The Great Grid Upgrade

Eastern Green Link 3 (EGL 3) and
Eastern Green Link 4 (EGL 4)

Guide to Consultation Documents and Drawings

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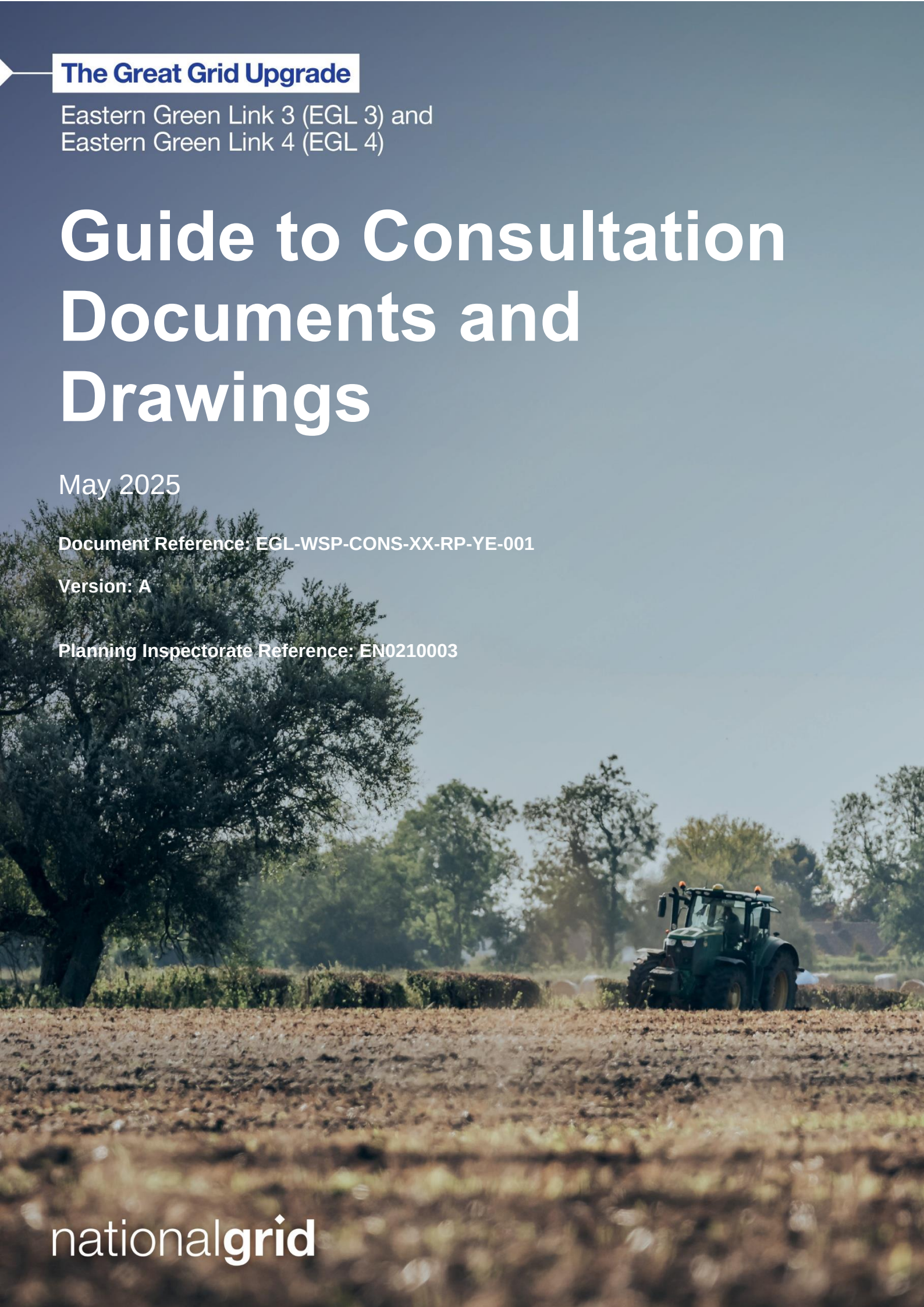

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1. Introduction

1.1 Introduction

1.1.1 Eastern Green Link 3 (EGL 3) and Eastern Green Link 4 (EGL 4) are two new 2-Gigawatt (GW) (4 GW in total) High Voltage Direct Current (HVDC) electricity links, between Scotland and England. Both EGL 3 and EGL 4 would comprise subsea and underground HVDC cables between new converter stations at each end of the electricity transmission link. These in turn are connected to the existing National Electricity Transmission System (NETS) via High Voltage Alternating Current (HVAC) cables between the new converter stations and new substations. Although EGL 3 and EGL 4 would be independent of one another, the English Onshore Scheme is being developed in parallel.

1.1.2 The Projects will facilitate the additional transmission capacity needed for the UK's commitment to connect more renewables to the electricity grid and reduce our dependence as a country on fossil fuels. The Projects will help to meet government targets to reduce carbon emissions, increase our country's energy security, and carry cleaner and more affordable energy to where it is needed.

1.1.3 EGL 3 and EGL 4 are needed as the existing transmission network does not have enough capacity to securely and reliably transport the increasing amount of energy generated in Scotland and Scottish waters, particularly from offshore wind, to population centres in the Midlands and South of England.

1.1.4 EGL 3 would run from Peterhead, Aberdeenshire, to King's Lynn and West Norfolk, and EGL 4 would run from Westfield, Fife, to a King's Lynn and West Norfolk. NGET is jointly developing EGL 3 with Scottish and Southern Electricity Networks Transmission (SSEN Transmission) and EGL 4 with SP Energy Networks. SSEN Transmission and SP Energy Networks are responsible for obtaining consent for EGL 3 and EGL 4 in Scotland and Scottish waters.

1.1.5 EGL 3 and EGL 4 will involve a combination of offshore and onshore development. Whilst these are two separate projects, we will be seeking consent for our proposals in England and English waters through one Development Consent Order (DCO). The infrastructure for EGL 3 and EGL 4 within England and English waters have been split into two geographical parts, hereafter referred to as 'the English Onshore Scheme' and 'the English Offshore Scheme', collectively termed 'the Projects'. It is these parts of EGL 3 and EGL 4 which are the subject of the consultation documents and drawings set out in this Guide.

1.1.6 Following our stage 1 (non-statutory) consultation in spring and summer 2024, we have developed our proposals and are pleased to share these with you now and seek your feedback. We encourage you to share your views on the proposed siting and what you would like to see us consider as we finalise our proposals and prepare to submit our application for development consent to the Secretary of State.

1.1.7 All documents published as part of this consultation, including this stage 2 consultation document, can be found at **nationalgrid.com/egl3andegl4** and are available on request by contacting the project team at **contactegl3and4@nationalgrid.com** or **0800 298 0405**.

1.2 Purpose of this Document

1.2.1 The purpose of this Guide to Consultation Documents and Drawings is to provide an overview of the documents and drawings published for stage 2 statutory consultation and to assist consultees with navigating the materials.

1.2.2 The Guide on the next page shows which documents provide a background to the Projects, where to find out more about the various components being Proposed, the structure of the Preliminary Environmental Information Report (PEIR), and where to find out more about the consultation process.

1.2.3 Section 3 provides further detail on each of the documents and an overview of the plans and drawings.

1.2.4 Section 4 provides a detailed list each individual drawing. The drawings have been grouped together based on their content.

Guide to Consultation Documents and Drawings

Find out more about the evolution of the Projects, from the strategic proposal, identification and selection of options and non-statutory consultation to the current design.	Find out more about the Projects, including the various components being proposed.	Find out about the preliminary assessment of the Projects' likely significant effects on receptors, including humans and the environment.	Find out information about the consultation process, and how we have responded to previous feedback.
Strategic Options Report Update	Stage 2 Consultation Document	Preliminary Environmental Information Report (PEIR) – Non-Technical Summary	Statement of Community Consultation
Design Development Report	Location Plans	PEIR – Volume 1, Part 1 – Introduction	Non-Statutory Consultation Feedback Report
	English Onshore Scheme Plans	PEIR – 1, Part 2 – English Onshore Scheme	
	English Offshore Scheme General Arrangement Plans	PEIR – Volume 1, Part 3 – English Offshore Scheme	
	English Onshore Scheme Construction & Design Drawings	PEIR – Volume 1, Part 4 – Project Wide Scheme	
	English Onshore Scheme Construction & Design Drawings – Converter Stations & Substation	PEIR – Volume 2, Appendices	
	English Offshore Scheme Construction & Design Drawings	PEIR – Volume 3, Figures	
	Converter Station Design – Background to Potential Architectural Approaches		
	Soils and Drainage Leaflet		

3. List of Documents and Drawings

3.1 Evolution of the Projects

Strategic Options Report Update

3.1.1 The purpose of the Strategic Options Report was to set out high level strategic options for EGL 3 and EGL 4 and highlight the initial seven options considered to meet NGET's needs case to increase overall capacity and provide resilience to the Grid capacity. The Strategic Options Report Update published at stage 2 statutory consultation considers the revised need case, and the strategic options for meeting this.

Design Development Report (DDR)

3.1.2 The DDR explains NGET's approach to design development, and the rationale of each design stage that the Projects have gone through to date, and summarises the outcomes of each design development stage.

3.1.3 The DDR also explains how NGET has arrived at the preferred design and options taken to statutory consultation, and why NGET is consulting on four options for Converter Station siting at Walpole.

3.2 Overview of the Projects

Stage 2 Consultation Document

3.2.1 This document is an overview document that includes an overview of our consultation approach including when we are holding public information events and webinars. The document also explains the need for EGL 3 and EGL 4, and provides details of our proposals, including construction methods.

Location Plans

Overall Location Plan

3.2.2 The Overall Location Plan identifies the draft Order Limits for both the offshore and onshore elements of EGL 3 and ELG 4.

English Onshore Scheme Key Plan

3.2.3 The English Onshore Scheme Key Plan provides an overview of the sheet numbers of the Location Plan (Onshore).

Location Plan (Onshore)

3.2.4 The Location Plan (Onshore) shows the English Onshore Scheme draft Order Limits in more detail and is split across 19 sheets.

English Onshore Scheme Plans

English Onshore Scheme General Arrangement Plans

English Onshore Scheme General Arrangement Plans

3.2.5 The English Onshore Scheme General Arrangement Plans show the proposed layout of various elements of the Projects, including the indicative cable route and indicative zones for construction compounds, underground cable assets, and temporary construction works. The General Arrangement Plans are split over 18 sheets.

English Onshore Scheme General Arrangement Plans – Walpole

3.2.6 The English Onshore Scheme General Arrangement Plans – Walpole show the proposed layout of the Projects at Walpole, for each of the four Converter Station options being consulted on (Options A, B, C and D). These Plans show the indicative zones for the Converter Stations, Indicative Walpole B substation, new overhead lines, and various other elements of the Projects. These Plans are split over four sheets (one sheet per Option).

English Onshore Scheme Access Plans

Access Plans (Onshore)

3.2.7 The Access Plans (Onshore) show indicative haul roads, access points, highway access routes, and construction compounds proposed to facilitate construction of the Projects.

Access Plans (Onshore) – Walpole

3.2.8 The English Onshore Scheme Access Plans – Walpole show indicative haul roads, access points, highway access routes, and construction compounds proposed to facilitate construction of the Projects in the Walpole area. They show additional details relating to the four Convertor Station Options (A, B, C and D). These Plans are split across eight sheets (two sheets per Option).

English Offshore Scheme General Arrangement Plans

Offshore Key Plan

3.2.9 The Offshore Key Plan provides an overview of the sheet numbers of the Offshore General Arrangements Plans.

Offshore General Arrangements Plans

3.2.10 The Offshore General Arrangement Plans show the indicative location of the English Offshore Scheme and is split across 12 sheets.

English Onshore Scheme Construction and Design Drawings

English Onshore Scheme Construction and Design Drawings

3.2.11 The English Onshore Scheme Construction and Design Drawings include a number of plans which provide an overview of ‘typical’ construction methods, designs and materials likely to be used during the construction phase of the English Onshore Scheme. Plans include details of cable laying, construction compounds, highway access from construction compounds, and more.

English Onshore Scheme Construction and Design Drawings – Converter Stations and Substation

Typical Converter Station 3D Isometric View

3.2.12 The Typical Converter Station 3D Isometric View drawing shows an example Converter Station design.

Typical Converter Station Outline Layout

3.2.13 The Typical Converter Station Outline Layout drawing shows a ‘typical’ layout of a Convertor Station, including ancillary locations of ancillary buildings, equipment, parking and more.

Typical Converter Station Construction Compound

3.2.14 The Typical Converter Station Construction Compound drawing shows an example layout of a construction compound used to facilitate construction of a Convertor Station, including examples of how materials, equipment, parking etc could be accommodated within the compound.

Walpole B Substation Layout Plan

3.2.15 The Walpole B Substation Layout Plan shows the proposed layout of the new Substation at Walpole, including indicative zones for construction activities, underground cable assets, environmental mitigation, and more.

Walpole B Substation Layout Plan (Schematic)

3.2.16 The Walpole B Substation Layout Plan (Schematic) shows the proposed layout the Substation plant.

English Offshore Scheme Construction and Design Drawings

3.2.17 The English Offshore Scheme Construction and Design Drawings include plans which provide an overview of ‘typical’ construction methods, materials, equipment and designs likely to be used during the construction phase of the English Offshore Scheme. Plans include details of cable installation, horizontal directional drilling (HDD) landfall connection, and more.

Converter Station Design – Background to Potential Architectural Approaches

3.2.18 This document has been prepared to provide a summary of the design process that is currently being followed in order to develop architectural design approaches and design principles that could be applied to the converter stations. These suggestions of design approaches are being developed in parallel to the process of selection of the preferred locations for the siting of the converter stations and Walpole B Substation in the Walpole area, which are being consulted upon as part of the statutory consultation

Soils and Drainage Leaflet

3.2.19 This leaflet explains NGET's approach to the management of soils impacted during the construction of the Projects through installation of underground electricity cables, and management of associated pre and post-construction land drainage.

3.3 Preliminary Assessment of Environmental Effects

Preliminary Environmental Information Report (PEIR) – Non-Technical Summary (NTS)

3.3.1 The PEIR NTS presents a summary of the information and preliminary environmental impact assessment undertaken to date, as set out in the PEIR. It is written in non-technical language. The aim of this NTS is to enable the local communities and other stakeholders to understand the likely environmental effects arising from the Projects, based on the preliminary information and assessment undertaken to date (and as reported in the PEIR), in a concise manner which is easily understood and accessible by all.

PEIR – Volume 1, Part 1 – Introduction

3.3.2 Part 1 of Volume 1 introduces the PEIR and includes the project description, main alternatives considered and the approach to the PEIR.

PEIR – Volume 1, Part 2 – English Onshore Scheme

3.3.3 Part 2 of Volume 1 includes the preliminary assessment of the English Onshore Scheme's likely significant effects on environmental receptors across the following topic areas:

- Biodiversity
- Historic Environment
- Landscape and Visual
- Water Environment
- Geology and Hydrology
- Agriculture and Soils
- Traffic and Transport
- Noise and Vibration

- Air Quality
- Socio-economics, Recreation and Tourism
- Health and Wellbeing

PEIR – Volume 1, Part 3 – English Offshore Scheme

3.3.4 Part 3 of Volume 1 includes the preliminary assessment of the English Offshore Scheme's likely significant effects on environmental receptors across the following topic areas:

- Designated Sites
- Coastal and Marine Physical Processes
- Intertidal and Subtidal Benthic Ecology
- Fish and Shellfish Ecology
- Intertidal and Offshore Ornithology
- Marine Mammals and Marine Reptiles
- Shipping and Navigation
- Commercial Fisheries
- Other marine users
- Marine Archaeology

PEIR – Volume 1, Part 4 – Project Wide Scheme

3.3.5 Part 4 of Volume 1 includes the preliminary assessment of project wide topic areas, including greenhouse gas emissions and a cumulative effects assessment.

PEIR – Volume 2, Appendices

3.3.6 Volume 2 contains the appendices for the PEIR Chapters. The appendices references are based on the corresponding PEIR volume and chapter, as follows:

- The first number references the PEIR volume.
- The second number references the PEIR chapter.
- The third element will be a letter. The letters simply relate to the order in which the appendix comes within the relevant chapter (ie A, B C).

3.3.7 For example, based on the above method, an appendix with a reference of 2.3.B relates to PEIR Volume 2, Chapter 3.

PEIR – Volume 3, Figures

3.3.8 Volume 3 contains the figures for the PEIR Chapters. The figure references are based on their corresponding PEIR chapter, as follows:

- The first number references the PEIR chapter.
- The second number simply relates to the order in which the appendix comes within the relevant chapter (ie 1, 2, 3).

3.3.9 For example, based on the above method, a figure with a reference of 10-1 will the first figure of PEIR Chapter 10.

3.4 The Consultation Process

Statement of Community Consultation (SoCC)

3.4.1 The SoCC sets out our approach to consulting with the local community on our proposals and has been developed in consultation with all relevant local authorities in the areas affected by the Projects.

Non-Statutory Consultation Feedback Report

3.4.2 The Non-Statutory Consultation Feedback Report summarises the feedback we received during the 2024 stage 1 non-statutory consultation and how it has been considered in developing the design.

4. List of Plans

Table 4.1 - List of Location Plans

Plan Title	Drawing Reference
Location Plans	
Overall Location Plan	S42/OLP/SS/1001 Rev 02
English Onshore Scheme Key Plan	S42/MKP/SS/0001 Rev 02
Location Plan (Onshore) (Sheets 1 - 19)	S42/OLP/PS/0001 Rev 02 S42/OLP/PS/0002 Rev 02 S42/OLP/PS/0003 Rev 02 S42/OLP/PS/0004 Rev 02 S42/OLP/PS/0005 Rev 02 S42/OLP/PS/0006 Rev 02 S42/OLP/PS/0007 Rev 02 S42/OLP/PS/0008 Rev 02 S42/OLP/PS/0009 Rev 02 S42/OLP/PS/0010 Rev 02 S42/OLP/PS/0011 Rev 02 S42/OLP/PS/0012 Rev 02 S42/OLP/PS/0013 Rev 02 S42/OLP/PS/0014 Rev 02 S42/OLP/PS/0015 Rev 02 S42/OLP/PS/0016 Rev 02 S42/OLP/PS/0017 Rev 02 S42/OLP/PS/0018 Rev 02 S42/OLP/PS/0019 Rev 02

Table 4.2 – List of English Onshore Scheme Plans

Plan Title	Drawing Reference
English Onshore Scheme General Arrangement Plans	
Onshore General Arrangements (Sheets 1 - 18)	S42/IGA/PS/0001 Rev 02 S42/IGA/PS/0002 Rev 02 S42/IGA/PS/0003 Rev 02 S42/IGA/PS/0004 Rev 02 S42/IGA/PS/0005 Rev 02 S42/IGA/PS/0006 Rev 02 S42/IGA/PS/0007 Rev 02

		S42/IGA/PS/0008 Rev 02 S42/IGA/PS/0009 Rev 02 S42/IGA/PS/0010 Rev 02 S42/IGA/PS/0011 Rev 02 S42/IGA/PS/0012 Rev 02 S42/IGA/PS/0013 Rev 02 S42/IGA/PS/0014 Rev 02 S42/IGA/PS/0015 Rev 02 S42/IGA/PS/0016 Rev 02 S42/IGA/PS/0017 Rev 02 S42/IGA/PS/0018 Rev 02
Onshore General Arrangements (Walpole)	*Option A* *Option B* *Option C* *Option D*	S42/IGA/PS/1001 Rev 02 S42/IGA/PS/1002 Rev 02 S42/IGA/PS/1003 Rev 02 S42/IGA/PS/1004 Rev 02
English Onshore Scheme Access Plans		
Onshore Access Plans (Sheets 1 - 17)		S42/IAA/PS/0001 Rev 02 S42/IAA/PS/0002 Rev 02 S42/IAA/PS/0003 Rev 02 S42/IAA/PS/0004 Rev 02 S42/IAA/PS/0005 Rev 02 S42/IAA/PS/0006 Rev 02 S42/IAA/PS/0007 Rev 02 S42/IAA/PS/0008 Rev 02 S42/IAA/PS/0009 Rev 02 S42/IAA/PS/0010 Rev 02 S42/IAA/PS/0011 Rev 02 S42/IAA/PS/0012 Rev 02 S42/IAA/PS/0013 Rev 02 S42/IAA/PS/0014 Rev 02 S42/IAA/PS/0015 Rev 02 S42/IAA/PS/0016 Rev 02 S42/IAA/PS/0017 Rev 02
Onshore Access Plans (Walpole)	*Option A (Sheets 1 - 2)* *Option B (Sheets 1 - 2)* *Option C (Sheets 1 - 2)* *Option D (Sheets 1 - 2)*	S42/IAA/PS/1001 Rev 02 S42/IAA/PS/1002 Rev 02 S42/IAA/PS/1003 Rev 02 S42/IAA/PS/1004 Rev 02 S42/IAA/PS/1005 Rev 02 S42/IAA/PS/1006 Rev 02 S42/IAA/PS/1007 Rev 02 S42/IAA/PS/1008 Rev 02

Table 4.3 - List of English Offshore Scheme General Arrangement Plans

Plan Title	Drawing Reference
English Offshore Scheme General Arrangement Plans	
Offshore Key Plan	C01494-EGL3&4-LOC-009-A Rev 01
Offshore General Arrangements (Sheets 1 - 12)	C01494-EGL3&4-LOC-010-A Rev 01 C01494-EGL3&4-LOC-011-A Rev 01 C01494-EGL3&4-LOC-012-A Rev 01 C01494-EGL3&4-LOC-013-A Rev 01 C01494-EGL3&4-LOC-014-A Rev 01 C01494-EGL3&4-LOC-015-A Rev 01 C01494-EGL3&4-LOC-016-A Rev 01 C01494-EGL3&4-LOC-017-A Rev 01 C01494-EGL3&4-LOC-018-A Rev 01 C01494-EGL3&4-LOC-019-A Rev 01 C01494-EGL3&4-LOC-020-A Rev 01 C01494-EGL3&4-LOC-021-A Rev 01

Table 4.4 - List of English Onshore Scheme Construction and Design Drawings

Plan Title	Drawing Reference
English Onshore Scheme Construction & Design Drawings	
Typical HVAC Construction Swathes	S42/TDD/SS/0002 Rev 01
Typical HVAC Joint Bay	S42/TDD/SS/0005 Rev 01
Typical HVAC Road Ducted Crossing	S42/TDD/SS/0008 Rev 01
Typical HVAC Trenchless Crossing Compound	S42/TDD/SS/0017 Rev 01
Typical HVAC Watercourse Ducted Crossing	S42/TDD/SS/0009 Rev 01
Typical HVDC Construction Swathes	S42/TDD/SS/0001 Rev 01
Typical HVDC Joint Bay	S42/TDD/SS/0003 Rev 01
Typical HVDC Transition Joint Bay	S42/TDD/SS/0004 Rev 01
Typical HVDC Road Ducted Crossing	S42/TDD/SS/0006 Rev 01
Typical HVDC Watercourse Ducted Crossing	S42/TDD/SS/0007 Rev 01
Typical HVDC Trenchless Crossing Compound	S42/TDD/SS/0016 Rev 01
Typical Cable Construction Compound	S42/TDD/SS/0014 Rev 01
Typical Circular Culvert	S42/TDD/SS/0011 Rev 01
Typical Bridge Crossing	S42/TDD/SS/0012 Rev 01
Typical Box Culvert	S42/TDD/SS/0010 Rev 01
Typical Bellmouth and Visibility Splay	S42/TDD/SS/0013 Rev 01

Table 4.5 - List of English Onshore Scheme Construction and Design Drawings – Converter Stations and Substation

Plan Title	Drawing Reference
English Onshore Scheme Construction & Design Drawings – Converter Stations & Substation	
Typical Converter Station 3D Isometric View	S42/TDD/SS/0019 Rev 01
Typical Converter Station Outline Layout	S42/TDD/SS/0018 Rev 01
Typical Converter Station Construction Compound	S42/TDD/SS/0015 Rev 01
Walpole B Substation Layout Plan	PDD-100944_LAY_309 Rev A
Walpole B Substation Layout Plan (Schematic)	PDD-100944_LAY_310 Rev A

Table 4.6 – List of English Offshore Scheme Construction and Design Drawings

Plan Title	Drawing Reference
English Offshore Scheme Construction & Design Plans	
Illustration of Unexploded Ordnance, Removal and Detonation	S42/ODD/0001 Rev 01
Illustration of Boulder Clearance	S42/ODD/0002 Rev 01
Illustration of Pre Lay Grapnel Run	S42/ODD/0003 Rev 01
Illustration of Indicative Pre-Sweeping and Sidecasting	S42/ODD/0004 Rev 01
Illustration of Simultaneous Lay and Burial	S42/ODD/0005 Rev 01
Illustration of Lay and Post-Lay Burial	S42/ODD/0006 Rev 01
Illustration of Omega Inline Joint	S42/ODD/0007 Rev 01
Illustration of HVDC Bundled Cable Profile/Configuration	S42/ODD/0008 Rev 01
Illustration of Typical Marine Trench Profiles	S42/ODD/0009 Rev 01
Indicative HVDC Bundled Cable Crossing Over Unburied FO/Telecomms Asset	S42/ODD/0010 Rev 01

Indicative HVDC Bundled Cable Crossing Over Buried FO/Telecomms Asset	S42/ODD/0011 Rev 01
Indicative HVDC Bundled Cable Crossing Over Buried Power Cable Asset	S42/ODD/0012 Rev 01
Indicative HVDC Bundled Cable Crossing Over Pre Lay Berm	S42/ODD/0013 Rev 01
Indicative Rock Berm Schematics Pre Lay and Post Lay	S42/ODD/0014 Rev 01
Illustration of Cable Protection Systems	S42/ODD/0015 Rev 01
Illustration of Rock Placement Sections	S42/ODD/0016 Rev 01
Illustration of Typical HDD Landfall	S42/ODD/0017 Rev 01

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