not significant for the

Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.6 Marine Archaeology

7.6.1 The potential interaction of the proposed Offshore Scheme with the known and potential marine archaeology and cultural heritage resource below mean high water springs (MHWS) is assessed in **Volume 1, Part 4, Chapter 7: Marine Archaeology** of the PEIR.

7.6.2 The assessment establishes a baseline of seabed prehistory, seabed features (maritime and aviation), marine recorded losses (records for ships or aircraft that are known to have wrecked or crashed offshore) and heritage assets.

7.6.3 Whilst there are no designated sites or known sites of prehistoric date within the study area, there is potential for prehistoric archaeological material to be discovered during seabed works associated with the Proposed Project.

7.6.4 There are currently no maritime or aviation sites within the study area that are subject to statutory protection. Within the Study Area, a total of 722 geophysical anomalies were identified as being of possible archaeological potential.

7.6.5 Control and management, and embedded mitigation measures have been built into the proposed Offshore Scheme to avoid and/or minimise impacts to marine archaeology and cultural heritage resources. For example, a Written Scheme of Investigation (WSI) including a Protocol for Archaeological Discoveries will be agreed with the Archaeological Curator via the Regulator and implemented prior to works commencing. Locations of known marine archaeological interest/value within the marine environment will be avoided by all marine vessels by the implementation of appropriately sized Archaeological Exclusion Zones (AEZs).

7.6.6 The potential impacts of the proposed Offshore Scheme on marine archaeology include direct and indirect damage to known and unknown assets. With the implementation of embedded mitigation and control and management measures, the preliminary likely significance of effect on the receptors are all considered to be not significant for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.7 Shipping and Navigation

7.7.1 **Volume 1, Part 4, Chapter 8: Shipping and Navigation** of the PEIR assesses the potential interaction of the proposed Offshore Scheme with shipping and navigation in the format of a Navigational Risk Assessment.

7.7.2 The assessment establishes a baseline of key navigational features, emergency response, maritime incidences, and marine traffic.

7.7.3 Control and management, and embedded mitigation measures have been built into the proposed Offshore Scheme to avoid and/or minimise impacts to shipping and navigational receptors. For example, a risk based burial approach will be used where cables will be buried to a minimum DOL to the top of the cable of 0.5 m (in areas of bedrock), with a target DOL for the Proposed Project of approximately of a minimum of 1.5m.

7.7.4 The potential impacts of the proposed Offshore Scheme include vessel-to-vessel collision, deviation from established vessel routes and areas, interaction with vessel

anchors and anchoring activity, interaction with fishing gear, potential risks from reduction in under keel clearance and interference with marine navigational equipment.

7.7.5 The preliminary assessment of likely significant effects presented to shipping and navigation by the proposed Offshore Scheme, has been determined via Formal Safety Assessment (FSA), as part of a Navigational Risk Assessment. The assessment determined that all risks to shipping and navigation associated with the offshore scheme are either broadly acceptable or tolerable if as low as reasonably practical (ALARP). As such, the risks and therefore any significant effects are considered to be tolerable and ALARP, provided that the recommendations for further risk reduction are implemented or otherwise closed out satisfactorily.

7.7.6 As part of the PEIR approach and methodology, this PEIR chapter establishes the sensitivity, magnitude, and likely significance of the effects. The outcomes from the FSA serve as a basis, combined with qualitative judgment, to determine these effects, ultimately resulting in the identification of no significant effects for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.8 Commercial Fisheries

7.8.1 **Volume 1, Part 4, Chapter 9: Commercial Fisheries** assesses the potential interaction of the proposed Offshore Scheme with commercial fisheries.

7.8.2 The assessment established a baseline of principal fishing activities. This included mobile gear fisheries consisting of dredges targeting cockle, demersal trawls targeting mackerel, and beam trawls targeting sole and plaice, and static gear fisheries consisting of pots targeting whelk, and fixed and drift nets targeting sole and bass.

7.8.3 Control and management, and embedded mitigation measures have been built into the proposed Offshore Scheme to avoid and/or minimise impacts to commercial fisheries. For example, a Fisheries Liaison Officer and fisheries working group(s) will be maintained throughout installation to ensure project information is effectively disseminated to ensure a dialogue is maintained with the commercial fishing industry and access to home ports remains during the main fishing season.

7.8.4 The potential impacts of the proposed Offshore Scheme on commercial fisheries include obstruction of navigation routes to commercial fishing grounds, direct loss and alteration of fishing grounds, and displacement of commercial fishing activities. With the implementation of mitigation and control and management measures, the preliminary likely significance of effect on the receptors are all considered to be not significant for the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.9 Other Sea Users

7.9.1 **Volume 1, Part 4, Chapter 10: Other Sea Users** of the PEIR assesses the potential interaction of the proposed Offshore Scheme with other sea users.

7.9.2 The assessment establishes a baseline of marine recreational activities (including recreational boating and fishing, scuba diving, kayaking, paddleboarding and canoeing, surfing, windsurfing and kite surfing and open water swimming), oil and gas operations, offshore wind farms, cables, and pipelines, dredging and disposal sites, military practice and exercise areas, aquaculture and other developments.

7.9.3 Control and management, and embedded mitigation measures have been built into the proposed Offshore Scheme to avoid and/or minimise impacts to other sea users. This includes the use of crossing agreements which describe the rights and responsibilities of the parties and also the design of the crossing. Furthermore, timely and efficient communication will be given to sea users in the area via Notices to Mariners (NtM), Kingfisher Bulletins, Navigational Telex (NAVTEX), and Navigational Areas (NAVAREA) warnings.

7.9.4 The potential impacts of the proposed Offshore Scheme are disruption to marine recreational users, disruption to vessel routeing and access to other sea user working areas, and the risk of damage to or interference with a third-party cable assets.

7.9.5 Following the inclusion of embedded mitigation and control and management measures, the preliminary assessment has not identified any likely significant effects on other sea user receptors within the Study Area from the Proposed Project on its own and the Proposed Project with co-location at the Suffolk landfall.

7.10 Intra-project Cumulative Effects

7.10.1 **Volume 1, Part 4, Chapter 11 Intra-project Cumulative Effects** of the PEIR presented the preliminary intra-project cumulative effects assessment for the proposed Offshore Scheme. This considered the potential significant cumulative effects that may arise from the Proposed Project (where a single receptor is affected by multiple aspects of a project, worsening the effect).

7.10.2 Where a receptor has been identified as only experiencing one effect or where only one topic has identified effects on that receptor, there is no potential for intra-cumulative effects. No shared receptors were present across the proposed Offshore Scheme topic chapters. Therefore, intra project effects will not be significant for the proposed Offshore Scheme.

7.11 Inter-project Cumulative Effects

7.11.1 **Volume 1, Part 4, Chapter 12 Inter-project Cumulative Effects** of the PEIR presented the preliminary inter-project cumulative effects assessment for the proposed Offshore Scheme. This considered the potential significant cumulative effects that may arise from the proposed Offshore Scheme with ‘other developments’.

7.11.2 The short-listed developments included in this chapter were:

- Sizewell C Nuclear Power Station;
- NeuConnect Interconnector;
- Gridlink Interconnector;
- North Falls Offshore Windfarm;
- East Anglia ONE North Offshore Windfarm;
- East Anglia TWO Offshore Windfarm;
- East Anglia THREE Offshore Windfarm;
- Nautilus Interconnector;
- Five Estuaries Offshore Windfarm;

- LionLink Interconnector; and
- Hanson Aggregate Marine Ltd Area 528/2.

7.11.3 Each shortlisted development was screened for potential cumulative effects for each technical chapter of the proposed Offshore Scheme. These sections were subsequently summarised against each development, detailed their potential for interaction, potential impact pathways, potential for cumulative effect and where appropriate, proposed mitigation. The cumulative effects appraisal concluded that all residual effects are considered to be not significant following the inclusion of control and management measures, embedded and additional mitigation.

7.12 Summary

7.12.1 Table 7-1 provides a summary of the preliminary assessment of likely significant effects associated with the Offshore Scheme.

Table 7-1. Summary of the preliminary environmental assessment for the Offshore Scheme

Topic	Preliminary Likely Significant Effects (Y/N)?	Comment
Physical Environment	N	Control and management measures have been included within **Appendix 1.4.A Outline Code of Construction Practice** with mitigation measures included within **Appendix 1.4.F Schedule of Environmental Commitments and Mitigation**. Following the inclusion of the above measures, the preliminary likely significance of effect is Not Significant for all offshore receptors.
Benthic Ecology	N	
Fish and Shellfish	N	
Marine Mammals	N	
Ornithology	N	
Marine Archaeology	N	
Shipping and Navigation	N	
Commercial Fisheries	N	
Other Sea Users	N	
Intra-project Cumulative Effects	N	
Inter-project Cumulative Effects	N	

8. Project- Wide Preliminary Environmental Assessment

8.1 Climate Change

8.1.1 The current and future baseline for the Proposed Project's greenhouse gas (GHG) assessment is a 'business as usual' scenario where the Proposed Project is not constructed and operated. The baseline comprises of existing carbon stock and sources of GHG emissions within the draft Order Limits of the existing site activities.

8.1.2 The baseline for the lifecycle GHG impact assessment will be established in the ES by quantifying the GHG emissions through a desk-based study, and analysis of data from other relevant technical disciplines, for example, transport.

8.1.3 Based on initial assessment, the current land use within the draft Order Limits consists of predominantly arable land, and managed hedgerows and trees. Trees are present individually in some areas, as well as in rows and within small woodland areas. The abundance of vegetation within the draft Order Limits suggests a relatively high carbon sink potential. Also, current land use within the draft Order Limits has minor levels of associated GHG emissions as the land use is largely agricultural. Baseline agricultural GHG emissions are dependent on soil and vegetation types present, and fuel use for the operation of vehicles and machinery.

8.1.4 This PEIR concludes that the effects on the global climate by the Proposed Project are likely to be minor adverse and not significant because the Proposed Project's GHG impacts are fully consistent with applicable existing and emerging policy requirements set by the government to support them in reaching their net zero target and move away from the use of fossil fuels. This will be confirmed in the full assessment completed as part of the Environmental Statement.

8.1.5 The PEIR also concluded that the effect of climate change impacts on the Proposed Project are not anticipated to be significant. Where any climate change impacts are identified these will be manged through the appropriate mitigation.

8.2 Combined Effect of the Proposed Project

8.2.1 The preliminary combined effects assessment details the effects of the entirety of the Proposed Project after potential mitigation measures have been applied. This includes the Kent and Suffolk Onshore Schemes in conjunction with the proposed Offshore Scheme.

8.2.2 Overall, most environmental, and social features studied within the preliminary environmental assessment had no potential for significant combined effects resulting from both the proposed Onshore Schemes and the Offshore Scheme. However, designated sites, ornithology and notable terrestrial and aquatic habitats were all deemed as being subject to potential combined effects of the Proposed Project.

8.2.3 Further preliminary assessment concluded that designated sites were not subject to significant combined effects in relation to the loss of land. However, there was the potential for significant combined effects between the Suffolk Onshore Scheme and the

Offshore scheme due to disturbance to Sandlings SPA and Leiston-Aldeburgh SSSI during construction. Mitigation measures will be considered and developed further within the ES. No significant combined effects due to disturbance to designated sites between the Kent Onshore Scheme and the Offshore scheme were identified.

8.2.4 Assuming trenchless techniques will be used to traverse sensitive intertidal habitats, notable habitats had no significant combined effect from the Proposed Project.

8.2.5 Ornithological receptors were the only receptor group that was identified as having a potential significant combined effects t at Kent and Suffolk Onshore Schemes with the Offshore Scheme due to the loss of functionally- linked habitat. Consequently, appropriate mitigation measures across all proposed Onshore and Offshore Schemes have been studied in detail across the preliminary effects assessment.

8.3 Habitat Regulations Screening

8.3.1 The Habitats Regulations Screening Assessment discusses impacts on internationally important wildlife sites to the extent possible at the current stage of the Proposed Project. A provisional conclusion of Likely Significant Effects (LSE) has been made for a number of impact pathways, pending further analysis in the ES.

8.3.2 Impact pathways are routes by which the implementation of a project can lead to an effect upon a European designated site. An example of this would be visual and noise disturbance arising from the construction work or operational phase associated with a project. If there are sensitive ecological receptors within a nearby European site (e.g. non-breeding overwintering birds), this could alter their foraging and roosting behaviour and potentially affect the site's integrity.

8.3.3 Given the location of the Proposed Project, the relevant European sites, and the likely impact pathways present, the following European sites have been considered:

Designated Sites in Suffolk

- Sandlings SPA.
- Outer Thames Estuary SPA.
- Alde-Ore Estuary SPA/Ramsar.
- Minsmere-Walberswick SPA/Ramsar.

Designated Sites in Kent

- Thanet Coast & Sandwich Bay SPA/Ramsar.
- Sandwich Bay SAC.
- Stodmarsh SPA/Ramsar.
- Stodmarsh SAC.

Designated Sites Offshore

- Outer Thames Estuary SPA.
- Alde-Ore Estuary SPA/Ramsar.
- Minsmere-Walberswick SPA/Ramsar.

- Thanet Coast & Sandwich Bay SPA/Ramsar.
- Sandwich Bay SAC.
- Berwickshire and North Northumberland Coast SAC.
- Humber Estuary SAC.
- Margate and Long Sands SAC.
- Southern North Sea SAC.
- Thanet Coast SAC.
- Wash and North Norfolk Coast SAC.

Suffolk Onshore Scheme

8.3.4 The following impact pathways have been screened in for Appropriate Assessment:

- Air quality impacts on Sandlings SPA, since a construction compound and trenchless installation pit will immediately abut the SPA.
- Until wintering bird surveys are complete it is not possible to dismiss LSE due to loss of functionally-linked habitat on white-fronted goose associated with Minsmere-Walberswick SPA. This impact pathway is therefore screened in for Appropriate Assessment.
- Construction/decommissioning period noise and visual disturbance of nesting woodlark and nightjar at Sandlings SPA is screened into Appropriate Assessment given a construction compound and trenchless installation pit will be located adjacent to the SPA.

Kent Onshore Scheme

8.3.5 The following impact pathways have been screened in for Appropriate Assessment:

- It is considered at this stage that LSE on Thanet Coast & Sandwich Bay SPA/Ramsar site due to loss of functionally-linked land for golden plover cannot be dismissed. This conclusion will be reviewed for the DCO once a second season of wintering bird data is obtained, and an Appropriate Assessment undertaken if necessary.
- At this stage of the Proposed Project, the potential for operational period collision risk cannot be dismissed, associated with the new section of overhead powerline and species travelling to Stodmarsh SPA/Ramsar. It is therefore screened in for further consideration.

Offshore Scheme

8.3.6 In summary, the following impact pathways have been screened in for Appropriate Assessment:

- Temporary physical disturbance impacts on Outer Thames Estuary SPA, Alde-Ore Estuary SPA, Minsmere-Walberswick SPA, Southern North Sea SAC, Wash and North Norfolk Coast SAC, Humber Estuary SAC, and Berwickshire and North Northumberland Coast SAC.

- Permanent loss impacts on Outer Thames Estuary SPA, Thanet Coast & Sandwich Bay SPA/Ramsar, Alde-Ore Estuary SPA, Minsmere-Walberswick SPA, Southern North Sea SAC, Wash and North Norfolk Coast SAC, Humber Estuary SAC, and Berwickshire and North Northumberland Coast SAC
- Temporary increase in SSC impacts on Outer Thames Estuary SPA, Alde-Ore Estuary SPA, Minsmere-Walberswick SPA, Southern North Sea, and Thanet Coast SAC
- Underwater noise impacts on Southern North Sea SAC, Wash and North Norfolk Coast SAC, Humber Estuary SAC, and Berwickshire and North Northumberland Coast SAC
- Vessel collision risk impacts on Southern North Sea SAC, Wash and North Norfolk Coast SAC, Humber Estuary SAC, and Berwickshire and North Northumberland Coast SAC
- Airborne sounds and visual disturbance impact on Outer Thames Estuary SPA, Alde-Ore Estuary SPA, Minsmere-Walberswick SPA, Wash and North Norfolk Coast SAC, Humber Estuary SAC, and Berwickshire and North Northumberland Coast SAC
- Effects of EMF emissions impacts on Southern North Sea SAC.

8.4 Marine Conservation Zone Assessment

8.4.1 The MCZ Assessment outlines the potential impacts of the Proposed Project on the protected features and physical processes within these designated sites.

8.4.2 The following potential impacts were identified: temporary physical disturbance, permanent loss of subtidal benthic habitats, increases in SSC, underwater noise, EMF emissions, thermal emissions, vessel collision risk with mobile marine species, and airborne sounds and disturbance. The following sites were screened into the assessment:

- Goodwin Sands MCZ;
- Thanet Coast MCZ;
- Kentish Knock MCZ;
- Orford Inshore MCZ;
- Dover to Deal MCZ;
- Foreland MCZ; and
- Medway Estuary MCZ.

8.4.3 The preliminary assessment concluded that impacts from the Proposed Project were not considered to have significant effects on the designated features or conservation objectives of these MCZs.

8.5 Water Framework Directive Screening Assessment

8.5.1 The Water Framework Directive (WFD) Screening Assessment identifies WFD waterbodies that have the potential to be impacted by specific project activities, targeting those waterbodies and activities that require further assessment.

8.5.2 The WFD screening assessment concluded that due to the nature of the Proposed Project including the proposed Suffolk and Kent Onshore Schemes and the Offshore Scheme, both during construction and operation, 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 minimised by implementing the good practice measures.

9. Next Steps

9.1 What happens next?

9.1.1 Following the end of the PEIR Consultation period with non-statutory and statutory consultees, National Grid will consider all comments that have been received.

9.1.2 These consultation responses will inform further design refinements and proposals for environmental measures to reduce impacts from the Proposed Project.

9.1.3 Based on consultation responses, design refinements and additional information that becomes available from site visits and surveys, the environmental assessment will be reviewed and updated for the final ES. It is expected that the ES to accompany the DCO application will be submitted in Autumn 2024.

9.2 How Can I Get Further Information About Sea Link?

9.2.1 **Please get in touch if you have any questions about our proposals for Sea Link.**

- Call our community helpline: 0808 134 9569 (lines are open Monday to Friday, 9am-5:30pm)
- Email us: contact@sealink.nationalgrid.com
- Write to us: Freepost SEA LINK

9.2.2 **Who to contact if you are a landowner or person with interest in land?**

- If you are a landowner and want to talk to our lands team, please email: sealink@dalcourmaclaren.com
- Alternatively, you can find out more information about land interests by visiting nationalgrid.com/sealink

9.2.3 **Who to contact for a media enquiry?**

- If you are a journalist and would like to speak with a member of the National Grid Electricity Transmission media team, please call 01926 656 536.

9.2.4 **Who to contact if you would like information or documents in an alternative format?**

- We are committed to making project information accessible to all users. If you or someone you know needs any information or documents in an alternative format such as large print, Braille or audio tape, get in touch using the above contact details.

9.3 How Can I Have My Say About Sea Link

How to give feedback

9.3.1 Our statutory public consultation runs from **Tuesday 24 October to Monday 18 December 2023**. We want to hear the views of local people. All feedback we receive as part of this

consultation will be carefully considered as we finalise our proposals and prepare our application for development consent.

9.3.2 Public information exhibitions are listed in Table 9-1 below. This is an opportunity to speak to the project team and view and take away some materials. Online webinars can be signed up to on our project website, over the phone or by emailing us.

Table 9-1. Public information exhibitions

Suffolk

Date	Time	Location
Wednesday 8 November	12pm–5.30pm	Old Generator Station, King's Field, Aldeburgh, IP15 5HY
Thursday 9 November	11am–4.30pm	Old Generator Station, King's Field, Aldeburgh, IP15 5HY
Friday 24 November	1pm–6pm	Market Hall, High Street, Saxmundham, IP17 1AF
Saturday 25 November	11am–4pm	Market Hall, High Street, Saxmundham, IP17 1AF

Kent

Date	Time	Location
Wednesday 15 November	2.30pm–7.30pm	Cliffsend Village Hall, 55 Foads Lane, Cliffsend, Ramsgate, CT12 5JH
Thursday 16 November	12pm–5.30pm	Minster Village Hall, 1 High Street, Minster, CT12 4BU
Friday 17 November	10am–3pm	Guildhall, Cattle Market, Sandwich CT13 9AH
Wednesday 29 November	2pm–8pm	Cliffsend Village Hall, 55 Foads Lane, Cliffsend, Ramsgate, CT12 5JH
Saturday 2 December	11am–3pm	Royal Harbour Academy, Marlowe Way, Newington, Ramsgate, CT12 6FA

Webinars

Date	Time	Topic*
Wednesday 25 October	6pm–7pm	Our proposals in Suffolk
Thursday 26 October	6pm–7pm	Our proposals in Kent
Tuesday 31 October	6pm–7pm	Our proposals in Suffolk
Wednesday 1 November	6pm–7pm	Our proposals in Kent

9.3.3 Ask the experts sessions are listed in Table 9-2 below. Individual appointments with our project team can be booked online, over the phone or by email.

Table 9-2. Ask the expert sessions

	Date	Time	Location
Suffolk	Thursday 23 November	3pm–7.30pm	Friston Village Hall, Church Road, Saxmundham, Suffolk, IP17 1PU
Kent	Friday 1 December	2pm–6pm	Radford House,18-20 Effingham St, Ramsgate CT11 9AT

Online Feedback Form

- You can give your feedback by completing our online feedback form, available at nationalgrid.com/sealink.

Paper Feedback Form

9.3.4 You can download and print a paper copy of our feedback form from our website and post it back to us at Freepost SEA LINK. You can also pick up a paper feedback form from any of the public information events or deposit points listed in chapter 16. Alternatively, you can request a consultation pack (newsletter, feedback form and freepost envelope) in the post by emailing contact@sealink.nationalgrid.com or by calling us on 0808 134 9569.

Email Us

9.3.5 If you prefer to send us your comments via email, you can send them to us at contact@sealink.nationalgrid.com.

Send Us a Letter

9.3.6 You can write to us at Freepost SEA LINK.

Call Us

9.3.7 If for any reason you are unable to provide written feedback, then we may be able to accept your comments by telephone. You can call us on 0808 134 9569 to discuss.

9.3.8 The deadline for feedback is **23.59 on Monday 18 December 2023**. Postal responses will be accepted until Tuesday 23.59 on 2 January 2024.

National Grid plc
National Grid House,
Warwick Technology Park,
Gallows Hill, Warwick.
CV34 6DA United Kingdom

Registered in England and Wales
No. 4031152
nationalgrid.com