



The Great Grid Upgrade

Sea Link

Sea Link

Volume 2: Plans and Drawings

Document 2.1 Guide to the Plans

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nationalgrid

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Executive Summary

Ex1.1 Purpose of this Document

- Ex1.1.1 National Grid Electricity Transmission plc (here on referred to as National Grid) is making an application for development consent to reinforce the transmission network in the South East and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon generation, as well as an addition to new interconnection with mainland Europe. The reinforcement would be achieved via the construction and operation of a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- Ex1.1.2 The drawings referenced in Table 1.3 within this document and the descriptions provided throughout the document are there to assist the reader with the information provided on the drawings and the purpose of the drawings provided and how they support the Development Consent Order.

1. Guide to the Plans

1.1 Introduction

- 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 and East Anglia. The Proposed Project is required to accommodate additional power flows generated from renewable and low carbon generation, as well as accommodating additional new interconnection with mainland Europe.
- 1.1.2 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.
- 1.1.3 This would be achieved by reinforcing the network with a High Voltage Direct Current (HVDC) Link between the proposed Friston substation in the Sizewell area of Suffolk and the existing Richborough to Canterbury 400 kV overhead line close to Richborough in Kent.
- 1.1.4 National Grid is also required, under Section 38 of the Electricity Act 1989, to comply with the provisions of Schedule 9 of the Act. Schedule 9 requires licence holders, in the formulation of proposals to transmit electricity, to:
- 1.1.5 *Schedule 9(1)(a) ‘...have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest;’ and*
- 1.1.6 *Schedule 9(1)(b) ‘...do what [it] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects’.*
- 1.1.7 The purpose of this document is to:
- Provide a guide to how to interact with the plans provided.

1.2 The Proposed Project

- 1.2.1 The Proposed Project would comprise the following elements:

The Suffolk Onshore Scheme

- A connection from the existing transmission network via 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 as part of the Proposed Project.

- A high voltage alternating current (HVAC) underground cable of approximately 1.9 km in length between the proposed Friston Substation and a proposed converter station (below).
- A 2 GW high voltage direct current (HVDC) converter station (including permanent access from the B1121 and a new bridge over the River Fromus) up to 26 m high plus external equipment (such as lightning protection, safety rails for maintenance works, ventilation equipment, aerials, similar small scale operational plant, or other roof treatment) 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).

The Offshore Scheme:

- Approximately 122 km of subsea HVDC cable, running between the Suffolk landfall location (between Aldeburgh and Thorpeness), and the Kent landfall location at Pegwell Bay.

The Kent Onshore Scheme:

- 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 1.7 km to a new converter station (below).
- A 2 GW HVDC converter station (including a new permanent access off the A256), up to 28 m high plus external equipment such as lightning protection, safety rails for maintenance works, ventilation equipment, aerials, and similar small scale operational plant near Minster. A new substation would be located immediately adjacent.
- Removal of approximately 2.2 km of existing HVAC overhead line, and installation of two sections of new HVAC overhead line, together totalling approximately 3.5 km, each connecting from the substation near Minster and the existing Richborough to Canterbury overhead line.

1.2.2 The Proposed Project also includes modifications to sections of existing overhead lines in Suffolk (only if Friston Substation is not built pursuant to another consent) and Kent, diversions of third-party assets, and land drainage from the construction and operational footprint. It also includes opportunities for environmental mitigation and compensation. The construction phase will involve various temporary construction activities including overhead line diversions, use of temporary towers or masts, working areas for construction equipment and machinery, site offices, parking spaces, storage, accesses, bellmouths, and haul roads, as well as watercourse crossings and the diversion of public rights of way (PROWs) and other ancillary operations.

1.2.3 This document has been produced to support the application for development consent under the Planning Act 2008. It provides a guide to the plans produced to support the application. It explains the role of the different plans and factors that should be considered when reviewing these plans.

- 1.2.4 National Grid has prepared a series of documents to explain the Proposed Project, including plans and drawings. This guide provides more detail about the plans that are available and what is shown on each plan.
- 1.2.5 Whilst the plans illustrate many aspects of the Proposed Project, they do not explain the rationale for the design. A description of the Proposed Project is provided in **Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project**.
- 1.2.6 In accordance with normal practices within DCO's, it should be noted that depending on their type, the plans and drawings show either indicative locations or illustrative designs to give a general understanding of the Proposed Project for which consent is sought, or they show the parameters within which the Proposed Project will be constructed. The designs are likely to change within the parameters shown, to reflect the ongoing detail design, and/or unforeseen engineering or environmental circumstances. Flexibility will be retained through Limits of Deviation (LoD) (described below).

1.3 Sections

- 1.3.1 The Proposed Project has been subdivided into three sections:
- The Suffolk Onshore Scheme.
 - The Offshore Scheme.
 - The Kent Onshore Scheme.
- 1.3.2 The plans and drawings show designs and lands information that provide a more detailed understanding of the proposals.
- 1.3.3 Where designs are shown, these comprise either indicative or illustrative examples of what the proposed equipment typical might look like, and where and how it might be configured within the parameters of the draft Development Consent Order (DCO) (**Application Document 3.1 draft Development Consent Order**). This is because the final design may change to reflect detailed design, and/or respond to unforeseen engineering or environmental circumstances. The Plans are grouped into five categories:
- Parameter Plans – these plans show parameters which define zones within which specific works would be carried out. The parameters defined on these drawings are fixed and would not be subject to change.
 - Indicative Plans – these plans indicate the way in which National Grid expect the Proposed Project would be arranged. These tend to be plans to show geographically specific matters such as the location of the Transition Joint Bays (TJB) or Converter Stations.
 - Illustrative Plans – these plans illustrate one way in which the Proposed Project 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.
 - Informative Plans – these drawings or plans support the application for development consent. Generally, they are required under the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 and provide factual information about the surrounding environment.

- Order drawings – other drawings or plans which are referred to in provisions within **Application Document 3.1 draft Development Consent Order**.

1.4 The Order Limits

- 1.4.1 The Planning Act 2008 has created a separate planning process for major infrastructure projects in the fields of energy, transport, water, wastewater, and waste – termed Nationally Significant Infrastructure Projects (NSIPs). NSIPs receive development consent from the relevant Secretary of State rather than planning permission from the local planning authority.
- 1.4.2 To qualify as an NSIP, a proposed project must meet certain thresholds in Part 3 of the Planning Act (the Secretary of State may add to/amend these thresholds by Order). Provision is also made under section 35 of the Planning Act for the Secretary of State to issue a direction, the effect of which is to bring other projects into the remit of the NSIP consenting process.
- 1.4.3 The Secretary of State may give a direction under subsection (1) only if the development is or forms part of a project (or proposed project) in the field of energy, transport, water, waste water or waste, or a business or commercial project (or proposed project) of a prescribed description
- 1.4.4 The application is submitted pursuant to Section 35 of the Planning Act 2008 (as amended) ('the Act'), and in accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) ('the APFP Regulations 2009') for the proposed project to be treated as a development consent application.
- 1.4.5 The Order Limits are shown as a solid red line on all Plans.

1.5 Limits of Deviations (LoD)

- 1.5.1 Within the Order Limits, Parameters known as LoD are set out.
- 1.5.2 LoD are a common feature of NSIP's. They allow for adjustment to the final positioning of the permanent infrastructure for example to avoid localised constraints or unknown or unforeseeable issues that may arise. This could include, previously unidentified poor ground conditions may require a cable to be moved slightly for archaeological reasons, such as property remains.
- 1.5.3 The horizontal LoD define the parameters within which the position on the ground of proposed permanent infrastructure may deviate from the position shown on the plans. This applies to both linear (for example underground cables) and non-linear (for example substations) proposed infrastructure. Horizontal LoD are shown on the Works Plans as a dashed line (blue for overhead line, pink for underground cable, light brown for access route (permanent), green for offshore and black for non-linear works). In some areas the LoD and Order Limits are contiguous.
- 1.5.4 Vertical LoD (which limit the maximum vertical height, or the depth below ground, of any new infrastructure) are specified in the DCO.

1.6 The Proposed Alignment

- 1.6.1 Certain plans and documents for example various chapters within the ES use the term 'Proposed Alignment' when describing the route. The Proposed Alignment is a concept used to help communicate the potential route of the reinforcement and has been developed because of consultation feedback, ongoing engineering design, environmental assessment work and landowner discussions. It includes indicative locations of overhead Lines, joint bays, cables, substation, and Converter Stations.
- 1.6.2 However, noting what is said above regarding the purpose and effect of the LoD, National Grid will not be seeking approval for a specific alignment, or specific equipment locations. This is to provide an appropriate and necessary degree of flexibility during detailed design and construction for example to take account of unforeseen circumstances, such as unsuitable ground conditions or ecological constraints.

1.7 Modification, Removal and Realignment Works

- 1.7.1 The plans and drawings also show the areas in which National Grid is proposing to modify remove or realign existing National Grid and other statutory undertakers' infrastructure, including:
- existing pylons to be modified or removed; and
 - existing overhead lines to be replaced, modified or removed or undergrounded.
- 1.7.2 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 overhead line deviations.
- 1.7.3 Removal works refers to the dismantling and disposing of existing equipment that will no longer be required at the end of the Proposed Project, for example removing a pylon where the existing overhead line has changed route.
- 1.7.4 Realignment works refer to the changing or restoring of existing assets which will be relocated to a different position. An example of realignment works is the relocation of the existing 400 kV overhead line from its existing alignment to a modified alignment where it enters into Minster Substation.

1.8 Other Features

- 1.8.1 Other features shown on the plans and drawings are summarised in Table 1.1 and Table 1.2.

Table 1.1 Permanent Features

Permanent Features	Overview
Category 2 Fence	A barrier of 2.4 m in height with an electric pulse fence.
Category 3 Fence	A barrier of 2.4 m in height without an electric pulse fence.

Permanent Features	Overview
Converter Stations	Converter Stations are a collection of equipment and buildings which convert the electricity from High Voltage Direct Current (HVDC) to High Voltage Alternating Current (HVAC) and vice versa.
Environmental areas	These are locations identified for mitigation planting.
Gantries	An overhead bridge-like structure supporting electrical equipment. A transition point from overhead line equipment to equipment in a substation compound.
HVAC Underground Cables	An insulated conductor carrying alternating electric current designed for underground installation. Also includes associated infrastructure relating to communications, cable jointing, inspection, and testing.
HVDC Underground Cables	An insulated conductor carrying direct electric current designed for underground installation. Also includes associated infrastructure relating to communications, cable jointing, inspection, and testing. Including transition joint bays from offshore cables to onshore cables.
Marine Protection Structures	Equipment or material placed under the sea to protect the installed cable or the cables or pipes being crossed by the Proposed Project's Cable – this could include rock berms or rock mattresses etc.
Overhead Lines	Conductors (Wires) carrying electric current, strung from pylon to pylon.
Permanent access bellmouth	A flared vehicular access/egress point connecting a permanent operational route to the public highway, designed to accommodate turning movements by large vehicles. It may involve creating visibility splays, which is a safety feature where vegetation may be removed for the bellmouth to enable a driver to see down the road and know when the road is clear.
Proposed Alignment	The term is used to help communicate the potential alignment of the Proposed Project within the application. It is the design as shown on the General Arrangement Plans, which have been developed through an iterative design process including engineering and environmental inputs alongside feedback received through various consultation stages. It should be noted that as the Proposed Project is pursuant to Section 35 of the planning act, that the permanent aspects of the Proposed Project, including the equipment locations, are not fixed and could be located anywhere within the LoD as defined in the Work Plans
Pylons	Structures that support the overhead line (conductors). There are three types of pylons; suspension, where the conductors are simply suspended from the tower, tension (angle) where the conductors change directions and Terminal where the conductors connect to substations or other overhead lines.
Submarine Trench	This is a term used to include mechanically created linear trough within the seabed into which the cable is placed. The trough may be filled with clastic material placed from a vessel, or may naturally fill with local sediment material
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 higher to lower voltage or vice versa, to allow it to be transmitted to homes and businesses.
Transition Joint Bay (TJB)	The joint bay located near the coast to transition between the subsea HVDC cable and the land HVDC cable.

Table 1.2 Temporary Features

Temporary Features	Overview
Access Point	An access point is the location where the construction working area meets the public highway. Access points may consist of existing gates into fields used by farm vehicles or may involve the construction of a temporary access point which would be removed/reinstated at the end of construction. Access points may involve a bellmouth as described above.
Temporary Access Bellmouth	A flared vehicle access/egress point connecting a construction site to the public highway, designed to accommodate turning movements by large vehicles. It may involve creating visibility splays, which is a safety feature where vegetation may be removed for the bellmouth to enable a driver to see down the road and know when the road is clear.
Cable working area	Working area required to construct the underground cable systems including haul road soil storage and installation of cables
Construction Compounds	Temporary compounds installed during the construction phase of the Proposed Project. Each compound may contain storage areas including laydown areas, soils storage and areas for equipment and fuel, drainage, generators, car parking and office and welfare areas (portacabins)
Stringing positions	Areas used for stringing/installing new electrical equipment, such as wires and conductors on pylons
Temporary Anchoring Area	Temporary area in which vessels may deploy anchors during cable installation activities. Pre-deployed anchors may be temporarily installed until construction activity is completed.
Temporary Construction Area	The additional temporary construction space required to construct the Proposed Project in a particular area, but which will not be required once construction has taken place,
Temporary construction access route	A temporary road constructed to convey construction vehicles through the working areas. These can be made of imported stone or using protective covering such as Trakmat. These would be removed at the end of construction.
Temporary Excavation Pit	temporary pit excavated at the point where the trenchless solution terminates at the seabed allowing removal of equipment and installation of bellmouth (guidance device for cable pull-in)
Temporary Exclusion Zones	Areas in the immediate vicinity of mobile or static vessels which should be avoided by other maritime vessels during construction activities (vessel limited manoeuvrability)
Temporary Laydown Area – Offshore	Temporary cable storage area on the seabed for use during the cable installation period
Temporary overhead line diversions and pylons	Temporary diversions of existing overhead line may be required to ensure electricity flows are maintained at all times during construction of the Proposed Project to limit the disruption to the electricity network. These typically comprise of a short section of overhead line with temporary structures or pylons which electricity flows are diverted along.
Temporary Pull-In Area	Temporary area of sea which may be used for manoeuvring of vessels whilst the cable is pulled/floated ashore.
Trenchless Crossing	A crossing installation method used to avoid a sensitive feature such as a watercourse or environmental feature.

1.9 Plan Details

- 1.9.1 This section provides detail on what the different plans and drawings show. To make it easier to understand the plans, the colour and symbols used are consistent throughout the plan series. The legend showing the symbols used throughout the plan series is included in Table 1.4.
- 1.9.2 All plans are ordered from North (Saxmundham, Suffolk) to South (Minster, Kent). All plans with multiple pages have a key plan included to help users quickly locate an area or section of interest to them along the length of the Proposed Project.
- 1.9.3 The plans and drawings published to support our application are listed in Table 1.3. The design and layout plans listed in Table 1.3 are indicative and illustrative and show only the principal assets.
- 1.9.4 There are no details in Table 1.3 with regards to the Confidential Plans which contain details of the Badger Sets – these are available to the Planning Inspectorate only.
- 1.9.5 On the General Arrangement plans there are large areas around some features within the Order Limits, to allow for mitigation. To show this on the General Arrangement Plans this would clash with the works, therefore the areas are intentionally left blank. An example of this is on drawing DCO/S/IGA/PS/1501 around the converter station.
- 1.9.6 Where the Mean High Water Spring (MHWS) coincides with the Mean Low Water Spring (MLWS) at the scale of the plans, then only the MHWS is shown.
- 1.9.7 On the Works Plans some of the Termination Lines would be on top of the Limits of Deviation if this is the case the Termination Lines have been moved, this is for visual purposes so both lines are visible.
- 1.9.8 On the Land Plans there are some areas within the Order Limits that don't have plot numbers. These areas are intentionally left white without plot numbers, as these are areas that are no longer required for the scheme but were removed too late in the Proposed Project's development for the Order Limits to be changed.
- 1.9.9 Online versions of the Plans can be used to zoom into the detail for any persons who has the need to do so.
- 1.9.10 On the Special Category land plans there are a number of plans that are blank, as these areas do not contain any Special Category Land, and they are intentionally left blank to demonstrate this.
- 1.9.11 There are no land plans included for the offshore land as we are not seeking any compulsory rights over the land in the Book of Reference (BoR)
- 1.9.12 On the Marine plans included in the sets of plans below, the offshore sections of these work plans are overlaid on United Kingdom Hydrographic Office (UKHO) admiralty charts, displaying key navigational information. For example, areas of purple show separation zones for marine traffic. Note in particular the green line on Sheet One within the Marine sections, which does not represent part of the project - instead it is a radio reporting line highlighted for emphasis.

Not all areas below MHWS are covered by UKHO admiralty charts on these plans, such as tidal rivers. This is of particular relevance on Sheet Three within the Marine sections, for areas of the River Stour where the plans do not seek to show marine charts in respect of elements of the project covered under Onshore activities.

There are a number of symbols and text which relate to marine activities and are relevant to the marine environment on the admiralty charts. For more information on admiralty charts refer to the “Symbols and Abbreviations used on Paper Charts (NP5011) Admiralty Publications”.

Table 1.3 List of Plans

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.2	Location Plans	5(2)(o)	Informative	DCO/T/OLP /SS/0001 - 0003	These plans show a very high-level view of the locations of the Proposed Project in the context of the surrounding locality, including the Order Limits.
2.3	Land Plans	5(2)(i)(i)-(iii)	Order Drawing	DCO/S/KP/SS/0100 DCO/S/LP/PS/0101 – 0106 DCO/K/KP/SS/107 DCO/K/LP/PS/0108 - 0113	<p>These plans show the types of statutory land powers (compulsory acquisition or temporary use) National Grid intend to seek for the Order land, within the Order Limits. The land to which these powers relate, has been split down into land plots and those plots have been given a unique plot number that can be found within Application Document 4.3 Book of Reference.</p> <p>There are ten different classes of land powers within the application:</p> <p>Class 1: Compulsory Acquisition of Land - all interests and rights in the land – This is where National Grid would purchase the land, for example, where National Grid would be constructing a Converter Station.</p> <p>Class 2: Compulsory Acquisition of Rights - Overhead Line– Acquisition of rights by the creation of new rights, or modification of existing rights for the sections of overhead line. These rights allow National Grid to construct, operate, and maintain the Proposed Project.</p> <p>Class 3: Compulsory Acquisition of Rights of Underground Cable System – Acquisition of rights by the creation of new rights, the imposition of restrictions, or the acquisition of existing rights or benefits of existing restrictions for sections of underground cable. These rights allow National Grid to construct, operate, and maintain the Proposed Project.</p>

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
					<p>Class 4: Compulsory Acquisition of Rights – Construction Compound – Acquisition of Construction rights over land that is required to allow National Grid to construct the Proposed Project.</p> <p>Class 5: Compulsory Acquisition of Rights – Access - Acquisition of rights of access that allow National Grid to construct, operate, and maintain the Proposed Project.</p> <p>Class 6: Compulsory Acquisition of Rights - Drainage – Acquisition of rights of drainage which allow National Grid to construct, operate and maintain drainage required for the Proposed Project.</p> <p>Class 7: Compulsory Acquisition of Rights – Mitigation – Acquisition of rights for mitigation which allow National Grid to construct and maintain the require mitigation for the Proposed Project.</p> <p>Class 8 Temporary Use for Construction, Mitigation, Maintenance and Dismantling of redundant infrastructure – This means the temporary use of the land. These rights apply to areas of land that would be temporarily used during construction and then reinstated (subject to specified exceptions), for example the cable construction compounds; and</p> <p>Class 9: Temporary Use for Access – This means the temporary use of rights on the land for temporary access. These are so National Grid can temporarily access the Proposed Project for the construction work.</p> <p>Class 10: Land that is not subject to powers of acquisition nor temporary use</p> <p>The classes of rights are listed in order of magnitude, starting with Class 1 (Compulsory Acquisition of land) with (in most cases) each class including all subordinate rights within the lesser classes. For instance, Class 1 would also include Class 2-9 rights (in most cases).</p> <p>In addition to Application Document 4.3 Book of Reference and the Application Document 4.2 Statement of Reasons, Application</p>

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
					<p>Document 3.1 draft Development Consent Order also sets out certain details in respect of temporary use plots.</p> <p>There are areas shown within the Order Limits which do not have an associated class – where this occurs we will not be seeking any powers over this land.</p>
2.4	Special Category and Crown Land Plans	5(2)(i)(iv) and 5(2)(n)	Informative	DCO/S/KP/SS/0300 DCO/S/CR/PS/0301 – 0306 DCO/K/KP/SS/0307 DCO/K/CR/PS/0308 – 0313 DCO/M/KP/SS/0314 DCO/M/CR/PS/0315 - 0317	<p>These plans show any land that is defined as Special Category Land or Crown land, which land is subject to powers of compulsory acquisition.</p> <p>Special Category Land is defined as the land identified as forming part of a common, open space, inalienable National Trust land, or a fuel or field garden allotment.</p> <p>Within these plans sheets are only included where there is Special Category Land and or Crown Land or Crown Bodies identified.</p> <p>Further details on this plan are described in Part 4 of Schedule 2 (plans) of the Application Document 3.1 draft Development Consent Order. Further details of the Special Category Land are set out in Application Document 4.2.3 Statement of Reasons Appendix C Special Category Land Report.</p> <p>There are two sets of Special Category and Crown Land Plans, onshore and offshore.</p>
2.5	Works Plans	5(2)(j)		DCO/S/KP/SS/0400 DCO/S/WK/PS/0401 – 0406 DCO/K/KP/SS/0407	<p>These plans show the main permanent aspects of the Proposed Project that are described in Schedule 1 of the Application Document 3.1 draft Development Consent Order. The plans show the Proposed Alignment centre lines of the linear works that make up the application. In respect of the permanent linear works (the underground cables and overhead line) these will be subject to an LoD.</p> <p>The plans show the LoD that National Grid is applying for, which gives some flexibility in the design in respect of the works. National</p>

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
				DCO/K/WK/PS/0408 – 0413	Grid has applied a standard approach to the LoD to most of the route, however there are some areas along the route where local constraints mean that they are restricted.
				DCO/M/KP/SS/0417	Article 5 of the Application Document 3.1 draft Development Consent Order sets out all of the relevant LoD in respect of the above.
				DCO/M/WK/PS/0414 - 0416	Further details on this set of plans are listed in Part 7 of Schedule 2 (plans) of the Application Document 3.1 draft Development Consent Order .
2.6	Traffic Regulation Order Plans	5(2)(o)	Order Drawings	DCO/S/KP/SS/0500 DCO/S/TP/PS/0501 – 0508 DCO/K/KP/SS/0509 DCO/K/TR/PS/0510 - 0515	These plans also show the extent of the proposed Traffic Regulation Orders and sections of the road/street that may need to be subject to a Traffic Regulation Order while works are undertaken, such as where restrictions or traffic management would be required to facilitate the construction and maintenance of the Proposed Project. Further detail on Traffic Regulation Orders is described in Schedule 13 (pursuant to Article 50) of Application Document 3.1 draft Development Consent Order .
2.7	Access, Rights of Way and Public Rights of Navigation Plans	5(2)(k)	Order Drawings	DCO/S/KP/SS/0600 DCO/S/AC/PS/0601 – 0608 DCO/K/KP/SS/0609	These plans show the access points from the public highway that are needed to construct, operate, or maintain the Proposed Project. Each of these new or altered access points have been given a unique number. These plans also show public rights of way (PRoW) and streets that are affected by the Proposed Project and the type of management proposed for these affected PRoW and streets. Each of the affected PRoW and streets have been given a reference number.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
				DCO/K/AC/PS/0610 - 0615	<p>Further details in respect of these plans are listed in Part 1 of Schedule 2 (plans) of the Application Document 3.1 draft Development Consent Order.</p> <p>Public rights of way and streets may be subject to different types of management (e.g. closure with diversion and without diversion) at different points during the construction programme and therefore may be listed in more than one schedule.</p> <p>Further detail on streets or public rights of way to be temporarily closed is described in Schedule 8 of the Application Document 3.1 draft Development Consent Order. Further detail on access to works is described in Schedule 9 of the Application Document 3.1 draft Development Consent Order. Schedule 7 of the Application Document 3.1 draft Development Consent Order covers street or public rights of way to be permanently stopped up.</p> <p>Further detail on the public right of navigation to be temporarily closed can be found in Article 53 of the Application Document 3.1 draft Development Consent Order.</p>
2.8	Nature Conservation , Geological and Landscape Importance Plans	5(2)(l)(i)	Informative	DCO/S/KP/SS/0700 DCO/S/NCGL/PS/0701 – 0706 DCO/K/KP/SS/0707 DCO/K/NCGL/PS/708 – 0713 DCO/M/KP/SS/0717	<p>These plans show environmental designations, sites of special scientific interest, ancient woodland and other environmental features onshore relevant to the application including notified and potential geological sites.</p>

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
				DCO/M/NC GL/PS/071 4 - 0716	
2.9.1	Habitats of Protected Species and Important Habitats - Suffolk	5(2)(l)(ii)	Informative	DCO/S/KP/SS/0800 DCO/S/HA/PS/0801 - 0806	These plans show the locations of habitats of protected species and important habitats based on the Proposed Projects environmental surveys. An assessment of the effects on habitats and species is presented in Application Document 6.2.2.2 Part 2 Suffolk Chapter 2 Ecology & Biodiversity . The data shown in the plan is both inside and outside of the Order Limits and the figures shown are based on the results of site surveys and ariel imagery where site access was not available, further details can be found in Application Document 6.3.2.2.A Appendix 2.2.A Extended Phase 1 Habitat Survey Report .
2.9.2	Habitats of Protected Species and Important Habitats - Kent	5(2)(l)(ii)	Informative	DCO/K/KP/SS/0807 DCO/K/HA/PS/0808 - 0813	These plans show the locations of habitats of protected species and important habitats based on the Proposed Projects environmental surveys. An assessment of the effects on habitats and species is presented in Application Document 6.2.3.2 Part 3 Kent Chapter 2 Ecology & Biodiversity . The data shown in the plan is both inside and outside of the Order Limits and the figures shown are based on the results of site surveys and ariel imagery where site access was not available, further details can be found in Application Document 6.3.3.2.A Appendix 3.2.A Extended Phase 1 Habitat Survey Report .
2.10.1	Statutory and Non-Statutory Sites and Features of	5(2)(m)	Informative	DCO/S/KP/SS/0900	This plan shows scheduled monuments, listed buildings and archaeological sites on the historic environment record. An assessment of effects on these sites is presented in Application Document 6.2.2.3 Part 2 Suffolk Chapter 3 Cultural Heritage . Historic environment references can be found in Application

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	the Historic Environment Plans – Suffolk			DCO/S/HE/PS/0901 – 0906	Document 6.3.2.3.A ES Appendix 2.3.A Cultural Heritage Baseline Report.
2.10.2	Statutory and Non-Statutory Sites and Features of the Historic Environment Plans – Kent	5(2)(m)	Informative	DCO/K/KP/SS/0907 DCO/S/HE/PS/0908 – 0913	This plan shows scheduled monuments, listed buildings and archaeological sites on the historic environment record. An assessment of effects on these sites is presented in Application Document 6.2.3.3 Part 3 Kent Chapter 3 Cultural Heritage . Historic environment references can be found in Application Document 6.3.3.3.A Appendix 3.3.A Cultural Heritage Baseline Report .
2.10.3	Statutory and Non-Statutory Sites and Features of the Historic Environment Plans – Offshore	5(2)(m)	Informative	DCO/M/KP/SS/0917 DCO/S/HE/PS/0914 – 0916	This plan shows scheduled monuments, listed buildings and archaeological sites on the historic environment record. An assessment of effects on these sites is presented in Application Document 6.2.4.6 Part 4 Marine Chapter 6 Marine Archaeology . Historic environment references can be found in Application Document 6.3.4.6.A Appendix 4.6.A Marine Archaeological Technical Report .
2.11.1	Water Bodies in the River Basin Plans - Suffolk	5(2)(l)(iii)	Informative	DCO/S/KP/SS/1000 DCO/S/WB/PS/1001 - 1006	This plan shows the Water Bodies and their catchment areas.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.11.2	Water Bodies in the River Basin Plans - Kent	5(2)(l)(iii)	Informative	DCO/K/KP/SS/1007 DCO/K/WB/PS/1008 - 1013	This plan shows the Water Bodies and their catchment areas.
2.12	Trees and Hedgerows to be Removed or Managed Plans	5(2)(o)	Order Drawings	DCO/S/KP/SS/1100 DCO/S/TH/PS/1101 – 1106 DCO/K/KP/SS/1107 DCO/K/TH/PS/1108 - 1113	<p>These plans show the trees and hedgerows that are potentially affected by the Proposed Project.</p> <p>A tree is defined as a perennial woody plant having a main stem and usually a distinct crown with a stem diameter (measured at 1.5 m above ground level) of 75 mm or greater. A hedgerow is defined as any boundary line of trees or shrubs over 10 m long and less than 5 m wide at the base, provided that at one time the trees or shrubs were more or less continuous.</p> <p>The trees and hedges have been broken down into the following three categories:</p> <ul style="list-style-type: none"> Retained - means individual trees, sections of hedgerow or groups of trees that would be retained if the Proposed Alignment shown on the Indicative General Arrangements Plans (Application Document 2.14) were to be implemented; Managed - means individual trees, sections of hedgerow or groups of trees that would be managed if the Proposed Alignment shown on the Indicative General Arrangements Plans (Application Document 2.14) were to be implemented. Removed - means individual trees, sections of hedgerow or groups of trees that would be removed (including the roots) if the Proposed Alignment shown on the Indicative

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
<p>General Arrangements Plans (Application Document 2.14) were to be implemented.</p> <p>The impact upon individual trees, sections of hedgerow or groups of trees (i.e., shown as ‘Retained, managed or removed’) could change by the use of flexibility from the LoD.</p> <p>Further details on this plan are described in Schedule 14 (Tree Preservation Order (TPO) trees) of the Application Document 3.1 draft Development Consent Order.</p>					
2.13.1	Design and Layout Plans – Suffolk - Typical Suffolk 400kV GIS Substation – SPR-Sea Link Double Turn in/out (AIS Terminal Option)	5(2)(o)	Indicative	DCO/S/DE/SS/1200	This plan shows an indicative layout of the proposed equipment to be installed in the Suffolk 400 kV substation. This plan shows the proposed features included in the substation boundary, proposed permanent accesses and locations of various substation equipment and infrastructure.
2.13.1	Design and Layout Plans – Suffolk - Typical HVAC Direct Buried Cross Section and	5(2)(o)	Indicative	DCO/S/DE/SS/1202	This plan shows an illustrative cable working cross section through agricultural land. The working width would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	Construction Area				
2.13.1	Design and Layout Plans – Suffolk - Typical 400kV HVAC Joint Bay Arrangement	5(2)(o)	Indicative	DCO/S/DE/SS/1203	This plan shows an illustrative joint bay cross section, layouts and above and below ground infrastructure. The joint bay would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.1	Design and Layout Plans – Suffolk - Typical HVAC and HVDC Combined Construction Area	5(2)(o)	Indicative	DCO/S/DE/SS/1204	This plan shows an illustrative cable working cross section through agricultural land. The working width would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.1	Design and Layout Plans – Suffolk - Typical Suffolk Converter Station Layout Plan (GIS)	5(2)(o)	Indicative	DCO/S/DE/SS/1205	This plan shows an illustrative layout of a typical 2GW converter station including all of the elements required for it to operate. This will be sited within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the manufacture of the equipment.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.1	Design and Layout Plans – Suffolk - Typical Suffolk 400kV GIS Substation Elevation Drawing	5(2)(o)	Indicative	DCO/S/DE/SS/1206	This plan shows an illustrative elevation of the Suffolk 400 kv Substation from different angles. This will be sited within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the manufacturer of the equipment.
2.13.1	Design and Layout Plans – Suffolk - Typical Suffolk Converter Station – Elevation Drawing	5(2)(o)	Indicative	DCO/S/DE/SS/1207 - 1208	These plans show an illustrative elevation of the Suffolk 525 kv Converter Station from different angles. This will be sited within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the manufacturer of the equipment.
2.13.1	Design and Layout Plans – Suffolk - Typical HVDC Direct Buried Cable Cross Section and Construction Area	5(2)(o)	Indicative	DCO/S/DE/SS/1209	This plan shows an illustrative cable working cross section through agricultural land. The working width would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.1	Design and Layout Plans – Suffolk - Indicative River Fromus Crossing	5(2)(o)	Indicative	DCO/S/DE/SS/1210	This plan shows two illustrative bridge crossings of the Fromus river to give size and scale. This bridge would lie with the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the final agreement on the height and design with the Stakeholders.
2.13.1	Design and Layout Plans – Suffolk Indicative Horizontal Direction Drill Solution Aldeburgh	5(2)(o)	Indicative	DCO/S/DE/SS/1211	This plan shows an indicative horizontal directional drill solution in Suffolk showing the indicative alignment of the underground ducts once the drill is complete. The Spare duct is drilled at the time of the installation so that if any issues occurred in the future with the cables in the other ducts, this could be used without having to remobilise the drilling equipment.
2.13.1	Design and Layout Plans – Terrestrial General – Illustrative Drawing of Typical HDD Landfall	5(2)(o)	Illustrative	DCO/T/DE/SS/1212	This plan shows an illustrative profile of a typical horizontal directional drill solution, showing a single duct alignment.
2.13.1	Design and Layout Plans – Suffolk Indicative Layout of HDD Construction	5(2)(o)	Indicative	DCO/S/DE/SS/1213	This plan shows an indicative horizontal directional drill compound layout. The equipment shown in blue and some of the equipment shown in black on the drawings would need to be moved around the compound to the alignment of each of the ducts to be drilled. The Spare duct is drilled at the time of the installation so that if any issues occurred in the future with the cables in the other ducts, this could be used without having to remobilise the drilling equipment.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	Compound Aldeburgh				
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM09 (S- AP-14)	5(2)(o)	Indicative	DCO/S/DE/ SS/1214	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Document.
2.13.1	Design and Layout Plans – Suffolk - Indicative Visibility Splays	5(2)(o)	Indicative	DCO/S/DE/ PS/1215 - 1218	These plans show several illustrative visibility splays for access to various site access points. The visibility splays would lie with the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM07 (S- AP-12)	5(2)(o)	Indicative	DCO/S/DE/ SS/1219	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM14 (S-MAP-5)	5(2)(o)	Indicative	DCO/S/DE/SS/1220	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM15 (S-MAP-2)	5(2)(o)	Indicative	DCO/S/DE/SS/1221	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM16 (S-EAP-1)	5(2)(o)	Indicative	DCO/S/DE/SS/1222	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM01 (S- AP-2) and S- BM02 (S-AP-3)	5(2)(o)	Indicative	DCO/S/DE/ SS/1223	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM03 (S- AP-5) and S- BM04 (S-AP-6)	5(2)(o)	Indicative	DCO/S/DE/ SS/1224	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.
2.13.1	Design and Layout Plans – Suffolk Indicative Bellmouth Access Arrangement S- BM05 (S- AP-8) and S-	5(2)(o)	Indicative	DCO/S/DE/ SS/1225	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	BM06 (S-AP-9)				
2.13.2	Design and Layout Plans – Kent – Typical Kent Substation - Overall Layout	5(2)(o)	Indicative	DCO/K/DE/SS/1250	This plan shows an indicative layout of the proposed additional equipment to be installed in the Kent 400 kV substation. This plan shows the proposed features included in the substation boundary, proposed permanent accesses and locations of various substation equipment and infrastructure.
2.13.2	Design and Layout Plans – Kent – Typical Kent Converter Station Layout Plan (GIS)	5(2)(o)	Indicative	DCO/K/DE/SS/1251	This plan shows an illustrative layout of a typical 2 GW converter station including all of the elements required for it to operate. This will be sited within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the manufacture of the equipment.
2.13.2	Design and Layout Plans – Kent – Typical Kent Substation Elevation Drawings	5(2)(o)	Indicative	DCO/K/DE/SS/1252 - 1253	These plans show an illustrative elevation of the Kent 400 kV substation from different angles. This will be sited within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the manufacturer of the equipment.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.2	Design and Layout Plans – Kent – Typical Kent Converter Station Elevation Drawings	5(2)(o)	Indicative	DCO/K/DE/SS/1254 - 1255	These plans show typical elevations of the Kent 525 kV Converter Substation from different angles. This will be sited within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors and the manufacturer of the equipment.
2.13.2	Design and Layout Plans – Kent - Indicative Layout of HDD Construction Compound Pegwell Bay	5(2)(o)	Indicative	DCO/K/DE/SS/1256	This plan shows an indicative horizontal directional drill compound layout. The equipment shown in blue and some of the equipment shown in black on the drawings would need to be moved around the compound to the alignment of each of the ducts to be drilled. The Spare duct is drilled at the time of the installation so that if any issues occurred in the future with the cables in the other ducts, this could be used without having to remobilise the drilling equipment.
2.13.2	Design and Layout Plans – Kent - Indicative Horizontal Directional Drill Solution Pegwell Bay	5(2)(o)	Indicative	DCO/K/DE/SS/1257	This plan shows an indicative horizontal directional drill solution in Suffolk showing the indicative alignment of the underground ducts once the drill is complete. The Spare duct is drilled at the time of the installation so that if any issues occurred in the future with the cables in the other ducts, this could be used without having to remobilise the drilling equipment.
2.13.2	Design and Layout Plans – Kent - Indicative	5(2)(o)	Indicative	DCO/K/DE/SS/1258	This plan shows an indicative direct pipe solution at the Kent End of the project. This shows the indicative pipe alignment from land to sea.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	Direct Pipe Solution Pegwell Bay				There are less Ducts in this solution to the HDD as they are larger ducts.
2.13.2	Design and Layout Plans – Kent - Indicative Visibility Splays	5(2)(o)	Indicative	DCO/K/DE/SS/1261 - 1262	These plans show several illustrative visibility splays for access to various site access points. The visibility splays would lie with the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.2	Design and Layout Plans – Kent - Indicative Bellmouth Arrangement K- BM02 (K- AP-5)	5(2)(o)	Indicative	DCO/K/DE/SS/1263	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.
2.13.2	Design and Layout Plans – Kent - Indicative Bellmouth Arrangement K- BM03 (K- EAP-1)	5(2)(o)	Indicative	DCO/K/DE/SS/1264	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.2	Design and Layout Plans – Kent - Indicative Bellmouth Arrangement K- BM01 (K- AP-4)	5(2)(o)	Indicative	DCO/K/DE/ SS/1265	This drawing shows a typical bell mouth design for an access point. All bell mouths are labelled with a BM (Bell Mouth) number and also an AP (Access Point), MAP (Monitoring Access Point) or EAP (Environmental Access Point) reference which are used in other DCO Application Documents.
2.13.2	Design and Layout Plans – Kent – Indicative River Stour (Kent) Temporary Crossing	5(2)(o)	Indicative	DCO/K/DE/ PS/1266 - 1267	These plans show a typical temporary bridge crossing the type of which could be used to cross the river stour to take construction traffic.
2.13.3	Design and Layout Plans – Terrestrial General Typical Bellmouth Arrangement Details	5(2)(o)	Indicative	DCO/T/DE/ SS/1300	This plan show several illustrative bellmouth design for access to various site access points. The bellmouths would lie with the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.3	Design and Layout Plans – Terrestrial General - Typical	5(2)(o)	Indicative	DCO/T/DE/ SS/1301	This plan shows an illustrative joint bay cross section, layouts and above and below ground infrastructure. The joint bay would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	HVDC Joint Bay Arrangements				
2.13.3	Design and Layout Plans – Terrestrial General - Typical OHL or Cable Works Construction Compound	5(2)(o)	Indicative	DCO/T/DE/SS/1302	This plan shows illustrative construction compound layout. The compounds would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.3	Design and Layout Plans – Terrestrial General - Typical Converter or Substation Works Construction Compounds	5(2)(o)	Indicative	DCO/T/DE/SS/1303	This plan shows illustrative construction compound layout. The compounds would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.3	Design and Layout Plans – Terrestrial General - Typical OHL Pylon Detail	5(2)(o)	Indicative	DCO/T/DE/SS/1304	This plan shows illustrative pylon designs used on the existing 400 kV overhead line and the proposed 400 kV overhead line amendments. The design and height of the pylons used would vary depending on the final design and topography within the parameters contained within the Application Document 3.1 draft Development

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
					Consent Order with reference to the Work Plans (Application Document 2.5) .
2.13.3	Design and Layout Plans – Terrestrial General – Typical Combined Cable and Converter Construction Compound	5(2)(o)	Indicative	DCO/T/DE/SS/1305	This plan shows illustrative construction compound layout. The compounds would lie within the LoD shown on the Work Plans (Application Document 2.5) . The actual layout would vary depending on site specific factors.
2.13.3	Design and Layout Plans – Terrestrial General - Typical Staged Ducted Road Crossing Lane Widths – HVDC	5(2)(o)	Indicative	DCO/T/DE/SS/1306	This plan shows typical methods of how ducting will be installed under public roads. This shows the widths of the roads, the widths of the closures and the traffic allowed to pass through the traffic management. This also shows a typical cross section of the HVDC trench under an existing road.
2.13.3	Design and Layout Plans – Terrestrial General - Typical Box Culvert Detail	5(2)(o)	Indicative	DCO/T/DE/SS/1307	This plan shows an illustrative culvert design that may be used along a temporary construction access route to cross ditches and watercourses. It shows how a culvert could be designed using infill and/or sandbags perpendicular to the direction the watercourse is flowing, with a pipe through the middle to enable water to continue flowing. This plan gives a cross-section and a side-view of the culvert.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of HVDC Bundled cable crossing over unburied Fibre Optic/Telecoms Asset	5(2)(o)	Illustrative	DCO/M/DE/SS/1350	This plan shows typical plan and section views of how a typical HVDC cable bundle will cross an un-buried Fibre Optic/Telecoms cable and the protections and rock placement that could be used.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of HVDC Bundled cable crossing over buried Fibre Optic/Telecoms Asset	5(2)(o)	Illustrative	DCO/M/DE/SS/1351	This plan shows typical plan and section views of how a typical HVDC cable bundle will cross a buried Fibre Optic/Telecoms cable and the protections and rock placement that could be used.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of	5(2)(o)	Illustrative	DCO/M/DE/SS/1352	This plan shows typical plan and section views of how a typical HVDC cable bundle will cross a buried Power Asset Cable and the protections and rock placement that could be used.

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	HVDC Bundled cable crossing over buried Power Cable Asset				
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of HVDC Bundled cable crossing over pre lay berm	5(2)(o)	Illustrative	DCO/M/DE/SS/1353	This plan shows typical plan and section views of how a typical HVDC cable bundle will cross a pre lay berm and the protections and rock placement that could be used. A pre lay berm is installed where a protective cover over the existing cable to be crossed is required to maintain separation and prevent damage, where other solutions are inadequate, as per crossing agreement requirements.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawings of Rock Berm Schematics Pre Lay and Post Lay	5(2)(o)	Illustrative	DCO/M/DE/SS/1354	This plan shows typical drawing of the pre and post lay rock berms which may be installed as part of the HVDC asset protection structures.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of	5(2)(o)	Illustrative	DCO/M/DE/SS/1355	This plan shows typical section views of how a typical HVDC cable bundle is laid out in profile with an indication of the makeup of a HVDC Cable and the associated Fibre Optic.




























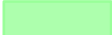





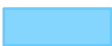


Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	HVDC Bundle Cable Profile / Configuration				
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Boulder Clearance	5(2)(o)	Illustrative	DCO/M/DE/SS/1356	This plan shows the typical equipment and actions used to clear boulders from the seabed in preparation for the laying of the HVDC Cable.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Pre Lay Grapnel Run	5(2)(o)	Illustrative	DCO/M/DE/SS/1357	This plan shows the typical equipment and actions to remove linear debris crossing the route, such as rope, cable debris, chains and abandoned fishing equipment, in preparation for the laying of the HVDC cable.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Pre-sweeping and Sidecasting	5(2)(o)	Illustrative	DCO/M/DE/SS/1358	This plan shows the typical equipment and activities associated with the removal of sand waves to the Non-Mobile Reference Level (NMRL) prior to cable lay. Sidecasting is a variation where the sediment is removed to the side of the route.

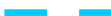



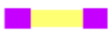

































Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of unexploded ordnance, removal and detonation	5(2)(o)	Illustrative	DCO/M/DE/SS/1359	This plan shows the typical equipment and activities associated with the location, identification, removal and potential detonation of Unexploded Ordnance which is found obstructing the route and cannot be avoided by micro-routing. The Unexploded Ordnance requires to be removed to a safe storage area and/or detonated under controlled conditions.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Omega and Inline Joint	5(2)(o)	Illustrative	DCO/M/DE/SS/1360	This plan shows the typical layout of the different jointing lay down configurations. Omega joints are formed where two pre-existing lengths of cable have been laid to the seabed, for later jointing. Inline joints are formed when cable is laid in series; with the previous cable end being recovered to the deck of the cable lay vessel, and jointed to the new length and laid onto the seabed ‘in-line’ Laying of the new cable length continues after the joint is completed.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Simultaneous Lay and Burial	5(2)(o)	Illustrative	DCO/M/DE/SS/1361	This plan shows the typical layout of the equipment and activities for the simultaneous lay and burial of the cable using a cable plough system.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of	5(2)(o)	Illustrative	DCO/M/DE/SS/1362	This plan shows the typical equipment and activities illustrating the laying of the cable onto the seabed, using the Cable lay Vessel. Subsequently a cable burial vessel will lower the cable into the seabed and bury the cable, using one of the burial techniques; water jetting, mechanical trenching and/or rock cutting.


















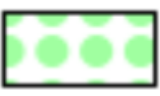


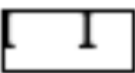

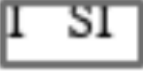







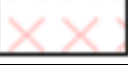

Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
	Lay and Post-Lay Burial				
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Cable Protection Systems	5(2)(o)	Illustrative	DCO/M/DE/SS/1363	This plan shows typical systems used to protect the cable where the planned cable burial is insufficient to reduce the risk of damage to the cable, or where additional protection has been identified.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Rock Placement Sections	5(2)(o)	Illustrative	DCO/M/DE/SS/1364	This plan illustrates typical rock placement designs.
2.13.4	Design and Layout Plans – Offshore - Illustrative Drawing of Typical Marine Trench Profiles	5(2)(o)	Illustrative	DCO/M/DE/SS/1365	This plan illustrates examples of trench profiles resulting from lowering techniques deployed with different trenching equipment/methods. The trench profiles are often affected by local sediment processes and can vary from the well-defined profiles indicated.


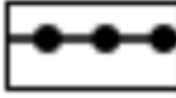





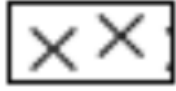



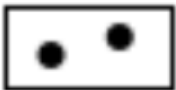
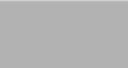















Application Document Reference	Title	Regulation Number	Plan Type	Drawing Number(s)	Description
2.14	Indicative General Arrangement Plans	5(2)(o)	Indicative	DCO/S/KP/SS/1500 DCO/S/IGA/PS/1501 – 1506 DCO/K/KP/SS/1507 DCO/K/IGA/PS/1508 – 1513 DCO/M/KP/SS/1517 DCO/M/IGA/PS/1514 - 1516	<p>These plans show an indication of the construction and operational components of the proposals based on the Proposed Alignment within the parameters of the Application Document 3.1 draft Development Consent Order with reference to the Work Plans (Application Document 2.5).</p> <p>The plans include the following principal components:</p> <ul style="list-style-type: none"> the Order Limits; the Limits of Deviation (LoD); temporary construction works including, temporary overhead line diversions, temporary construction access routes, temporary construction compounds, trenchless crossings, temporary access points and temporary access bridges. areas for proposed environmental mitigation; and the Proposed Alignment (encompassing indicative locations for pylons and cables). <p>These plans also include proposed environmental areas which include embedded measures, mitigation and enhancement areas as defined within Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project.</p> <p>A range of temporary construction works whilst not shown are also required within the Order Limits, including but not limited to; surveys, protective scaffolding, diversion of services, drainage works, storage of material.</p> <p>There are two sets of plans in the General Arrangement Plans which are onshore and offshore.</p>







Table 1.4 Legend

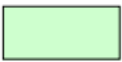












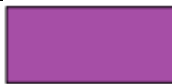




Description	Symbol	Description	Symbol
Order Limits		Limits of deviation: overhead lines	
Limits of deviation: underground cable		Limits of deviation: non-linear works	
Limits of deviation: Permanent access		Proposed utility diversion route	
Limits of deviation: marine underground cable		Proposed joint bay	
Proposed High Voltage Direct Current (HVDC) underground cables		Proposed High Voltage Alternating Current (HVAC) underground cables	
Proposed marine High Voltage Direct Current (HVDC) cable alignment		Proposed 400kV overhead lines	
Proposed permanent access		Proposed access route centreline	
Proposed permanent monitoring access		Proposed Public Right of Way (PRoW) diversion route	
Proposed River Fromus Bridge Crossing		Proposed converter station	
Proposed construction compound		Proposed substation	
Proposed temporary Over Head Line (OHL) structure		Proposed overhead lines to be removed	
Existing pylon		Proposed pylon modification works	
Proposed pylon		Propose pylon removal	
Proposed drainage permanent infiltration pond		Proposed drainage temporary infiltration pond	
Proposed drainage permanent infiltration outfall pipe		Proposed drainage temporary infiltration outfall pipe	
Proposed drainage - temporary outfall		Proposed drainage - permanent outfall	
Proposed drainage permanent attenuation pond		Proposed drainage temporary attenuation pond	
Proposed drainage permanent attenuation outfall pipe		Proposed drainage temporary attenuation outfall pipe	

Description	Symbol	Description	Symbol
Proposed drainage temporary rising main		Proposed temporary bellmouth	
Proposed permanent bellmouth		Mean High Water Spring	
Mean Low Water Spring		District Council boundary	
Proposed temporary construction compound		Commencement of work	
Termination of work		Commencement and termination of work	
Traffic regulation order reference point		Traffic regulation order line	
Public rights of way: existing (with accompanying local highway authority reference number)		Public rights of way: temporary diversions (managed)	
Public rights of way: temporary closure points		Access point (with accompanying reference)	
Public right of way: permanent stopping up points		Street management: temporary closure points	
Street management: temporary diversions		Public rights of way: temporary and permanent diversions	
Street management: temporary closure		Public rights of way: permanently stopped up	
Public rights of way: temporary closure		Public rights of way: temporary closure points	
Public rights of navigation: temporary closure		Street managed permanently stopped up	
Public rights of way: temporary closure (managed)		Proposed permanent cycleway diversion route	
King Charles III England Coast Path Route		County Wildlife Site (CWS)	
Ancient Woodland Inventory Site (AWI)		Special Area of Conservation (SAC)	
SPA with Marine Component		Area of Outstanding Natural Beauty (AONB)	
Special Protection Area (SPA)		SAC with Marine Component	
Ramsar Site		Site of Special Scientific Interest (SSSI)	

Description	Symbol	Description	Symbol
Important Bird Area		Tree Preservation Order (TPO) area	
RSPB Reserve		Local Nature Reserve (LNR)	
National Nature Reserve (NNR)		Marine Conservation Zone (MCZ)	
Other potential bat observation		Hazel dormouse refugia point	
Hazel dormouse observation		Bat potential structure	
A1.1.1 - Broadleaved woodland - semi-natural		A1.1.2 - Broadleaved woodland - plantation	
A1.2.2 - Coniferous woodland - plantation		A1.3.1 - Mixed woodland - semi-natural	
A2.1 - Scrub - dense/continuous		A2.2 - Scrub - scattered	
A3.1 - Broadleaved parkland/scattered trees		A3.2 - Coniferous parkland/scattered trees	
B1.2 - Acid grassland - semi-improved		B2.2 - Neutral grassland - semi-improved	
B4 - Improved grassland		B5 - Marsh/marshy grassland	
B6 - Poor semi-improved grassland		Monkton and Minster Marshes Waterbody - GB107040019621	
C1.1 - Bracken - continuous		C3.1 - Other tall herb and fern - ruderal	
F1 - Swamp		G1 - Standing water	
G2 - Running water		H1.1 - Intertidal - mud/sand	
H2.4 - Saltmarsh - scattered plants		H2.6 - Saltmarsh - dense/continuous	

Description	Symbol	Description	Symbol
H3 - Shingle above high tide mark		J2.8 - Earth bank	
H6.5 - Dune grassland		H6.6 - Dune heath	
H8.4 - Coastal grassland		J1.1 - Cultivated/disturbed land - arable	
J1.2 - Cultivated/disturbed land - amenity grassland		J1.3 - Cultivated/disturbed land - ephemeral/short perennial	
J1.4 - Introduced shrub		J2.6 - Dry ditch	
J3.6 - Buildings & infrastructure		J4 - Bare ground	
Z99 - Hardstanding		J5 - Other habitat	
Badger (dead)		Footprint	
Hole (sett)		Latrine	
Mammal path		Snuffle hole	
Push under		Hair	
Single dung		Listed Building Grade II	
Listed Building Grade II*		Heritage feature (line)	
Heritage feature (point)		Heritage feature (polygon)	

Description	Symbol	Description	Symbol
Military Remains		Heritage Coast	
Listed Building Grade I		Scheduled Monument	
Fromus Waterbody - GB105035045980		Fromus Catchment - GB105035045980	
Waveney and East Suffolk Chalk and Crag Catchment - GB40501G400600		Hundred River Catchment - GB105035046260	
Hundred River Waterbody - GB105035046260		Alde and Ore Catchment - GB520503503800	
Ash Level Waterbody - GB107040019600		Ash Level Catchment - GB107040019600	
Stour (Kent) Waterbody - GB520704004700		Monkton and Minster Marshes Catchment - GB107040019621	
East Kent Chalk - Stour Catchment - GB40702G501600		East Kent Tertiaries Catchment - GB40702G501600	
Ancient tree (retained)		Veteran tree (retained)	
Important hedgerow to be retained		Important hedgerow to be removed	
Existing tree, group, woodland, or hedge to be retained		Existing tree, group, woodland, or hedge to be managed	
Existing tree, group, woodland, or hedge to be removed		Indicative HDD Alignment	
Indicative HDD Alignment – spare duct		Indicative HDD Working Area	
Indicative HDD duct stringing for pushed installation		Indicative HDD duct stringing for pushed installation – spare duct	
Historic Landfill		Mean High Water Springs (MHWS)	
Mean Low Water Springs (MLWS)		Indicative Direct Pipe Alignment	
Indicative Direct Pipe Working Area			
Order Limits		Class 1. Compulsory Acquisition of land	

Description	Symbol	Description	Symbol
Class 2. Compulsory Acquisition of Rights – Overhead Line		Class 3. Compulsory Acquisition of Rights – Underground Cable System	
Class 4. Compulsory Acquisition of Rights – Construction Compound		Class 5. Compulsory Acquisition of Rights – Access	
Class 6. Compulsory Acquisition of Rights – Drainage		Class 7. Compulsory Acquisition of Rights – Mitigation	
Class 8. Temporary use for Construction, Mitigation, Maintenance, and Dismantling of Redundant Infrastructure		Class 9. Temporary Use for Access	
Class 10. Land that is not subject to powers of acquisition nor temporary use		Local Authority Boundary	
Mean High Water Spring (MHWS)		Mean Low Water Spring (MLWS)	
Crown Land – Offshore Plans		Special Category Land (Open Space)	
Crown Land and Marquess Conyngham (Reputed Ownership)		Special Category Land (Inalienable National Trust Land)	
Special Category Land (Open Space) and National Trust Land (Inalienable)		Special Category Land (Open Space) and Crown Land	

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