Preliminary Environmental Information Report Volume 1

Chapter 1 Introduction

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Contents

Glossary of Project Terminology

This Glossary has been provided to define terms used across a number of the LionLink Proposed Scheme documents.

Terms and Abbreviations contained herein are provided at the end of the document in the **Topic Glossary and Abbreviations.**

Term	Description
Amendment to Kiln Lane Substation Scenario	The scenario where the Proposed Scheme will comprise the amendments to Kiln Lane Substation that would be required if Kiln Lane Substation was built out pursuant to the EA1N/EA2 DCOs.
Applicant, the	National Grid Lion Link Limited (NGLLL)
Bellmouth	A flared vehicular access/egress point connecting permanent route to the public highway.
Converter Station	A converter station changes electricity between High Voltage Alternating Current (HVAC), which power our homes, and High Voltage Direct Current (HVDC) which is more efficient for transporting electricity over long distances and vice versa. The proposed Converter Station is located to the east of Saxmundham.
Converter Station Site	The Converter Station Site as a whole, allowing for the co-location of the Converter Station with the Converter Station being separately consented as part of the Sea Link project.
Co-ordination	The process of people or entities working together.
Co-location	Where different elements of a project, or various projects, are located in one place.
Construction Compound	Temporary compounds installed during the construction phase of the Proposed Scheme. Each compound is likely to contain storage areas such as laydown areas, soils storage, and areas for equipment and fuel, drainage, generators, car parking and offices and welfare areas (portacabins).
Development Consent Order (DCO)	An order made by the Secretary of State pursuant to the Planning Act 2008 (as amended) granting development consent for a Nationally Significant Infrastructure Project. It grants consent to develop the approved project and may include (among other things) powers to compulsorily acquire land and rights where required and deemed marine licences for any offshore works.
Draft Order Limits	The area of land identified as being subject to the DCO application. The Draft Order Limits are made up of the land required both temporarily and permanently to allow for the construction, operation and maintenance, and decommissioning of the Proposed Scheme. All onshore parts of the Proposed Onshore Scheme are located within England and offshore parts of the Proposed Offshore Scheme are located within English territorial waters to 12 Nautical

Term	Description
	Miles and then up to the United Kingdom (UK) Exclusive Economic Zone (EEZ) boundary at sea.
Dutch Offshore Components	Is the term used when referring to the offshore elements of the Project within Dutch waters.
Eastern Route Option	As part of the Underground HVDC cable corridor, the Eastern Route Option would facilitate a degree of co-location with the Sizewell Link Road (SLR) scheme.
Environmental Impact Assessment (EIA)	The EIA is a systematic regulatory process that assesses the potential likely significant effects of a proposed project or development on the environment.
EIA Scoping Report	An EIA scoping report defines the proposed scope and methodology of the EIA process for a particular project or development. The EIA Scoping Report for the Proposed Scheme was submitted to the Planning Inspectorate with a request for the Secretary of State to adopt a scoping opinion in relation to the Proposed Scheme on 6 March 2024.
Environmental Statement (ES)	The ES is a document that sets out the likely significant effects of the project on the environment. The ES is the main output from the EIA process. The ES is published as part of the DCO application.
Exclusive Economic Zone (EEZ)	The zone in which the coastal state exercises the rights under Part V of the United Nations Convention on the Law of the Sea. These rights relate principally to the water column and may extend to 200 nautical miles from baselines. This is distinct from territorial waters, which for the UK extend 12 nautical miles from the coast.
Full Build Out of Kiln Lane Substation Scenario	The scenario if the Proposed Scheme was brought forward first, then it would be responsible for developing Kiln Lane Substation for the Proposed Scheme, with sufficient additional capacity for other projects.
Joint Bay	Underground structures constructed at regular intervals along the onshore cable route to join sections of cable and facilitate installation of the cables into the buried ducts.
Kiln Lane Substation	The proposed connection point for the Project to the British National Electricity Transmission System, located to the north of Friston. Formerly known as Friston Substation. The new name has recently been adopted by NGET. The substation is of the same footprint and in the same location. Friston Substation will, hereafter, be referred to as Kiln Lane Substation.
Landfall	The proposed Landfall is where the proposed offshore HVDC Submarine Cables are brought ashore and meets with the onshore proposed Underground HVDC Cables. This includes the Transition Joint Bay (TJB). The proposed Landfall will be located at Walberswick, and there will be no permanent above ground infrastructure at the proposed Landfall.
Landfall Site	The area where the Landfall may be located.

Term	Description
Limit of Deviation	A maximum distance or measurement of variation within which the works must be constructed. These are lateral (i.e. on the ground) and vertical limits (in relation to height).
Link Box Chamber	Link boxes are used at joint bays to facilitate grounding connections to ensure safety and enable maintenance. Link boxes can either be installed below ground, in a link box chamber, or in an above ground link pillar
Multi-purpose interconnector (MPI)	A project where GB interconnection is combined with transmission of offshore generation within GB (and optionally within a connecting state).
National Grid Electricity Distribution (NGED)	The local distribution network operator for the Midlands, the southwest of England and south Wales.
National Grid Electricity Transmission (NGET)	Operators of the national electricity transmission network across Great Britain and own and maintain the network in England and Wales, providing electricity supplies from generating stations to local distribution companies. National Grid does not distribute electricity to individual premises, but its role in the wholesale market is vital to ensuring a reliable, secure and quality supply to all.
National Grid Lion Link Limited (NGLLL)	The Applicant, a joint venture between National Grid Ventures and TenneT. NGLLL is a business within the wider National Grid Ventures portfolio.
National Grid Strategic Infrastructure (NGSI)	Part of NGET and responsible for delivering major strategic UK electricity transmission projects, focussed on connecting more clean, low-carbon power to England and Wales.
National Grid Ventures (NGV)	Operates and invests in energy projects, technologies and partnerships to accelerate the development of a clean energy future. This includes interconnectors (such as the LionLink Project), allowing trade between energy markets and the efficient use of renewable energy resources.
Nationally Significant Infrastructure Projects (NSIP)	Major infrastructure developments in England and Wales for which development consent is required, as defined within Section 14 of the Planning Act 2008 (as amended). This includes any development which is subject to a direction by the relevant Secretary of State pursuant to Section 35 of the Planning Act 2008.
Non-standard interconnector (NSI)	A project where GB interconnection is combined with transmission of offshore generation outside of GB.
Northern Route Option	A northern cable corridor option that would allow Underground HVAC Cable delivery for Proposed Scheme only.
Offshore Hybrid Asset (OHA)	A project that combines cross-border interconnection with the transmission of offshore generation, this is an overarching term which covers both multi-purpose interconnectors (MPI) and non-standard interconnectors (NSI).
Order Limits	The maximum extent of land within which the Proposed Scheme may take place, as consented.

Term	Description
Outline Offshore Construction Environmental Management Plan (Outline Offshore CEMP)	Describes the control measures and standards proposed to be implemented to provide a consistent approach to the environmental management of the construction activities of the Proposed Offshore Scheme.
Outline Onshore Code of Construction Practice (Outline Onshore CoCP)	Describes the control measures and standards proposed to be implemented to provide a consistent approach to the environmental management of the construction activities of the Proposed Onshore Scheme.
Overhead Lines (OHL)	Conductors (wires) carrying electric current, strung from Tower to Tower.
Planning Act 2008	The Planning Act 2008 being the relevant primary legislation for national infrastructure planning.
Planning Inspectorate (PINS)	The Planning inspectorate review DCO applications and make a recommendation to the Secretary of State, who will then decide whether to approve the DCO.
Preliminary Environmental Information Report (PEIR)	The PEIR is a document, compiled by the Applicant, which presents preliminary environmental information, as part of the statutory consultation process. This is defined by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 as containing information which "is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)" (Section 12 2. (b)). This PEIR describes the Proposed Scheme, sets out preliminary findings of the EIA undertaken to date, and the mitigation measures proposed to reduce effects. The PEIR is published at Statutory Consultation stage for information and feedback.
Project (the)	The LionLink Project (hereafter referred to as the 'Project') is a proposal by National Grid Lion Link Limited (NGLLL) and TenneT. The Project is a proposed electricity link between Great Britain (GB) and the Netherlands with a capacity of up to 2.0 gigawatts (GW) of electricity and will connect to Dutch offshore wind via an offshore platform in Dutch waters. The Project is the collective term used to refer to the proposal for all aspects (onshore and offshore) of the proposed interconnector between GB and the Netherlands.
Proposed Offshore Scheme	The term used when referring to the offshore elements of the Proposed Scheme, seaward of the mean high-water springs to the EEZ boundary at sea.
Proposed Onshore Scheme	The term used when referring to the onshore elements of the Proposed Scheme, landward of the mean low water springs. Proposed Onshore Scheme components include:

Term	Description
	a) Kiln Lane Substation. b) Underground High Voltage Alternating Current (HVAC) Cables; c) Converter Station. d) Underground High Voltage Direct Current (HVDC) Cables; and e) Landfall.
Proposed Scheme	Used when referring to the GB scheme components of the Project, not including Dutch components. This includes both the onshore and offshore scheme components which are within UK territorial waters and up to the UK EEZ boundary at sea.
Rochdale Envelope	The Rochdale Envelope or Design Envelope approach is employed where the nature of a proposed development means that some details of a project are not available in advance of, or at the time of submitting the DCO application. The Rochdale Envelope approach defines a design envelope and parameters within which the final design will sit and ensures a robust and reliable EIA can be undertaken.
Scoping Opinion	A scoping opinion is requested from the Planning Inspectorate on behalf of the Secretary of State, to inform the requirements of EIA process and ultimately the ES which will be submitted as part of the application for development consent. Through the scoping process, the views of the statutory consultees and other relevant organisations on the proposed scope of the EIA are sought. A Scoping Opinion for the Proposed Scheme was issued by the Planning Inspectorate (on behalf of the Secretary of State) on 16 April 2024. The Applicant received a separate EIA Scoping Opinion from the Marine Management Organisation (MMO) (Reference DCO/2024/00005, dated 04 September 2024) as the MMO were unable to provide opinion to the Planning Inspectorate in time for the April 2024 deadline.
Scottish Power Renewables (SPR) East Anglia One North (EA1N) and East Anglia 2 (EA2) Consents (SPR EA1N and EA2 Consents)	The Orders made following the Scottish Power Renewables applications for development consent for the following projects: a) The East Anglia ONE North Offshore Wind Farm Order 2022; and b) East Anglia TWO Offshore Wind Farm Order 2022
Southern Route Option	A southern cable corridor option that would allow: a) Underground HVAC Cable delivery for Proposed Scheme only, or b) Underground HVAC Cable delivery for Proposed Scheme and ducting for Sea Links Underground HVAC and HVDC cables in that section.
Statutory Consultation	Consultation undertaken with the community and stakeholders in advance of the application for development consent being submitted

Term	Description
	to the Planning Inspectorate, on behalf of the Secretary of state, in accordance with the PA 2008.
Substation	Substations are used to control the flow of power through the electricity system. They are also used to change (or transform) the voltage from a higher to lower voltage to allow it to be transmitted to local homes and businesses.
TenneT	Operator of the electricity transmission network across the Netherlands.
Tower	A structure used to carry overhead electrical conductors, insulators, and fittings. Often described as a pylon.
Transition Joint Bay (TJB)	An underground structure at the Landfall Site that house the joints between the offshore cables and the onshore cables.
Underground Cable Corridors	Collective term for the corridors within which HVAC and HVDC cables are planned.
Underground High Voltage Alternating Current (HVAC) Cable Corridor	A corridor in which the underground HVAC cables are planned to be installed.
Underground High Voltage Alternating Current (HVAC) Cables	Transmission cables which connect between the Converter Station and Substation. HVAC cables are designed to manage fluctuating flow of current.
Underground High Voltage Direct Current (HVDC) Cable Corridor	A corridor in which the underground HVDC cables are planned to be installed.
Underground High Voltage Direct Current (HVDC) Cables	Transmission cables which connect the Converter Station to the Landfall Site and then offshore. HVDC cables are designed to manage current flowing in one direction.
Visibility Splay	An area of land at a road junction that ensures drivers have an unobstructed view of oncoming traffic allowing them to safely join or cross the road.
Western Route Option	As part of the Underground HVDC cable corridor, the Western Route Option would deliver the Scheme within its own corridor with no co-location with the Sizewell Link Road (SLR) scheme.

1 Introduction

1.1 Introduction

1.1.1 This Preliminary Environmental Information Report (PEIR) has been prepared by Ove Arup and Partners Ltd (Arup) and Collaborative Environmental Advisers (CEA) Ltd, on behalf of National Grid Lion Link Limited (NGLLL) and is intended to provide an understanding of the potential likely significant effects (beneficial or adverse) of the Great Britain (GB) portion of the Project.

1.1.2 The Project comprises a new interconnector (offshore hybrid asset) with a capacity of up to 2.0[1] gigawatts (GW) between the National Transmission Systems (NTSs) of GB and the Netherlands, including a connection into a wind farm located in Dutch waters. An offshore hybrid asset combines interconnection with the transmission of offshore wind generation outside of GB territorial waters.

1.1.3 The Project is located partly in the territory of GB and partly in the territory of the Netherlands. This PEIR has been prepared for the portion of the Project within the territory of GB only, which is the subject of the proposed DCO application. However, the potential for transboundary effects arising from the interaction between the Project and European Economic Area (EEA) States will be assessed.

1.1.4 The Project will be the second interconnector between GB and the Netherlands, the first being the existing BritNed interconnector. The Project will be the first offshore hybrid asset in GB.

1.1.5 The GB portion of the Project, termed 'the Proposed Scheme', comprises the following key components:

a. Kiln Lane Substation located to the north of Friston[2];
b. Proposed Underground High Voltage Alternating Current (HVAC) Cables between the proposed Converter Station in Suffolk and Kiln Lane Substation north of Friston;
c. Proposed Converter Station in Suffolk, east of Saxmundham;
d. Proposed Underground High Voltage Direct Current (HVDC) Cables between the proposed Converter Station in Suffolk, and a proposed Landfall Site at Walberswick; and

[1] Following a modification application (ModApp) to National Energy System Operator (NESO) the LionLink connection agreement was updated in 2025 to provide for the transmission of up to 2.0GW of electricity (2.0GW export and 1.8GW import) at the proposed Kiln Lane Substation.
The ModApp was made following a decision by NGLLL to procure the High Voltage Direct Current cables and converter station through TenneT's 2.0GW Frameworks. The increased capacity to up to 2.0GW does not change the parameters of the proposed Converter Station or installation methods for the cable

[2] Formerly Friston Substation. At this time there are various consenting scenarios being considered for the development of the proposed substation. This PEIR outlines the scenarios in **Chapter 2 Description of the Proposed Scheme**, with each technical chapter assessing the 'worst-case scenario' in relation to that particular receptor.

e. Submarine electricity cables from a proposed Landfall Site at Walberswick at the mean high-water mark at the UK coast to the edge of the UK Exclusive Economic Zone (EEZ).

1.1.6 The location of the Project and the Proposed Scheme are provided in **Figure 1.1 Location Plan** of this PEIR.

1.2 The Applicant

1.2.1 There are three, distinct, electricity business entities under the umbrella of National Grid:

a. National Grid Ventures (NGV);
b. National Grid Electricity Transmission (NGET); and
c. National Grid Electricity Distribution (NGED).

1.2.2 NGV is a separate entity to NGET and NGED, which are subject to separate regulations. NGV operates and invests in energy projects, technologies, and partnerships to accelerate the development of a clean energy future.

1.2.3 NGLLL ('the Applicant') is part of the NGV portfolio.

The Applicant as a Statutory Undertaker

1.2.4 A statutory undertaker is a company or organisation that has been granted licence to undertake specified works under statutory powers. The Applicant holds an electricity interconnector licence granted pursuant to Section 6(1)(e) of the Electricity Act 1989, meaning that the Applicant is classed as a statutory undertaker for certain purposes.

1.3 Nationally Significant Infrastructure Projects

1.3.1 None of the components of the Proposed Scheme listed in **Section 1.1** of this PEIR fall within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) defined under Section 14 of the Planning Act 2008 (PA2008) (Ref 1). NGV therefore sought direction on 28 July 2022 pursuant to Section 35 of the PA2008 from the Secretary of State that the Proposed Scheme be treated as a development for which development consent under the PA2008 is required.

1.3.2 On 23 August 2022 a Section 35 direction was granted (the Section 35 Direction) by the Secretary of State on the grounds that:

"The proposed project is of national significance, taking into account that it forms part of a high voltage direct current electricity link with capacity of up to 1.8[1]GW between the national transmission systems of Great Britain and the Netherlands.

The proposed project will play an important role in enabling an energy system that meets the UK's commitment to reduce carbon emissions and the Government's objectives to create a secure, reliable and affordable energy supply for consumers.

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".

1.3.3 Following the grant of the Section 35 Direction, an application for development consent pursuant to Section 37 of the PA2008 will be made to the Secretary of State. The application will provide details of the Proposed Scheme and will be accompanied by an Environmental Statement (ES), which will be based on the content of this PEIR.

1.3.4 A Deemed Marine Licence will be sought under the development consent order.

1.4 The Need for The Project

1.4.1 The UK is rapidly transforming its energy system, moving away from fossil fuels and toward clean, low-carbon technologies.

1.4.2 International electricity interconnectors are a key part of this strategy. They enable the sharing of renewable energy between countries, improving system resilience, reducing costs and making energy more sustainable.

1.4.3 By enabling the rapid transfer of electricity between markets, interconnectors enable energy to be imported and exported depending on the needs of the market and in line with market prices. Interconnectors are also an effective tool to support the intermittent nature of renewable energy and help to support the network when demand is high.

1.4.4 GB has experienced success from existing interconnectors, which have connected energy between GB and Belgium, Denmark, France, Ireland and the Netherlands.

1.4.5 Offshore Hybrid Assets (OHAs) are seen as the next generation of interconnector, that will connect offshore wind farms to multiple countries.

1.4.6 In addition to facilitating the sharing of energy between countries, OHAs will also help to speed up the connection of offshore wind and maximise the use of wind generation. They will also reduce the impact on local communities by reducing the amount of connection points and onshore infrastructure required to connect this clean energy to the shore. The North Sea holds significant potential for both the UK and Europe to achieve significant increases in offshore wind energy.

1.4.7 The Project is an Offshore Hybrid Asset. Ofgem has made an initial project assessment and consider that the Project is likely to be in the interest of GB consumers, and therefore Ofgem has decided to grant the project a Pilot OHA regulatory regime in principle. This decision is supported by National Electricity System Operator's (NESO) System Impact Assessment Report.

1.4.8 The UK Government has recognised the significant role that international electricity interconnectors play in facilitating a secure, stable and clean energy system (Ref 2, Ref 3, Ref 4, Ref 5). Accordingly, the Government's National Policy

Statements acknowledge the importance and benefits of increasing levels of interconnection as part of national planning policy, and there is wide energy policy support for increased interconnection development.

1.4.9 The objective of the Project is to connect the British and Dutch NTSs, as well as facilitating a connection to Dutch offshore wind generation, for the purpose of achieving the energy security and supply benefits that come with a project of this scale. The Project would continue to boost interconnector capacity, and contribute towards the UK Government's commitment of reaching net zero by 2050.

1.4.10 The Project therefore delivers on core aspects of the UK Government's energy strategy (Ref 2): it supports a reduction in carbon emissions; contributes towards addressing the current unreliable nature of renewable energy supply and it provides the security, stability and cost savings that are associated with interconnectors. It is a step towards a more coherent and therefore more efficient electricity transmission network. This is supported by the Initial Project Assessment decision and subsequent conditional amendment provided by Ofgem in agreeing the Regulatory parameters in which the Project will operate.

1.4.11 When determining the connection point for the Project, NESO, which oversees the strategic planning of Great Britain's electricity grid, assessed a range of environmental, technical, and cost factors. Following discussions with NGV, NESO identified East Suffolk as the optimal connection point for the Project in Great Britain. In 2017, NESO granted a connection agreement for the Project to link to a new substation in the Leiston area[3]. This has been re-confirmed through a modification to the connection agreement in June 2025. The Applicant considers the connection point to be appropriate and consentable, and from an electricity system perspective is also consistent with NESO's East Anglia Study (Ref 6).

1.5 Overview of the Proposed Scheme

1.5.1 A full description of the Proposed Scheme is provided in **Chapter 2 Description of the Proposed Scheme** of this PEIR.

Proposed Onshore Scheme

1.5.2 The extent of the Proposed Onshore Scheme is illustrated in **Figure 1.2 Proposed Onshore Scheme Draft Order Limits** of this PEIR, which is located in England within the administrative boundary of Suffolk County Council and East Suffolk Council local planning authority areas.

1.5.3 The onshore components of the Proposed Scheme comprise of the following:

[3] The substation was formerly known as Friston Substation. Since modification of the connection agreement in June 2025, the new name (Kiln Lane Substation) has been adopted by NGET. The substation is of the same footprint and in the same location.

a. Kiln Lane Substation[4]
b. proposed Underground HVAC Cables;
c. proposed Converter Station; and
d. proposed Underground HVDC Cables, and
e. a proposed Landfall at Walberswick.

1.5.4 The Proposed Onshore Scheme is located in a predominantly rural setting. Settlements in proximity to components of the Proposed Scheme include:

a. Kiln Lane Substation and proposed Converter Station: Friston and Saxmundham;
b. Proposed Underground Cable Corridor: Friston, Saxmundham, Theberton, Annesons Corner, Middleton, Westleton and Blythburgh, and Walberswick; and
c. Proposed Landfall: Walberswick.

1.5.5 Existing infrastructure in proximity to the Proposed Onshore Scheme Draft Order Limits includes: two existing 400kV overhead lines that connect the existing Sizewell substation to the Bramford substation, the railway line connecting Saxmundham to Leiston, the A12 which is largely to the east of the Proposed Onshore Scheme but is crossed by the boundary up to twice, and the Sizewell Nuclear Site.

1.5.6 The Proposed Onshore Scheme Draft Order Limits includes parts of Suffolk & Essex Coast & Heaths National Landscape, Minsmere-Walberswick RAMSAR, Minsmere-Walberswick Heaths and Marshes Site of Special Scientific Interest (SSSI), Minsmere to Walberswick Heaths & Marshes Special Areas of Conservation (SAC) and Minsmere-Walberswick Special Protection Areas (SPA).

1.5.7 The following main rivers cross the Proposed Onshore Scheme Draft Order Limits: The Hundred River, River Minsmere and River Fromus.

1.5.8 The onshore components of the Proposed Scheme will be considered within **Chapters 6 to 17** and **Chapters 27 to 29**.

Proposed Offshore Scheme

1.5.9 The extent of the Proposed Offshore Scheme is illustrated in **Figure 1.3 Proposed Offshore Scheme Draft Order Limits** of this PEIR.

1.5.10 The Proposed Offshore Scheme Draft Order Limits are located within the East Inshore and East Offshore Marine Plan areas. The Proposed Offshore Scheme Draft Order Limits comprise the seabed and the adjacent water column which has been identified at this stage of the Proposed Scheme development and design process, as potentially being required to construct and operate the Proposed Scheme. This includes a sufficient width of seabed to allow installation of two submarine HVDC cables, one metallic return cable and up to two fibre

[4] At this time there is optionality in how Kiln Lane Substation may progress in terms of consenting and construction. This Report outlines the optionality in **Chapter 5 EIA Approach and Methodology** of this PEIR.

optic cables, the micro-routeing of those cables, dredging of sandwaves for the purposes of levelling, and the disposal of dredged material. and any external cable protection that may be required.

1.5.11 The Proposed Offshore Scheme Draft Order Limits from the Mean High Water Springs (MHWS) include the proposed Landfall site at Walberswick, a proposed Offshore HVDC Cable Corridor which routes in a north-easterly direction from the proposed Landfall across the Southern North Sea to the UK/Netherlands EEZ boundary.

1.5.12 The Proposed Offshore Scheme Draft Order Limits cross the Outer Thames Estuary SPA, Southern North Sea MPA, and Southern North Sea SAC.

1.5.13 The offshore components of the Proposed Scheme will be considered in **Chapters 18 to 29.**

1.6 Need for Environmental Impact Assessment

1.6.1 An Environmental Impact Assessment (EIA) is a legally required process which examines any likely significant effects of the construction, operation, maintenance and decommissioning of a proposed development. The EIA process for Nationally Significant Infrastructure Projects (NSIP) and projects directed into the Planning Act 2008 regime is governed by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the EIA Regulations) (Ref 6).

1.6.2 There are two schedules of development included within the EIA Regulations. These comprise of Schedule 1 developments, for which EIA is mandatory, and Schedule 2 developments, for which EIA is undertaken where the development is likely to have significant effects on the environment by virtue of its nature, size or location.

1.6.3 Schedules 1 and 2 of the EIA Regulations do not reference interconnectors, nor any of the individual components of the Project. It must be noted, however, that although a particular type of development is not explicitly identified in the Schedules does not necessarily mean that an EIA is not required.

1.6.4 The Applicant has considered the characteristics of the Proposed Scheme, including the location, nature and characteristics of the likely significant effects of the Proposed Scheme. In light of these factors, and the status of the Proposed Scheme as requiring development consent following the Section 35 Direction, it is proposed that an EIA will be undertaken.

1.6.5 The potential for likely significant effects that the Applicant considers the EIA will need to address were identified in the **Scoping Report** (Ref 8) submitted to the Planning Inspectorate on 6 March 2024 and a **Scoping Opinion** (Ref 9) was received from the Secretary of State on 16 April 2024. Issues raised in the **Scoping Opinion** by the Planning Inspectorate are summarised within each

technical chapter (**Chapters 6 to 28**), along with preliminary responses to those comments received.

1.6.6 Further legislative and policy context is provided in **Chapter 4 Legislation and Policy Context** of this PEIR.

1.7 Purpose of this Report

1.7.1 Regulation 12(2) of the EIA Regulations defines the Preliminary Environmental Information (PEI) as information that has been compiled by the applicant and:

> *"is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development)."*

1.7.2 The PEIR includes environmental information to enable consultees to understand the likely significant environmental effects of the Proposed Scheme based on the preliminary environmental information available at the time, and measures proposed to mitigate such effects, to help inform their consultation responses.

1.7.3 This PEIR presents the findings of preliminary environmental assessments undertaken upon the current design position of the Proposed Scheme. Specialist technical assessments within this PEIR identify baseline conditions, potential effects upon identified receptors (beneficial and adverse), which effects may be potentially significant, and measures to mitigate identified effects. All assessment work has applied (and any ongoing work continues to apply) a precautionary principle, in that where limited information is available (in terms of the proposals for the Proposed Scheme and baseline information), a realistic worst-case is assessed following the 'Rochdale Envelope' approach. Any significant effects identified within the PEIR are identified on a preliminary basis and may be subject to change as environmental assessments progress to full EIA stage. Therefore, likely significant effects provisionally identified within this PEIR may later be found to not be significant following further design development and identification of further mitigation measures, to be reported in the ES.

1.7.4 This PEIR forms part of the consultation material provided for the Proposed Scheme's statutory consultation being undertaken in early 2026. **Section 1.10 Next Steps** of this document provides further explanation of the consultation process.

1.7.5 This PEIR has been prepared in line with guidance provided in the Planning Inspectorate's Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (Ref 10). Further guidance which has been considered is set out in **Chapter 5 EIA Approach and Methodology** of this PEIR.

1.8 Structure of the Preliminary Environmental Information Report

1.8.1 This PEIR consists of three volumes:

a. Volume 1 Main Report,
b. Volume 2 Appendices and
c. Volume 3 Figures.

1.8.2 A separate Non-Technical Summary (NTS) has also been provided. The structure of the PEIR is detailed further in **Table 1.1.**

1.8.3 The PEIR is comprised of technical chapters presenting the preliminary environmental assessment for the receptors identified within that technical assessment. These chapters will include a description of the scope of the topic, the preliminary environmental information comprising baseline, future baseline, proposed mitigation and a description of any likely significant residual effects.

Table 1.1: Structure of the PEIR

Chapter Number	Chapter Title	Content
Non-Technical Summary		
The Non-Technical Summary provides a succinct description of the Proposed Scheme, alternatives considered, environmental baseline, mitigation measures, and preliminary environmental effects.		
Volume 1 – Part 1: Introduction		
1	Introduction	An introduction to the Proposed Scheme and the purpose and structure of this PEIR.
2	Description of the Proposed Scheme	A description of the Proposed Scheme including permanent features and associated temporary works. It describes the general characteristics of the Proposed Scheme and outlines where there is design flexibility, including design options and scenarios.
3	Alternatives and Design Evolution	An outline of the reasonable alternatives and design evolution considered for the Proposed Scheme.
4	Legislation and Policy Overview	An overview of the legislation and policy relevant to the Proposed Scheme.
5	EIA Approach and Methodology	A description of the overall EIA methodology that is proposed for the Proposed Scheme including definition of baseline and future baseline, approach to scope (technical, spatial, and temporal) definition of assessment scenarios and options, and approach to mitigation (primary (embedded), secondary (additional), and tertiary

Chapter Number	Chapter Title	Content
		(good practice) mitigation). It also provides a summary of the approach to consultation and engagement, and the preliminary responses to the Planning Inspectorate's Scoping Opinion. Interactions with other supporting environmental documents and their relevance to the EIA are also described.
Volume 1 – Part 2: Onshore		
6	Agricultural land and Soils	Each technical chapter defines: • the regulatory and planning context specific to the technical assessment area; • preliminary responses to the Planning Inspectorate's Scoping Opinion, and consultation which has been undertaken to date or planned to be undertaken; • the approach to the preliminary assessment and methodology; • the relevant baseline and future baseline information, and defined study area; • known mitigation measures; • preliminary assessment of effects; and • a summary of identified significant effects.
7	Air Quality	
8	Ecology and Biodiversity	
9	Geology and Contamination	
10	Health and Wellbeing	
11	Historic Environment	
12	Hydrology, Hydrogeology and Drainage	
13	Landscape and Visual	
14	Material Assets and Waste	
15	Noise and Vibration	
16	Socio-economics, Recreation and Tourism	
17	Traffic and Transportation	
Volume 1 – Part 3: Offshore		
18	Marine and Physical Environment	Each technical chapter defines: • the regulatory and planning context specific to the technical assessment area; • preliminary responses to the Planning Inspectorate's Scoping Opinion, and consultation which has been undertaken to date or planned to be undertaken; • the approach to the preliminary assessment and methodology; • the relevant baseline and future baseline information, and defined study area; • known mitigation measures; • preliminary assessment of effects; and • a summary of identified significant effects.
19	Intertidal and Subtidal Benthic Ecology	
20	Fish and Shellfish	
21	Intertidal and Offshore Ornithology	
22	Marine Mammals	
23	Shipping and Navigation	
24	Commercial Fisheries	
25	Other Marine Users	
26	Marine Archaeology	
Volume 1 – Part 4: Sitewide		
27	Climate Change	This chapter provides preliminary assessment of the vulnerability of the Proposed Scheme to

Chapter Number	Chapter Title	Content
		climate change and contribution of the Proposed Scheme to climate change with regards to carbon.
28	Cumulative and Combined effects	This chapter sets out identified intra-project and inter-project interactions and potential for cumulative or combined effects on shared receptors.
29	Preliminary summary of likely significant effects	This chapter summarises the preliminary findings of the EIA and identifies the likely significant effects identified at this stage of the Proposed Scheme.
Volume 2 - Appendices		
Supporting documentation relevant to **Volume 1** of the PEIR.		
Volume 3 - Figures		
Supporting figures illustrating information relevant to **Volume 1** of the PEIR.		

1.9 Competent Experts

1.9.1 The EIA Regulations require that an ES is prepared by 'competent experts' under Regulation 14 (4)(a). This PEIR has been prepared by a professional environmental team which comprises technical specialists who have extensive experience in the field of EIA, the details of which are presented in **Appendix 1.1 Competent Experts,** of Volume 2 Appendices, of this PEIR. The individual experts have demonstrated their competence through academic qualifications, membership of relevant professional institutions and practical experience in undertaking EIAs.

1.9.2 The EIA has been led by Arup on behalf of the Applicant. Arup has been awarded with the EIA Quality Mark from Institute of Environmental Management and Assessment (IEMA – now the Institute of Sustainability and Environmental Professionals (ISEP)), a voluntary standard which required organisations to commit to excellence and requires demonstration of their competency in EIA. The Offshore technical chapters have been produced by Collaborative Environmental Advisers Ltd (CEA). All specialists have demonstrable expertise in their fields.

1.10 Next Steps

1.10.1 This PEIR has been prepared to support consultees in developing an informed view on the likely significant environmental effects of the Proposed Scheme.

1.10.2 The potential effects identified within this PEIR will be considered further as part of the EIA, and additional mitigation may be identified as the design develops further in order to minimise the Proposed Scheme's environmental impact. The final assessment will be presented within the ES submitted with the application

for development consent. This will take into account the representations made during the statutory consultation and ongoing design informed by the EIA process. Therefore, it is possible that likely significant effects provisionally identified at this preliminary stage may later be found to be not significant following completion of the mitigation strategy when reported in the ES.

Statutory Consultation

1.10.3 The Applicant wrote to the Secretary of State prior to the commencement of this consultation with notification for the purposes of Section 46 of the PA2008 to notify of the intention to commence statutory consultation pursuant to Section 42 of the Act in regard to its proposed application for a DCO to authorise the Proposed Scheme.

1.10.4 An eight-week consultation on the Proposed Scheme will run from January to March 2026 to enable the public and consultees to review the proposals and provide feedback. The Applicant invites comments on the Proposed Scheme and environmental issues addressed in this PEIR.

1.10.5 Further details on the consultation and electronic copies of all consultation documents can be downloaded at the project website:

https://www.nationalgrid.com/national-grid-ventures/lionlink

1.10.6 To support the consultation, a number of engagement events are being held for the general public to access information about the Proposed Scheme, and to speak to members of the project team and technical specialists.

1.10.7 Copies of consultation documents will also be available for viewing at a number of locations.

1.10.8 Full details of the consultation events or locations where copies of the consultation documents can be viewed are available in the **Statement of Community Consultation** (SoCC) which is also accessible on the Project website. The draft SoCC was subject to consultation with the relevant planning authority.

Have your say

1.10.9 The statutory consultation period is from January to March 2026.

1.10.10 Feedback received by this point, using the response channels stated below, will be carefully considered as the proposals for the project are refined.

1.10.11 Online response form: You can give your feedback by completing our online response form, available at nationalgrid.com/lionlink.

1.10.12 Email us: If you prefer to send us your comments via email, you can send them to info@lionlink.nationalgrid.com.

1.10.13 Paper feedback form: You can download and print a paper copy of our feedback form from our website and post it, or a letter containing your feedback, to

Freepost NGV LionLink. You can also pick up a paper feedback form from any of the public information events or deposit points listed above. Alternatively, you can request for a feedback form to be sent to you in the post.

1.10.14 Call us: 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 0800 083 1787 to discuss.

Topic Glossary and Abbreviations

Term	Definition
DCO	Development Consent Order
EEA	European Economic Area
EIA	Environmental Impact Assessment
ES	Environmental Statement
EEZ	Exclusive Economic Zone
GB	Great Britain
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IEMA	Institute of Environmental Management and Assessment
ISEP	Institute of Sustainability and Environmental Professionals
NGED	National Grid Electricity Distribution
NGESO	National Grid Electricity System Operator
NGET	National Grid Electricity Transmission
NGLLL	National Grid Lion Link Limited
NGV	National Grid Ventures
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
NTSs	National Transmission Systems
PA2008	Planning Act 2008
PEIR	Preliminary Environmental Information Report
SAC	Special Areas of Conservation
SoCC	Statement of Community Consultation
SoS	Secretary of State
SPA	Special Protection Areas
SSSI	Sites of Special Scientific Interest
UK	United Kingdom

References

Ref 1 The Planning Act 2008 https://www.legislation.gov.uk/ukpga/2008/29/contents

Ref 2 Department for Energy Security & Net Zero, Prime Minister's Office 10 Downing Street, Department for Business, Energy & Industrial Strategy (2022) British energy security strategy policy paper, available at: https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy#renewables (accessed October 2025)

Ref 3 Department for Energy Security & Net Zero, Department for Business, Energy & Industrial Strategy (2020) Energy white paper: Powering our net zero future , available at: https://www.gov.uk/government/publications/energy-white-paper-powering-our-net-zero-future (accessed October 2025)

Ref 4 Department for Energy Security and Net Zero (January 2024). Overarching National Policy Statement for Energy (EN-1). https://www.gov.uk/government/publications/overarching-national-policy-statement-for-energy-en-1. (accessed October 2025)

Ref 5 Department for Energy Security and Net Zero (January 2024) National Policy Statement (NPS) for electricity networks infrastructure EN-5. GOV.UK.. (online) Available at: https://www.gov.uk/government/publications/national-policy-statement-for-electricity-networks-infrastructure-en-5 (Accessed March 2025).

Ref 6 National Energy System Operator (2024) East Anglia Study [online] https://www.neso.energy/about/our-projects/offshore-coordination-project/east-anglia-study (accessed October 2025)

Ref 7 The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 https://www.legislation.gov.uk/uksi/2017/571/contents

Ref 8 LionLink Environmental Impact Assessment Scoping Report 2024 https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020033/EN020033-000046-LION%20-%20Scoping%20Report%20-%20Main%20Text.pdf

Ref 9 Planning Inspectorate Scoping Opinion. Proposed LionLink Multi-purpose interconnector https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020033/EN020033-000103-LION%20-%20Scoping%20Opinion.pdf

Ref 10 Nationally Significant Infrastructure Projects - Advice Note Seven: Environmental Impact Assessment: process, preliminary environmental information and environmental statements (republished 2020 – version 7) https://www.gov.uk/government/publications/nationally-significant-infrastructure-projects-advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-an/nationally-significant-infrastructure-

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