



The Great Grid Upgrade

Sea Link

Guide to Interacting with the Consultation Plans and Drawings

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nationalgrid

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Sea Link

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1. About This Document

1.1 Introduction

- 1.1.1 This document has been produced by National Grid Electricity Transmission plc (National Grid) to provide guidance on interacting with our consultation plans during the statutory consultation on Sea Link, (hereafter referred to as the 'Proposed Project').
- 1.1.2 The statutory consultation runs from **Tuesday 24 October until Monday 18 December 2023**.
- 1.1.3 To explain the Proposed Project, we have prepared a series of documents, including plans and drawings. This guide provides more detail about the plans that are available and what is shown on each plan.

1.2 What are the Consultation Plans?

- 1.2.1 National Grid has prepared a series of plans and drawings to support the consultation, to help people understand the proposals and how they may be affected.
- 1.2.2 Whilst the plans illustrate many aspects of the Proposed Project, they do not explain the rationale for the design. This can be found in the **Option Selection and Design Evolution Report** which has been published to accompany the consultation. The consultation documents also include the **Preliminary Environmental Information Report (PEIR)**, which describes the likely significant environmental effects that could result from the Proposed Project.
- 1.2.3 In accordance with normal practice, it should be noted that all plans and drawings published in support of the consultation are based on typical and indicative designs. They have been produced to give respondents to the consultation a general understanding of the Proposed Project and to help inform feedback. The designs are likely to change prior to application in response to consultation feedback, ongoing design, surveys, and environmental assessment. The application for development consent will contain an updated design (and accompanying set of plans), although it should be noted that even at that stage flexibility will be retained through Limits of Deviation (LoD), explained in section 2.2 of this document.

2. About The Plans

2.1 The Type and Structure of the Plans

2.1.1 Two types of plans have been produced for consultation: General Arrangements Plans and Design Drawings. The different drawings are explained in section 2.2 of this document.

2.1.2 The General Arrangements Plans document structure is listed below, split into three schemes that form the Proposed Project as referred to in the PEIR. Each scheme's plans are broken down further into several different sheets (or maps), which cover the geographical extent of each scheme, allowing you to identify areas of interest to you.

- Overall Location Plan.
- Suffolk Onshore Scheme.
 - Location Plan;
 - Master Key Plan; and
 - Indicative General Arrangements.
- Kent Onshore Scheme.
 - Location Plan;
 - Master Key Plan; and
 - Indicative General Arrangements.
- Offshore Scheme.
 - Master Key Plan; and
 - Indicative General Arrangements.

2.1.3 The Design Drawings are split into 2 categories, with several subcategories to assist with navigation, as follows:

- Onshore Scheme Design Drawings.
 - Friston 400 kV Substation;
 - Saxmundham Converter Station;
 - Suffolk Only - HVDC & HVAC Cross Sections for Sea Link plus ducts for up to two other projects;
 - HVDC & HVAC Arrangement & Cross Sections;
 - Minster Converter Station;
 - Minster 400 kV Substation; and
 - Compounds, Bellmouths & Pylon Types.
- Offshore Scheme Design Drawings.

- Pre-Cable Installation Works;
- Cable Installation Works;
- Cable Configuration and Trench Profiles;
- Cable Crossings and Protection;
- Landfall Trenchless Installation Technique;
- Landfall Installation - Aldeburgh For Sea Link Only;
- Landfall Installation - Aldeburgh For Sea Link Plus Ducts for up to two further projects; and
- Landfall Installation - Pegwell Bay.

2.2 What Do the Plans Show?

General Arrangement Plans

- 2.2.1 The General Arrangements Plans show the relevant aspects of new infrastructure proposed for each of the three schemes that make up the project.
- 2.2.2 These plans show the new infrastructure required, explained in **Error! Reference source not found.** and Table 2.2 of this document. The plans also show draft Order Limits and LoD which are explained below.
- 2.2.3 Additional information about what is shown on the General Arrangements Plans to assist with their interpretation is shown in section 2.4, Table 2.5 of this document. A complete list of the symbology used on these plans can be found in Appendix A of this document.

Draft Order Limits

- 2.2.4 The draft Order Limits form the boundary of the entire area within which the project could take place, including temporary and permanent works as well as the works to existing infrastructure.
- 2.2.5 The draft Order Limits are shown as a red line on all consultation plans except for the Marine General Arrangement plans which are shown as a red line with a red infill.

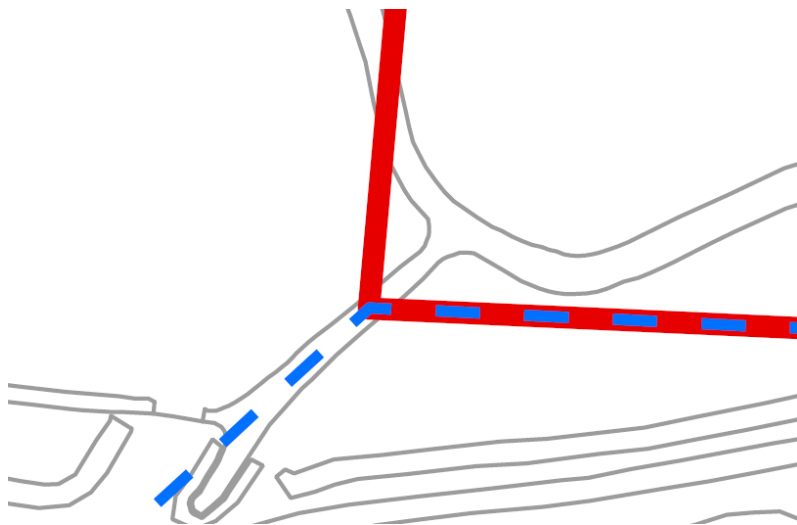
Limits Of Deviation

- 2.2.6 Within the draft Order Limits, parameters known as LoD are set out.
- 2.2.7 Limits of Deviation are a common feature of infrastructure projects. They provide the necessary flexibility when constructing the authorised development, reducing the risk that a project as approved cannot later be implemented due to unforeseen engineering or environmental reasons. For example, previously unidentified poor ground conditions may require the cable's location, indicatively shown on the plans, to no longer be feasible or become less preferred, and a new position for the cables is therefore adopted for them to be installed within the LoD.
- 2.2.8 The LoDs relate to permanent infrastructure, with any temporary construction activity not being subject to the LoDs, which can occur anywhere within the draft Order Limits.

Similarly planting, landscaping, mitigation, works to third party assets, drainage etc do not need to be within the LoDs, but again would need to be within the draft Order Limits.

- 2.2.9 The lateral LoD set specific parameters to moving infrastructure on the ground. These are shown on the Indicative General Arrangement plans. Vertical LoD (which limit the maximum vertical height of any new infrastructure) are not shown on the plans. Information on vertical LoD can be found in the **Preliminary Environmental Information Report, Volume 1, Part 1, Chapter 4, Description of the Proposed Project**.
- 2.2.10 The lateral LoD are shown on the Indicative General Arrangement Plans as a coloured dashed line. Where the LoD and the draft Order Limits overlap, the dashed line goes over the red line as shown in Figure 2.1.

Figure 2.1: Example of Limits of Deviation overlapping Draft Order Limits



- 2.2.11 The Proposed Projects LoD cover, but are not exclusive to, the following elements:
- converter stations;
 - substations;
 - cable swathe (onshore and offshore);
 - overhead Line (OHL) alignments; and
 - permanent roads.
- 2.2.12 The LoDs are also used on the plans to provide the flexibility necessary to the proposals to enable them to be delivered in a coordinated way with up to two other similar projects being progressed by National Grid Ventures (NGV). This is explained further in this section.

Modification, Removal & Realignment Works

- 2.2.13 The consultation plans and drawings also show the areas in which National Grid is proposing to modify, remove or realign existing infrastructure, including the location of:
- Existing pylons to be modified or removed.
 - Existing OHL to be replaced, modified, or removed.

- 2.2.14 Modification works refer to the changing or restoring of an existing asset whilst it remains in its current location. An example of modification works would be changing the arms of existing pylons (which will remain in situ) to accommodate angle changes and new OHL deviations.
- 2.2.15 Removal works refer to the dismantling and disposal of existing equipment that will no longer be required at the end of the Proposed Project.
- 2.2.16 Realignment works refer to the changing or restoring of existing assets which will be relocated to a different position.

Proposed Permanent and Temporary Works

- 2.2.17 The General Arrangement Plans show proposed locations of permanent and main temporary works. These are listed and explained in **Error! Reference source not found.** and Table 2.2.
- 2.2.18 Permanent works may be located within the appropriate LoDs shown on the General Arrangement Plans and temporary works may be located anywhere within the draft Order Limits.

Table 2.1 – List of proposed permanent works as shown on the General Arrangement Plans

Permanent Works	Definition
Access routes and points from the public highway	Permanent accesses, which would be surfaced roads for day-to-day use through during operation.
Bellmouth	A flared vehicular access/egress point connecting permanent route to the public highway.
Converter Station	A converter station is part of a High Voltage Direct Current (HVDC) system and converts HVDC to High Voltage Alternating Current (HVAC) and vice versa.
Gantries	An overhead bridge-like structure supporting electrical equipment,
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.
Overhead lines	Conductors (wires) carrying electric current, strung from pylon to pylon.
Attenuation pond and outfall pipes	A pond to temporarily store storm water for a period, to then release back into a watercourse or sewer network.
Pylons	Structures used to carry overhead electrical conductors, insulators, and fittings.

Permanent Works	Definition
Substations	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.
Transition Joint Bay	Underground structures at the landfall that house the joints between the offshore export cables and the onshore cables.
Underground cabling	An insulated conductor carrying electric current designed for underground installation. Underground cables link together two cable sealing end compounds.
Visibility splays	Areas of tree/vegetation removing, typically where access points are to enable a driver to see down the road and know when the road is clear.

Table 2.2: List of proposed temporary works as shown on the General Arrangement Plans

Temporary Work	Definition
Access routes and points from the public highway	<p>Temporary access routes to construction working areas implemented prior to any works commencing to provide suitable access for construction plant and traffic. This includes points from the public highway that can be used to access these areas.</p> <p>Access routes may be temporary construction roads with a variety of surfaces (e.g., no additional surface, trackway, stone etc). These would be restored to original state following the construction phase but could be reinstated temporarily if required in future for maintenance accesses for ongoing use.</p>
Bellmouth	A flared vehicular access/egress point connecting a construction compound to the public highway, designed to accommodate turning movements by large vehicles.
Construction compounds	Temporary compounds installed during the construction phase of the Proposed Project. Each compound is likely to contain storage areas including laydown areas and soils storage and areas for equipment and fuel,

Temporary Work**Definition**

drainage, generators, car parking and offices and welfare areas (portacabins).

Design Drawings

2.2.19 The Design Drawings provide examples of equipment, and layouts of the compounds, substations, converters, and other elements of the Proposed Project. A definition of the three types of Design Drawings is explained below.

- Typical Drawings – these plans show one way in which development might be arranged, or typical equipment that might be used. These tend to be plans to show typical types of equipment, such as substation equipment.
- Indicative Drawings – these plans show the way in which we expect the Proposed Project would be arranged. These tend to be plans to show geographically specific elements, such as the location of the substation or converters.
- Illustrative – these plans provide a visual explanation in understanding how certain activities are usually undertaken, for example how boulder clearance is undertaken in the marine environment.

2.2.20 Additional information about what is shown on the different Design Drawings to assist with their interpretation is shown in Table 2.5 of this document.

Co-location with Third Party Projects in Suffolk

2.2.21 National Grid Electricity Transmission plc and National Grid Ventures have undertaken discussions to explore the opportunities for coordination of their 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.

2.2.22 Several specific plans have been created which are included in the list of plans shown in section 2.3, Table 2.4 and Table 2.5. Where a plan isn’t specific to co-location but is still relevant to co-location an explanation has been added to the description column in these tables.

2.2.23 For ease of identifying specific co-location plans and drawings, these have been listed in Table 2.3.

Table 2.3: List of co-location only plans

Plan Type	Plan Title	Drawing Number
General Arrangements Plans	Suffolk co-location of converter stations	S42_S/IGA/SS/0008
Design Drawings	Typical HVAC and HVDC combined construction area for Sea Link plus ducts for up to two	S42_S/TDD/SS/0018

Plan Type	Plan Title	Drawing Number
	Typical HVDC construction area for Sea Link plus ducts for up to two further projects	S42_S/TDD/SS/0013
	Typical HVAC and HVDC combined construction area for Sea Link plus ducts for up to two further projects	S42_S/TDD/SS/0014
	Indicative horizontal directional drill solution for sea link plus ducts for up to two further projects Aldeburgh	S42_M/TDD/SS/1041
	Indicative layout of Horizontal Directional Drilling (HDD) construction compound for sea link plus ducts for up to two further projects Aldeburgh	S42_M/TDD/SS/1038

2.2.24 More details on co-location can be found in the **Preliminary Environmental Information Report, Volume 1, Part 1, Chapter 4, Description of the Proposed Project**.

Principles of Co-location In Suffolk – What is Shown on the Plans and Drawings

Saxmundum

- 2.2.25 At the Saxmundham converter site the LoDs enclose a relatively large area. Although a converter station location is indicatively shown, the LoDs would also allow us to build our converter station elsewhere within the site. If up to two further converter stations (developed by NGV) had already been built in this location, we would then be able to deliver our converter station in another appropriate location that worked with what had already been built
- 2.2.26 The Proposed Project plans are showing an indicative location for our converter station, as well as indicative locations for up to two further converter stations. This is to illustrate what the site could look like with up to three converter stations. These locations are also used as assumptions, where relevant, in some of the PEIR assessments.
- 2.2.27 It is important to note when reviewing and commenting on the drawings that other elements of the design (for example access roads, cable routes, areas providing opportunities for landscaping and planting, construction compounds etc) would also be in different locations relative to the location of the converter station. The implications of the converter station location on these proposed features within the wider site should be considered, and feedback provided in this context.
- 2.2.28 For illustration only, we are also providing a drawing reflecting a possible scenario whereby the Proposed Project was progressed without the need for the location of the converter station to be so flexible. The indicative location of the Proposed Projects converter station remains the same as shown elsewhere, but the degree of flexibility is reduced.

Cable corridors

2.2.29 The Proposed Project LoDs are shown wide enough to fit three projects. However, we are not showing the NGV ducts on the General Arrangement Plans. These are instead shown in the typical cross sections.

2.3 List of Plans and Drawings

2.3.1 The General Arrangements Plans and Design Drawings published to support our consultation are listed in Table 2.4 and Table 2.5. Drawing numbers can be located on the bottom righthand side of the plans and drawings.

Table 2.4: List of General Arrangement Plans

Project Scheme	Plan Title	Plan Type/ Drawing Numbers	Description
N/A	Overall Location Plan	Overall Location Plan: S42_T/OLP/SS/3001	Shows the entire route of the Proposed Project and draft Order Limits. It also shows local authority boundaries.
Suffolk Onshore Scheme	General Arrangements Plans	Location Plan: S42_S/OLP/SS/0001	The location plans show a more detailed look of the location of the onshore scheme in Suffolk.
		Key Plan: S42_S/MKP/SS/0001	The key plan shows how a particular scheme that forms part of the Proposed Project has been further split into several different sheets to provide greater detail of the proposed development. It also helps users quickly locate an area or section of interest along the length of the proposed offshore element of the development.
		General Arrangement Plans: S42_S/IGA/PS/0001 S42_S/IGA/PS/0002 S42_S/IGA/PS/0003 S42_S/IGA/PS/0004 S42_S/IGA/PS/0005 S42_S/IGA/PS/0006 S42_S/IGA/PS/0007	<p>These plans provide a detailed overview of the current proposals for the Suffolk Onshore Scheme. The plans are produced at a scale of 1:2,500.</p> <p>These plans include the following key features (described more fully in section 2.2 of this document):</p> <ul style="list-style-type: none"> the draft Order Limits. parameters known as Limits of Deviation. a range of temporary construction works whilst not shown are also required within the draft Order Limits, including but not limited to; surveys, [environmental mitigation], protective scaffolding, diversion of services,

Project Scheme	Plan Title	Plan Type/ Drawing Numbers	Description
			<p>drainage works, storage of material and diversions of public rights of way.</p> <ul style="list-style-type: none"> While no proposed landscaping is shown, areas within the draft Order Limits provide possible opportunities for landscape planting, mitigation and environmental gain, and views on where this may be located are welcomed. <p>HVAC and HVDC Alignments</p> <p>HVAC and HVDC alignments (lines) are shown on the plans, and they provide an indication of where cables could be installed within the LoD. Please note the alignments shown do not represent the number of cables or ducts that would be installed.</p> <p>Cable Limits of Deviation</p> <p>The LoDs for the cable sections include sufficient space to accommodate the ducts for up to a further two projects, being progressed separately. The actual swathes needed in the various scenarios is presented in the Design Drawings and the Preliminary Environmental Information Report, Volume 1, Part 1, Chapter 4, Description of the Proposed Project.</p> <p>Converter Station Location (Sea Link Only)</p> <p>The General Arrangements Plan S42_S/IGA/PS/0002 (sheet 2 of 7) shows the Proposed Project’s converter station in an indicative position within the draft Order Limits to accommodate co-location with two other converter stations. If Proposed Project were progressed alone, then the LoD for solely the Proposed Projects converter station are shown as dotted green on the co-location plan referenced below.</p>
		<p>General Arrangement Plan – Co-location: S42_S/IGA/SS/0008</p>	<p>Suffolk co-location of converter stations</p> <p>This plan shows an indicative arrangement of three converter stations within the overall site, with a single converter station for Proposed Project and potentially two additional converter stations developed by others under separate consent. Please</p>

Project Scheme	Plan Title	Plan Type/ Drawing Numbers	Description
			<p>note these locations have not been agreed with NGV and are shown as an indication of how the site could be arranged.</p> <p>If the Proposed Project were progressed alone, then the LoD for solely the Proposed Project's converter station are shown as dotted green on plan. LoD for the Proposed Projects convertor station is also shown that be required should co-location take place.</p>
Kent Onshore Scheme	General Arrangements Plans	Location Plan: S42_K/OLP/SS/2001	The location plans show a more detailed look of the location of the onshore scheme in Kent.
		Key Plan: S42_K/MKP/SS/2001	The key plan shows how a particular scheme that forms part of the Proposed Project has been further split into several different sheets to provide greater detail of the proposed development. It also helps users quickly locate an area or section of interest along the length of the proposed marine element of the development.
		General Arrangement Plans: S42_K/IGA/PS/2001 S42_K/IGA/PS/2002 S42_K/IGA/PS/2003 S42_K/IGA/PS/2004	<p>These plans provide a detailed overview of the current proposals for the Kent onshore scheme. The plans are produced at a scale of 1:2,500.</p> <p>These plans include the following key features (described more fully in section 2.2 of this document)</p> <ul style="list-style-type: none"> • the draft Order Limits. • parameters known as Limits of Deviation. • a range of temporary construction works whilst not shown are also required within the draft Order Limits, including but not limited to; surveys, [environmental mitigation], protective scaffolding, diversion of services, drainage works, storage of material and diversions of public rights of way. • While no proposed landscaping is shown, areas within the draft Order Limits provide possible opportunities for

Project Scheme	Plan Title	Plan Type/ Drawing Numbers	Description
			<p>landscape planting, mitigation and environmental gain, and views on where this may be located are welcomed.</p> <p>New OHL and Modifications to the existing OHL</p> <p>This information is shown on plan reference S42_K/IGA/PS/2004 (Sheet 2 of 4) and represents one way the overhead line could be configured. There are three potential options with the plans showing option 1. A full description of the three options can be found in the Preliminary Environmental Information Report, Volume 1, Part 1, Chapter 4, Description of the Proposed Project.</p>
Offshore Scheme	General Arrangements Plans	<p>Key Plan: S42_M/MKP/SS/1001</p>	<p>The key plan shows how a particular scheme that forms part of the Proposed Project has been further split into several different sheets to provide greater detail of the proposed development. It also helps users quickly locate an area or section of interest along the length of the proposed marine element of the development.</p>
		<p>General Arrangement Plans: S42_M/IGA/PS/1001 S42_M/IGA/PS/1002 S42_M/IGA/PS/1003</p>	<p>These plans provide a detailed overview of the current proposals for the marine element of the Proposed Project. The plans are produced at a scale of 1:50,000.</p> <p>The plans include the following key features (described more fully in section 2.2.3 and 2.2.4 of this document):</p> <ul style="list-style-type: none"> • the draft Order Limits; and • parameters known as Limits of Deviation. <p>The background used on the plans is a nautical map which has been used to assist in locating the proposed works.</p>

Table 2.5: List of Design Drawings

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
<i>Onshore (from the cable transition joint bay which is where the offshore cable is joined to the onshore cable)</i>				
Friston 400kV Substation	Typical Sea Link works should Friston 400kV GIS substation be developed by others	Suffolk Onshore Scheme	S42_S/TDD/SS/0001	<p>The drawing indicatively shows the type of substation (Gas Insulated Switchgear (GIS)) layout that National Grid anticipates would be built out under the extant of Scottish Power Renewables (SPR) consents, plus the additional busbars and switchgear necessary to accommodate Proposed Project. The additional equipment would all be within the curtilage of the consented Friston Substation.</p> <p>Note that this drawing doesn't include the adjacent East Anglia ONE North and East Anglia Two substations that also form part of the SPR consents.</p>
	Typical Friston 400kV GIS substation in scenario where not construction by third party	Suffolk Onshore Scheme	S42_S/TDD/SS/0003	<p>This drawing indicatively shows how National Grid would build out Friston Substation if it was delivered under the Proposed Projects consent, rather than under the extant SPR consents. This layout does not include the consented SPR projects. The dimensions of Friston Substation in this scenario are nonetheless within the parameters already approved under the extant SPR consents.</p> <p>Note that National Grid does anticipate that Friston Substation will be developed under the extant SPR consents. The entire Friston Substation (not including the adjacent East Anglia ONE North and East Anglia Two substations that also form part of the SPR consents) is currently part of the Proposed</p>

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
				Project proposals however, to provide a complete consenting position.
	Typical Friston 400kV GIS substation - elevation drawing	Suffolk Onshore Scheme	S42_S/TDD/SS/0019	Provides an indication of what the Friston Substation may look like in elevation view, including equipment heights. Overall heights and widths would be the same as the substation consented by Scottish Power Renewables, however the arrangement of the equipment would be different.
Saxmundham Converter Station	Typical Saxmundham converter station layout plan (GIS)	Suffolk Onshore Scheme	S42_S/TDD/SS/0015	Provides an indication of how the converter station may be set out in layout view.
	Typical Saxmundham converter station - elevation drawing	Suffolk Onshore Scheme	S42_S/TDD/SS/0020_SH1 S42_S/TDD/SS/0020_SH2	Provides an indication of what a converter station may look like in elevation view, including equipment heights.
Suffolk Only - HVDC & HVAC Cross Sections for Sea Link plus ducts for up to two other projects	Typical HVDC construction area for Sea Link plus ducts for up to two further projects	Suffolk Onshore Scheme	S42_S/TDD/SS/0018	This drawing shows a typical HVDC cable working cross section. This drawing also shows what the cable working cross section would typically look like if ducts to enable a further one and further two NGV projects were also constructed. The actual layout will vary depending on site specific factors.
	Typical HVAC construction area for Sea Link plus ducts for up to two further projects	Suffolk Onshore Scheme	S42_S/TDD/SS/0013	This drawing shows a typical HVAC cable working cross section. This drawing shows a typical cable working cross section for co-location of HVAC cables in the same location for the Proposed Project and to enable two further projects. This drawing shows a scenario where HVAC cables are not constructed alongside HVDC

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
				<p>cables. For the majority of their length, it is anticipated that the HVAC construction swathe would be combined with the HVDC cable construction swathe, as shown on drawing ref S42_S/TDD/SS/0014.</p> <p>The actual layout will vary depending on site specific factors.</p> <p><i>Note: There are no HVAC cables proposed in Kent.</i></p>
	Typical HVAC and HVDC combined construction area for Sea Link plus ducts for up to two further projects	Suffolk Onshore Scheme	S42_S/TDD/SS/0014	<p>This drawing shows a typical HVAC and HVDC combined cable working cross section.</p> <p>This drawing also shows what the cable working cross section would typically look like if ducts to enable a further one and further two NGV projects were also constructed.</p> <p>The actual layout will vary depending on site specific factors.</p> <p><i>Note: There are no HVAC cables proposed in Kent.</i></p>
HVDC & HVAC Arrangement & Cross Sections	Typical HVAC direct buried cross section and construction area	Suffolk Onshore Scheme	S42_S/TDD/SS/0010	<p>This drawing shows a scenario where HVAC cables are not constructed alongside HVDC cables. For the majority of their length, it is anticipated that the HVAC construction swathe would be combined with the HVDC cable construction swathe, as shown on drawing ref S42_S/TDD/SS/0012.</p> <p><i>Note: There are no HVAC cables proposed in Kent.</i></p>
	Typical 400kv HVAC joint bay arrangement	Suffolk Onshore Scheme	S42_S/TDD/SS/0011	<p>This drawing shows how HVAC cables are typically joined together and what other equipment would be installed alongside it.</p>

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
	Typical HVAC direct buried cross section and construction area	Onshore Schemes	S42_T/TDD/SS/3001	<p>This drawing shows a typical cable working cross section for a HVDC cable directly buried. The actual layout will vary depending on site specific factors.</p> <p>This drawing applies to both Suffolk and Kent, from the landfalls up to the converter stations.</p>
	Typical HVAC joint bay arrangements	Onshore Schemes	S42_T/TDD/SS/3003	This drawing shows how HVDC cables are typically joined together and what other equipment would be installed alongside it.
	Typical HVAC and HVDC combined construction area	Suffolk Onshore Scheme	S42_S/TDD/SS/0012	<p>This drawing shows a typical cable working cross section through agricultural land for a both HVAC and HVDC cables between Friston Substation and the Saxmundham converter station the Proposed Project and to enable two further projects. The working width would lie within the Limits of Deviation shown on the General Arrangement Plans. The actual layout will vary depending on site specific factors.</p> <p><i>Note: There are no HVAC cables proposed in Kent.</i></p>
Minster Converter Station	Typical Minster converter station - layout plan (GIS)	Kent Onshore Scheme	S42_K/TDD/SS/2002	Provides an indication of how the Minster Converter Station may be set out in layout view. The Minster Substation is proposed to be located directly next to the Minster Converter Station in one overall compound for the substation and converter elements.
	Typical minster converter station - elevation drawing	Kent Onshore Scheme	S42_K/TDD/PS/2005_SH1 S42_K/TDD/PS/2005_SH2	Provides an indication of what the Minster Converter Station may look like in elevation view, including equipment heights.

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
Minster 400kV Substation	Typical Minster 400kV GIS substation - overall layout	Kent Onshore Scheme	S42_K/TDD/SS/2001	Provides an indication of how the Minster Substation may be set out in layout view. The Minster Substation is proposed to be located directly next to the Minster Converter Station in one overall compound for the substation and converter elements.
	Typical 400kV GIS substation - elevation drawing	Kent Onshore Scheme	S42_K/TDD/PS/2003_SH1 S42_K/TDD/PS/2003_SH2	Provides an indication of what the Minster Substation may look like in elevation view, including equipment heights. The Minster substation is proposed to be located directly next to the Minster Converter station.
Bellmouths, Compounds & Pylon Types	Typical bellmouth arrangement details	Onshore Schemes	S42_T/TDD/SS/3002	This drawing shows a typical bellmouth. A bellmouth would be required where an access route meets a public road (access point), it allows safe entry and exit to the construction areas and for permanent access to the substations and converters for operation and maintenance.
	Typical OHL and construction works construction compound	Onshore Schemes	S42_T/TDD/SS/3004	Provides an indication of how a construction compound for an OHL or cable could be set out.
	Typical converter and substation works construction compounds	Onshore Schemes	S42_T/TDD/SS/3005	Provides an indication of how a construction compound for a converter and substation could be set out.
	Typical OHL pylon detail	Onshore Schemes	S42_T/TDD/SS/3006	This drawing shows typical pylon designs and heights used on the existing 400kV overhead line and the proposed modifications to the overhead line. The design and height of the pylons used would vary depending on the final design and topography. National Grid are proposing modification works to the existing 400 kV line near Friston, needed to install Friston Substation

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
				<p>in the scenario where this is undertaken under Sea Link's consent. National Grid are also proposing modification works to the OHL near Richborough to allow the T off into the Minster Substation. Finally, we are proposing a new stretch of OHL from the existing OHL into Minster Substation.</p> <p>Please note the proposed OHL pylons need to achieve the required electrical safety clearances.</p>
<i>Offshore (up to the cable transition joint bay which is where the offshore cable is joined to the onshore cable)</i>				
Pre-Cable Installation Works	Illustration of unexploded ordnance, removal and detonation	Offshore Scheme	S42_M/TDD/SS/1030	Provides an illustration of the process of how unexploded ordnance are identified and removed from the route.
	Illustration of boulder clearance	Offshore Scheme	S42_M/TDD/SS/1027	Provides an illustration of how boulders along the route are removed.
	Illustration of pre-lay grapnel run	Offshore Scheme	S42_M/TDD/SS/1028	Provides an illustration of how a grapnel run is undertaken before installation of a cable. The purpose of the grapnel run is to clear any obstacle that could obstruct the installation of the cable.
	Illustration of indicative pre-sweeping and sidecasting	Offshore Scheme	S42_M/TDD/SS/1029	Provides an illustration of how pre-sweeping is undertaken before installation of a cable to level the seabed where sand waves are encountered.
Cable Installation Works	Illustration of simultaneous lay and burial	Offshore Scheme	S42_M/TDD/SS/1032	Provides an illustration of how a marine cable is laid and immediately buried using a single vessel.
	Illustration of lay and post-lay burial	Offshore Scheme	S42_M/TDD/SS/1033	Provides an illustration of how a cable is laid on the seabed by in vessel and laid by another.

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
	Illustration of illustration of omega and inline joint	Offshore Scheme	S42_M/TDD/SS/1031	Provides an illustration of how the marine cable is joined together.
Cable Configuration and Trench Profiles	Illustration of bundled cable profile/ configuration	Offshore Scheme	S42_M/TDD/SS/1026	Provides an illustration of how the marine cable will be configured and indicative trench depth and width.
	Illustration of typical marine trench profiles	Offshore Scheme	S42_M/TDD/SS/1036	Provides an illustration of different trench profiles that could be used to install a marine cable.
Cable Crossings and Protection	Indicative HVDC bundled cable crossing over unburied fibre optic/telecoms asset	Offshore Scheme	S42_M/TDD/SS/1021	Provides an indicative of a cable crossing arrangement over a third-party unburied fibre optic or telecommunications asset on the seabed.
	Indicative HVDC bundled cable crossing over buried FO/telecoms asset	Offshore Scheme	S42_M/TDD/SS/1022	Provides an indicative of a cable crossing arrangement over a third-party buried fibre optic (FO) or telecommunications asset on the seabed.
	Indicative HVDC bundled cable crossing over buried power cable asset	Offshore Scheme	S42_M/TDD/SS/1023	Provides an indicative of a cable crossing arrangement over a third-party power cable asset on the seabed.
	Indicative HVDC bundled cable crossing over pre lay berm	Offshore Scheme	S42_M/TDD/SS/1024	Provides an indicative of a cable crossing arrangement over a third-party power cable asset on the seabed.
	Indicative rock berm schematics pre lay and post lay	Offshore Scheme	S42_M/TDD/SS/1025	Provides representation of rock placement over the cable to add a final protection layer where required.
	Illustration of cable protective systems	Offshore Scheme	S42_M/TDD/SS/1034	Provides an illustration of different methods to protect the marine cable where the target burial depth cannot be achieved.
	Illustration of rock placement sections	Offshore Scheme	S42_M/TDD/SS/1035	Provides an illustration of how rock placement (berm) could be undertaken over an existing cable.

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
Landfall Trenchless Installation Technique	Illustration of typical HDD landfall	Offshore Schemes	S42_M/TDD/SS/1043	Shows trenchless installation profile from an onshore location to an offshore location.
Landfall Installation - Aldeburgh For Sea Link Only	Indicative horizontal direction drill solution for sea link only Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1042	This drawing provides an indication of the number of HDD that would be required to facilitate the Sea Link project at the East Suffolk landfall. HDD is a trenchless solution being considered by the project.
	Indicative layout of HDD construction compound for sea link only Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1044	Provides an indication of how a construction compound for a trenchless solution at the East Suffolk landfall could be set out.
Landfall Installation - Aldeburgh For Sea Link Plus Ducts for up to two further projects	Indicative horizontal directional drill solution for sea link plus ducts for up to two further projects Aldeburgh	Suffolk Onshore Scheme	S42_M/TDD/SS/1041	This drawing provides an indication on the number of HDD that would be required to facilitate up to three projects coming onshore at the East Suffolk landfall. HDD is a trenchless solution being considered by the project.
	Indicative layout of HDD construction compound for sea link plus ducts for up to two further projects Aldeburgh	Kent Onshore Scheme	S42_M/TDD/SS/1038	Provides an indication of how a construction compound for a trenchless solution for up to three projects at the East Suffolk landfall could be set out.
Landfall Installation - Pegwell Bay	Indicative horizontal directional drill solution Pegwell bay	Kent Onshore Scheme	S42_M/TDD/SS/1039	This drawing provides an indication on the number of HDD's that would be required to facilitate the Sea Link project at the Kent landfall. HDD is a trenchless solution being considered by the project.
	Indicative layout of HDD construction compound Pegwell bay	Kent Onshore Scheme	S42_M/TDD/SS/1037	Provides an indication of how a construction compound for a trenchless solution at the Kent landfall could be set out.

Drawing Category Name	Plan Title	Scheme	Drawing Numbers	Description
	Indicative direct pipe solution Pegwell bay	Kent Onshore Scheme	S42_M/TDD/SS/1040	This drawing provides an indication on the number of direct pipes that would be required to facilitate the Sea Link project at the Kent landfall. Direct pipe is a trenchless solution being considered by the Proposed Project.

3. Viewing And Feedback On The Plans

3.1 How Can I View the Plans?

3.1.1 Our plans are available to view and download on our website www.nationalgrid.com/sealink or in paper copy on request (a printing charge may be incurred).

3.2 How Can I Provide Feedback Using the Consultation Plans?

3.2.1 Your views are important to us and will help shape our plans as the Proposed Project develops further. We welcome your feedback on all aspects of the design, including any geographical areas of interest.

3.2.2 You can provide your feedback through the following channels:

- Online: Fill in our feedback form online at www.nationalgrid.com/sealink.
- In paper copy: Visit us at one of our events to collect a paper copy feedback form, which can be completed and handed to the team. You can also collect a feedback form at a deposit location, or request one by telephone or email.
- By email: You can send your comments or scanned electronic copies of our feedback questionnaire to contact@sealink.nationalgrid.com.
- By post: You can send your paper copy questionnaire or comments to: Freepost SEA LINK (please write this in capitals and you do not need a stamp).



























3.2.3 You can use the consultation plans to identify key geographical areas of interest along with the proposed new infrastructure and works to existing infrastructure in each section. You can then provide your feedback in the relevant section of the feedback questionnaire.







3.2.4 If you have any questions about the Proposed Project or require assistance with interacting with our consultation plans, please contact us using the details below:

- Email: contact@sealink.nationalgrid.com
- Freephone: 0808 134 9569 (open Monday to Friday 9:00am-5:30pm)

Appendix A **General Arrangement Legend Symbology**

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Legend	Symbol
Cable Limit of Deviation (LoD)	
Co-location - Proposed converter station options	
Converter station Limit of Deviation (LoD)	
Sea Link - Proposed Converter Station Limit of Deviation (LoD)	
Detailed Sheets (key plans only)	
Draft Order Limits (offshore plans)	
Draft Order Limits (onshore plans)	
Existing pylon	
Local Authority Boundary	
Marine Limit of Deviation (LoD)	
Over Head Line (OHL) Limit of Deviation (LoD)	
Over Head Line (OHL) pylon	
Permanent access Limit of Deviation (LoD)	
Proposed access route	
Proposed construction compound	
Proposed converter station	
Proposed High Voltage Alternating Current (HVAC) cable alignment	
Proposed High Voltage Direct Current (HVDC) cable alignment	
Proposed joint bay	
Proposed marine High Voltage Direct Current (HVDC) cable alignment	
Proposed Over Head Line (OHL)	
Proposed permanent access	
Proposed permanent attenuation outfall pipe	
Proposed permanent attenuation pond	
Proposed permanent bellmouth	
Proposed permanent infiltration outfall pipe	

Legend	Symbol
Proposed permanent infiltration pond	
Proposed permanent outfall	
Proposed pylon modification works	
Proposed pylon removal	
Proposed substation	
Proposed temporary bellmouth	

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