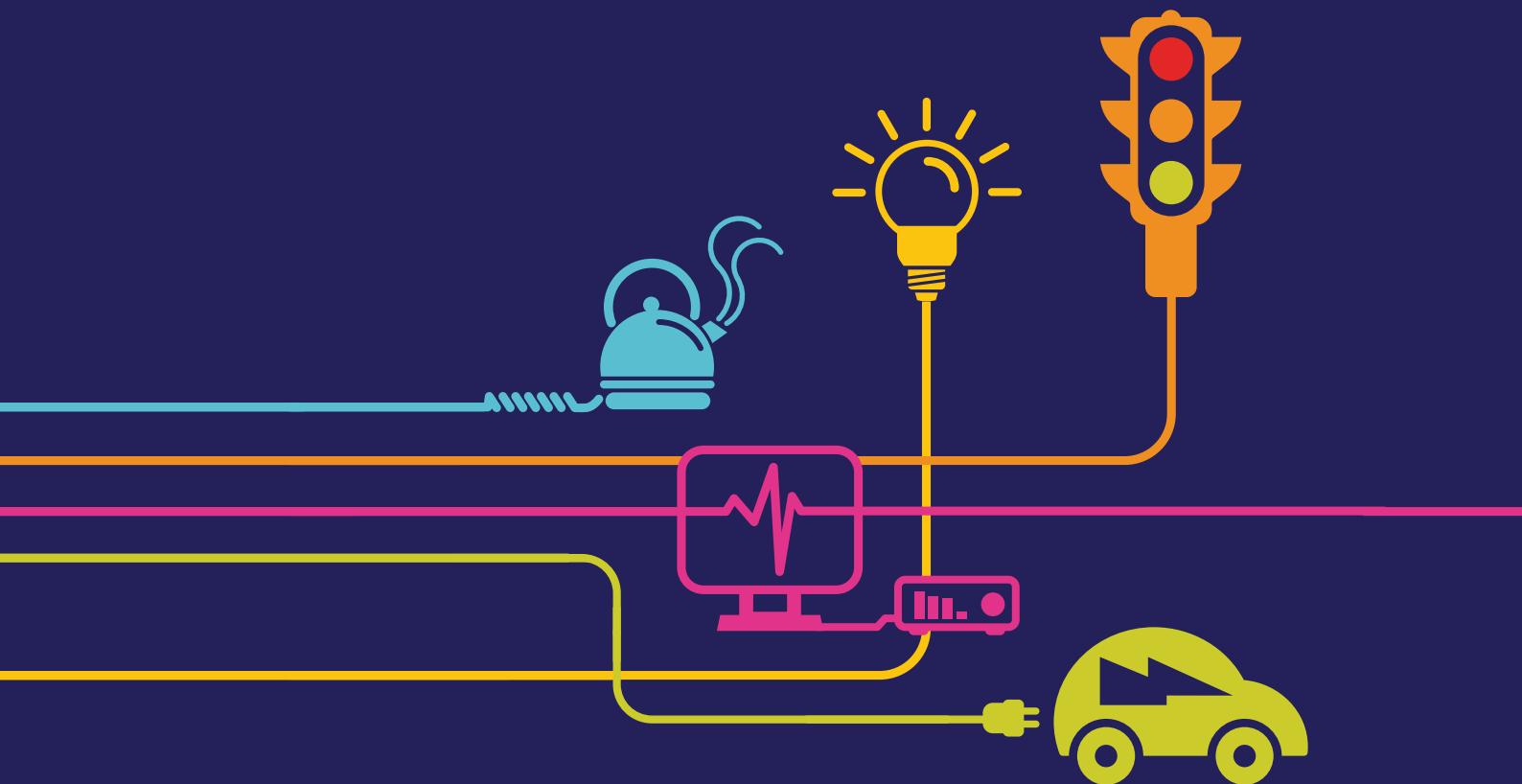


## Environmental Statement Introduction

Hinkley Point C Connection Project

*Regulation 5(2)(a) of the Infrastructure Planning  
(Applications: Prescribed Forms and Procedure)  
Regulations 2009*





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**Hinkley Point C Connection Project**

**ENVIRONMENTAL STATEMENT – MAY 2014**

**VOLUME 5.1.1, CHAPTER 1 – INTRODUCTION**



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# 1 INTRODUCTION

## 1.1 General Introduction

1.1.1 This Environmental Statement (ES) accompanies an application by National Grid Electricity Transmission plc (National Grid) to seek powers to construct, operate and maintain a new 400,000 volt (400kV) connection between Bridgwater, Somerset and Seabank Substation, north of Avonmouth, together with various associated development and other works ("the Proposed Development"). The Proposed Development (summarised at section 1.4) is in the administrative boundaries of Somerset County, North Somerset, West Somerset, City of Bristol, Sedgemoor and South Gloucestershire in the southwest of England, as shown at **Volume 5.1.2, Figure 1.1**.

1.1.2 That part of the Proposed Development that comprises an electric line above ground within section 16 of the Planning Act 2008 is a Nationally Significant Infrastructure Project (NSIP) for the purposes of that Act. Under Section 31 of the Planning Act 2008, development consent is required for development to the extent that it is or forms part of an NSIP. Development consent is granted by the making of a Development Consent Order (DCO) for which application may be made under section 37 of the Planning Act 2008.

1.1.3 This ES has been prepared in accordance with the Planning Act 2008, The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2009/2263) ('the 2009 Regulations') and The Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009.

1.1.4 A range of guidance documents has also been used in the preparation of the ES; specifically in **Volume 5.5.1: Environmental Impact Assessment (EIA) Approach and Method**, and the environmental topic chapters 6 – 16 at **Volumes 5.6 to 5.16**. Where guidance has been used to inform the assessments, references are provided in the chapter.

1.1.5 This chapter of the ES provides an overview of the applicant and the Proposed Development for which the DCO is being sought; the consultation process to date and compliance with relevant legislation and policies.

## 1.2 The Applicant

1.2.1 National Grid operates the high voltage electricity transmission system in Great Britain and owns the system in England and Wales. The system operates mainly at 400,000 and 275,000 volts, connecting the electricity generators to substations where the high voltages are transformed to lower voltages, enabling the power to be distributed to homes and businesses by Distribution Network Operators (DNO) who operate at a maximum of 132,000 volts.

1.2.2 National Grid is the only company licenced to transmit electricity in England and Wales. National Grid's Transmission Licence was granted under the Electricity Act 1989, Section 6 (1) (b).

1.2.3 DNOs own and operate the distribution network of pylons and cables that bring electricity from the national grid transmission network to homes and businesses. Western Power Distribution Ltd ("WPD") is the DNO for the Midlands and South West of England, and South Wales.

1.2.4 When developing proposals for new network infrastructure, National Grid has a duty under the Electricity Act 1989 to do so in an efficient, co-coordinated and economical way.

1.2.5 National Grid is also required, under S38 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:

*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*

*Schedule 9(1)(b) "do what he 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".*

1.2.6 In the environmental topic chapters, this ES includes assessments of all of the environmental aspects listed in Schedule 9(1)(a) and includes proposals for mitigation as required under Schedule 9(1)(b).

### **1.3 Project Need**

1.3.1 The existing transmission system in South West England and South Wales has adequate capacity and resilience for current levels of generation and demand. However, the electricity industry is undergoing unprecedented changes in the drive towards a low-carbon economy, which is seeing major investment in low-carbon generation. These new generation projects need connections to the transmission system and in some places that means additional transmission capacity is required.

1.3.2 Under the terms of its transmission licence, National Grid is obliged to make an offer of connection in response to each valid application made. In September 2007, National Grid received an application for the connection of a proposed new nuclear power station at Hinkley Point, Somerset (Hinkley Point C Power Station) to the high voltage electricity transmission system.

1.3.3 This connection, as well as others in the South West and South Wales, triggered the need for new transmission capacity in the region.

1.3.4 Further information is provided in **Volume 5.2.1** and a detailed explanation of the need for the Proposed Development is contained in the National Grid Need Case (Ref 1.1).

## 1.4 Project Overview

1.4.1 **Volume 5.1.2, Figure 1.1 and Volume 5.3.3, Figures 3.1 and 3.2** illustrate the Proposed Development.

1.4.2 The Proposed Development consists of the following principal components and activities:

- construction of a 57km 400kV electricity transmission connection between Bridgewater in Somerset and Seabank, near Avonmouth, comprising:
  - installation of a 400kV overhead line; and
  - installation of 400kV underground cables.
- modifications to existing overhead lines at Hinkley Point, Somerset;
- construction of three 400kV cable sealing end (CSE) compounds along the route of the connection;
- construction of a 400/132kV substation at Sandford, North Somerset;
- extension of the existing 400kV substation at Seabank;
- the removal of existing 132kV overhead lines and the construction of replacement 132kV overhead lines and 132kV underground cables;
- extensions/modifications to existing 132kV substations at Churchill, Portishead, Avonmouth and Seabank; and
- associated works, for example temporary access roads, highway works, temporary construction compounds, scaffolds, work sites and ancillary works.

1.4.3 A more detailed description of the Proposed Development is provided at **Volume 5.3.1** and the components described above are shown at **Volume 5.3.3, Figures 3.1 – 3.6**. This ES is supported by a number of figures (drawings) and appendices provided at **Volumes 5.1 – 5.19** and should be read with these figures available for reference, as they assist the understanding of the descriptions and assessments presented in the text.

## 1.5 Consultation and Engagement

1.5.1 Over the past four years, National Grid has undertaken consultation to help shape the route and design of the Proposed Development and the Environmental Impact Assessment of it. These are summarised below; details are provided in the Consultation Report at **Volume 6.1**; text describing how National Grid has considered representations at each consultation stage is provided in **Volume 5.2.1**.

1.5.2 Public consultation has taken place in stages as follows:

- Stage 1A and 1B (2009 to 2011): The findings of the Route Corridor Study formed the basis for an extensive Stage 1 Consultation exercise. In response to requests for further information National Grid published more detail on the

technical issues involved in building subsea and underground cables, together with more background on the proposals. The Stage 1 Consultation was also reopened to allow members of the public to provide additional feedback. This extension to the Stage 1 Consultation process is referred to as Stage 1B Consultation.

- Stage 2: After the Stage 1A and 1B Consultations were undertaken National Grid adopted a new corporate approach to the design and routeing of new electricity transmission lines. To align with this approach the Hinkley Point C Connection project moved directly to Stage 3, as Stage 2 had been undertaken as part of the Stage 1A and Stage 1B Consultations.
- Stage 3 (2011 to 2012): This began in September 2011, when National Grid announced the preferred route corridor for the proposed connection. In summer 2012 further consultation asked about what mattered to people and their communities. This included asking for feedback on the proposals for the local electricity network. In November 2012 the draft route for the proposed connection was announced and feedback was sought.
- Stage 4: Statutory consultation in line with section 42 and 47 of the Planning Act 2008 was held between 3 September and 29 October 2013. This included publication of the Preliminary Environmental Information Report (PEIR).

1.5.3 Some consultation and stakeholder engagement was of particular relevance to the ES: in so far as it has informed the following:

- What was assessed; the scope of the EIA. Early in the Scoping Stage, Thematic Groups involving key stakeholders such as Local Planning Authority specialists and statutory consultees were established for Biodiversity, Landscape and Views and Historic Environment. These groups provided advice on baseline conditions and the scope of the assessment. The Scoping Report was published In April 2013; a formal Scoping Opinion was received and responded to in the next stage of the ES.
- The Preliminary Assessment; the Statutory Stage 4 Consultation. The PEIR built on the Scoping Report, taking account of representations at Scoping Stage, and provided high level information on the potential effects of the Proposed Development. The report was consulted upon and the representations received helped to inform the assessments in the ES.
- Following the publication of the PEIR stakeholder engagement has included further Thematic Group meetings, topic specific meetings and one to one meetings with stakeholders and statutory consultees, to inform more detailed assessment and subsequent mitigation strategies.
- Short periods of written engagement have also taken place to determine the method and projects covered in the cumulative effects assessment and to inform the assessments and mitigation measures in the post Design Freeze Draft ES.

1.5.4 Further details of the consultation and engagement of relevance to the ES are provided in **Volume 5.5.1, sections 5.4 and 5.5** and **Volume 5.5.2, Appendices 5B and 5C**. In addition, each topic chapter (**Volume 5.6 to 5.16**) include key issues arising from the consultations at **section X.1**.

## **1.6 Policy and Legislation**

1.6.1 The EIA process and the published ES are subject to a number of legislative and policy requirements. This section identifies each of these requirements and provides detail on how the EIA and ES comply with those requirements.

### **Requirements of Schedule 4 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (“the EIA Regulations”)**

1.6.2 Schedule 4 identifies ‘Information for inclusion in the ES’, which should be compiled by the applicant and is reasonably required to assess the environmental effects of the Proposed Development and any associated development.

1.6.3 The information referred to in Schedule 4 is listed in **Table 1.1** alongside the location at which it has been addressed in this ES.

Table 1.1 Compliance with the Requirements of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009

Para	Requirements	ES Location
<b>Regulation 6 Procedure for Establishing whether an EIA is Required</b>		
6 (1) And (3)	<p>A person who proposes to make an application for an order granting development consent must, before carrying out consultation under section 42 (duty to consult) either:</p> <p>(a) request the Secretary of State to adopt a screening opinion in respect of the development to which the application relates; or</p> <p>(b) notify the Secretary of State in writing that the person proposes to provide an ES in respect of that development.</p>	<p>A screening opinion was not required as National Grid determined that the Proposed Development would require EIA under Schedule 2 Part 3 (Energy Industry) of the 2009 Regulations.</p> <p>National Grid notified the Planning Inspectorate in writing on 16 April 2013 of its intention to provide an ES. Further information is provided in <b>Volume 5.5.1</b> (EIA Approach and Method).</p>
<b>Regulation 8 Application for a Scoping Opinion</b>		
8 (1) and (3)	<p>A person who proposes to make an application for an order granting development consent may ask the Secretary of State to state in writing its opinion as to the information to be provided in the ES.</p>	<p>The Scoping Report for the Proposed Development was published and submitted to the Planning Inspectorate on 16 April 2013.</p> <p>Details relating to the Scoping Report and the request for a Scoping Opinion are located in <b>Volume 5.5.1</b> (EIA Approach and Method).</p>
<b>Regulation 10 Consultation Requirements</b>		
10	<p>6.1 The consultation statement prepared under section 47 (duty to consult local community) must set out:</p> <p>(a) whether the development for which the applicant proposes to make an application for an order granting development consent is EIA development; and</p> <p>(b) if that development is EIA development, how the applicant intends to publicise and consult on the preliminary environmental information.</p>	<p>Statutory consultation in line with section 42 and 47 of the Planning Act 2008 was held between 3 September and 29 October 2013.</p> <p>The Statement of Community Consultation (August 2013) sets out how National Grid intended to publicise and consult on the preliminary environmental information.</p> <p>The PEIR was published in August 2013. This provided stakeholders with preliminary assessments, in accordance with Schedule 4, of the Proposed Development as designed at that stage. <b>Volume 5.5.1</b> (EIA Approach and Method) provides further detail on the PEIR and its role in the EIA and project development process.</p>

Para	Requirements	ES Location
<b>Regulation 11 Pre-application Publicity under S48 (duty to publicise)</b>		
11	Where the proposed application for an order granting development consent is an application for EIA development, the applicant must, at the same time as publishing notice of the proposed application under section 48(1), send a copy of that notice to the consultation bodies and to any person notified to the applicant in accordance with regulation 9(1)(c).	A copy of the S48 notice was sent to the EIA consultation bodies on 2 September 2013
<b>Schedule 4, Part 1 (of the 2009 Regulations)</b>		
17(1)(a)	A description of the physical characteristics of the Proposed Development	<b>Volume 5.3.1, section 3.7 (Project Description)</b>
17(1)(b)	A description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;	<b>Volume 5.3.1, section 3.5 (Project Description)</b>

Para	Requirements	ES Location
17(1)(c)	<p>An estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation etc.) resulting from the operation of the Proposed Development;</p>	<p>The following chapters estimate expected residues and emissions:</p> <ul style="list-style-type: none"> <li>• <b>Volume 5.9.1:</b> Ground Environment assesses potential emissions of relevance to groundwater and soils; the chapter also considers, at a high level, the risks of unearthing contaminated land during the construction phase and the creation of preferential pathways to controlled waters.</li> <li>• <b>Volume 5.10.1:</b> Hydrology and Water Resources considers the potential for releases to the surface water environment, including accidental releases (e.g. silty water runoff).</li> <li>• Air: potential emissions to air are assessed in <b>Volume 5.13.1:</b> Air Quality and Emissions.</li> <li>• Noise and Vibration: an assessment of potential noise and vibration effects of the Proposed Development is provided at <b>Volume 5.14.1:</b> Noise and Vibration</li> <li>• <b>Volume 5.8.1:</b> Biodiversity and Nature Conservation and <b>Volume 5.20</b> Applicant's Report to Support Habitats Regulations Assessment assess the potential effects of lighting on fauna, especially bats and breeding birds.</li> <li>• <b>Volume 5.8.1</b> provides an assessment of the potential effects of heating from underground cables on aquatic and terrestrial fauna.</li> <li>• <b>Volume 5.10.1</b> provides an assessment of the potential heating effects from underground cables on watercourses. Also included in this chapter and <b>Volume 5.8.1</b> is consideration of heat on the Lox Yeo in the Water Framework Directive assessment for this river.</li> <li>• EMF: electric and magnetic fields associated with the proposed Development are assessed in <b>Volume 5.16.1.</b></li> </ul>
18	<p>An outline of the main alternatives considered and the main reasons for the applicant's choice taking into account the environmental effects;</p>	<p><b>Volume 5.2.1</b> (Project Need and Alternatives)</p>

Para	Requirements	ES Location
19	<p>A description of the aspects of the environment likely to be significantly affected by the Proposed Development including population, fauna, flora, soil, water, air, climatic factors material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between these factors;</p>	<p>Population: potential effects on population are assessed in the following documents:</p> <ul style="list-style-type: none"> <li>• <b>Volume 5.7.1</b> (Visual Effects)</li> <li>• <b>Volume 5.12.1</b> (Traffic and Transport)</li> <li>• <b>Volume 5.22</b> (Transport Assessment (TA))</li> <li>• <b>Volume 5.13.1</b> (Air Quality and Emissions)</li> <li>• <b>Volume 5.14.1</b> (Noise and Vibration)</li> <li>• <b>Volume 5.15.1</b> (Socio-economics and Land Use)</li> <li>• <b>Volume 5.16.1</b> (EMF)</li> </ul>
		<p>Fauna and flora: potential effects on fauna and flora are assessed in the following documents:</p> <ul style="list-style-type: none"> <li>• <b>Volume 5.8.1</b> (Biodiversity and Nature Conservation)</li> <li>• <b>Volume 5.20</b> (Applicant's Draft Habitat Regulation Assessment Report)</li> </ul>
		<p>Water: potential effects on water is assessed in the following documents:</p> <ul style="list-style-type: none"> <li>• <b>Volume 5.8.1</b> (Biodiversity and Nature Conservation)</li> <li>• <b>Volume 5.9.1</b> (Ground Environment)</li> <li>• <b>Volume 5.10.1</b> (Hydrology and Water Resources)</li> </ul>
		<p>Soil: potential effects on soil are assessed in the following documents:</p> <ul style="list-style-type: none"> <li>• <b>Volume 5.9.1</b> (Ground Environment)</li> <li>• <b>Volume 5.15.1</b> (Socio Economics and Land Use)</li> </ul>
		<p>Air: potential effects on air are assessed in <b>Volume 5.13.1</b> (Air Quality)</p>
		<p>Climatic Factors: potential effects on and as a result of climate change are assessed in all environmental topic chapters, <b>Volumes 5.6 to 5.16</b> in the Assessment sections.</p>

Para	Requirements	ES Location
		<p>Material assets:</p> <ul style="list-style-type: none"> <li>an assessment of material proposed to be used (resource consumption) is provided in <b>Volume 5.3.1</b> (Project Description)</li> <li>an assessment of likely waste arisings from the Proposed Development is provided at <b>Volume 5.26.2</b> (Outline Waste Management Plan (Outline WMP))</li> <li>an assessment of architectural and archaeological heritage is provided at <b>Volume 5.11.1</b> (Historic Environment)</li> </ul> <p>Landscape: potential effects on landscape are assessed in <b>Volume 5.6.1</b> (Landscape)</p> <p>Inter-relationship of effects: the inter-relationship of effects between environmental aspects is assessed in each environmental topic chapter, <b>Volume 5.6 to 5.16</b>.</p>
20	<p>A description of the likely significant effects of the Proposed Development (resulting from the existence of the development, the use of natural resources, the emission of pollutants, the creation of nuisances and the elimination of waste) on the environment including direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects;</p>	<p>These descriptions are provided in <b>Volumes 5.6.1 to 5.16.1</b>: environmental topic assessments, as described for regulations 17 and 19 (above).</p> <p>The assessments are based upon generic assessment guidance as set out in <b>Volume 5.5.1</b>, industry standard guidelines, liaising with stakeholders and professional judgements. All environmental topic chapters include a section on Method which describes the approach used. All methods include an assessment of direct, indirect, secondary, short, medium and long term, permanent and temporary, positive and negative effects.</p> <p>Cumulative effects are provided in <b>Volume 5.17</b>.</p> <p>Waste arisings and management are addressed in <b>Volume 5.26.2</b> (Outline WMP).</p>
20	<p>A description of the forecasting methods used to assess the effects on the environment;</p>	<p><b>Volume 5.5.1</b> (EIA Approach and Method)</p> <p><b>Volumes 5.6.1 to 5.16.1</b>: Topic assessments; each assessment chapter includes a section on method. These are <b>section X.3</b> in all except <b>Volume 5.14.1</b>, Noise and Vibration where method is in <b>section 14.2</b>.</p>

Para	Requirements	ES Location
21	A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment;	<b>Volumes 5.6 to 5.16:</b> Topic assessments. Each assessment chapter includes a section on mitigation. These are <b>section X.7</b> in all except <b>Volume 5.7 (section 7.8), Volume 5.12 (section 12.8) and Volume 5.14 (section 14.6).</b>  <b>Volume 5.26</b> Draft Construction Environmental Management Plan (CEMP) and its Appendices
22	A non-technical summary of the information provided above; and	<b>Volume 5.19</b> (Non-Technical Summary)
23	An indication of any difficulties (technical deficiencies or lack of know-how) encountered in compiling the required information.	Assumptions and limitations are included in:  <b>Volume 5.5.1</b> (EIA Approach and Method)  <b>Volumes 5.6 to 5.16:</b> Topic assessments. Each assessment chapter includes a section on mitigation. These are <b>section X.7</b> in all except <b>Volume 5.7.1 (section 7.8), Volume 5.12.1 (section 12.8) and Volume 5.14.1 (section 14.6).</b>

### **Requirements of Regulation 5 of the Infrastructure Planning (Application: Prescribed Form and Procedure) Regulations 2009**

1.6.4 Section 5(2) of the Regulations lists the documents which must accompany the application for a DCO. Those which form part of the ES suite of documents are listed in **Table 1.2** along with the relevant Volume of the ES.

Table 1.2 Prescribed Forms and Procedure

Required Documents in Section 5(2) of the Regulations	Location In ES Suite
(a) the environmental statement required pursuant to the EIA Regulations and any scoping or screening opinions or directions	The Environmental Statement for the Proposed development is provided in <b>Volumes 5.1 to 5.19</b> ; the Scoping Opinion and the response are provided at <b>Volume 5.5.2, Appendices 5A and 5B</b> .
(e) a copy of any flood risk assessment (FRA)	<b>Volume 5.23</b> includes FRAs for:  - Bridgwater Tee CSE Compounds - South of Mendip Hills CSE Compound - Sandford Substation - Seabank Substation - Route FRA

Required Documents in Section 5(2) of the Regulations	Location In ES Suite
(f) a statement whether the proposal engages one or more of the matters set out in section 79(1) (statutory nuisances and inspections therefore) of the Environmental Protection Act 1990 <sup>(2)</sup> , and if so how the applicant proposes to mitigate or limit them	This is provided in Statement of Statutory Nuisance at <b>Volume 5.24</b>
(g) any report identifying any European site to which regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994 <sup>(3)</sup> applies, or any Ramsar site <sup>(4)</sup> , which may be affected by the proposed development, together with sufficient information that will enable the Commission to make an appropriate assessment of the implications for the site if required by regulation 48(1)	This is addressed in <b>Volume 5.20</b> , Applicant's Report to Support Habitats Regulations Assessment
<ul style="list-style-type: none"> <li>• (l)where applicable, a plan with accompanying information identifying— <ul style="list-style-type: none"> <li>• (i)any statutory or non-statutory sites or features of nature conservation such as sites of geological or landscape importance;</li> <li>• (ii)habitats of protected species, important habitats or other diversity features; and</li> <li>• (iii)water bodies in a river basin management plan,</li> </ul> </li> </ul> <p>together with an assessment of any effects on such sites, features, habitats or bodies likely to be caused by the proposed development;</p>	
(m) where applicable, a plan with accompanying information identifying any statutory or non-statutory sites or features of the historic environment, including scheduled monuments, World Heritage sites, listed buildings and other historic structures, archaeological sites and registered battlefields, together with an assessment of any effects on such sites, features or structures likely to be caused by the proposed development	This is addressed in <b>Volume 5.11.1</b> and <b>Volume 5.26.4</b> Outline Written Scheme of Investigation (WSI)

### **Overarching National Policy Statement EN-1**

1.6.5 National Policy Statements (NPS) are of primary importance to the decision-making process when DCO applications are under consideration. Section 104 of the Planning Act 2008 (as amended) states:

*(2) In deciding the application the Panel or Council must have regard to –*

(a) Any national policy statement which has effect in relation to development of the description to which the application relates (a “relevant national policy statement”)

(3) The Panel or Council must decide the application in accordance with any relevant national policy statement, except to the extent that one or more of subsections (4) to (8) applies.

1.6.6 For energy-related Nationally Significant Infrastructure Projects (NSIPs), there are two NPSs, designated on 19 July 2011, that are relevant to the Proposed Development: Overarching National Policy Statement for Energy (EN-1) (Ref 1.2); and National Policy Statement for Electricity Networks Infrastructure (EN-5) (Ref 1.3). Summaries of these policies, and an analysis of how they are addressed in the Environmental Impact Assessment (EIA) and in this ES, are set out in **Volume 5.4.1**, **Tables 1.3 and 1.4** provide an initial overview of the requirements of EN-1 and EN-5 in relation to the EIA and ES and details of where in the ES Suite of documents each requirement is addressed.

Table 1.3 Signposting Table for Compliance with NPS EN-1

Para	Requirement	Location in the ES Suite
<b>Part 4: Assessment Principles</b>		
4.2.1	All proposals for projects that are subject to the European Environmental Impact Assessment Directive must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project	Volume 5, Environmental Statement; details of aspects given in Volume 5.1.1, section 1.8 and Volume 5.5.1, section 5.6
4.2.1	The Directive specifically refers to effects on human beings, fauna and flora, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them.	Volume 5, Environmental Statement; details of aspects given in Volume 5.1.1, section 1.8 and Volume 5.5.1, section 5.6

Para	Requirement	Location in the ES Suite
4.2.1	The Directive requires an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects.	Volume 5.5.1, section 5.6 describes generic method of assessment; each topic chapter also includes method as follows: All topic chapters of the ES provide details of the specific method(s) adopted. For all chapters except Noise and Vibration, see section X.3; Noise and Vibration is section 14.2.
4.2.2	The IPC <sup>1</sup> will find it helpful if the applicant sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated. This information could include matters such as employment, equality, community cohesion and well-being.	This is provided in Volume 5.15.1, section 15.5
4.2.3	The ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project.	This is provided in Volume 5.15.1, section 15.5
4.2.4	When considering a proposal the IPC should satisfy itself that likely significant effects, including any significant residual effects taking account of any proposed mitigation measures or any adverse effects of those measures, have been adequately assessed. In doing so the IPC should also examine whether the assessment distinguishes between the project stages and identifies any mitigation measures at those stages.	All topic chapters of the ES address residual effects. For all chapters except Noise and Vibration, see section X.8; Noise and Vibration is section 14.7
4.2.5	When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence)	This is addressed in Volume 5.17.1
4.2.6	The IPC should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.	All topic chapters of the ES address inter-relationship of effects. For all chapters except Noise and Vibration, see section X.6; Noise and Vibration is section 14.5

<sup>1</sup> Following the abolition of the IPC in April 2012, the Planning Inspectorate (PINS) took over the IPC duties with respect to Major Infrastructure Planning; IPC is referenced here to ensure consistency with the NPSs which have not been updated to include references to PINS.

Para	Requirement	Location in the ES Suite
4.2.7	In some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case	This is described in Volume 5.3.1, section 3.7
4.2.8	Where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed	This is described in Volume 5.3.1, section 3.7
<b>Habitats and Species Regulations</b>		
4.3.1	Prior to granting a development consent order, the IPC must, under the Habitats and Species Regulations <sup>79</sup> , (which implement the relevant parts of the Habitats Directive and the Birds Directive in England and Wales) consider whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects.	This is addressed in Volume 5.20, Applicant's Report to Support Habitats Regulations Assessment
4.3.1	The applicant should seek the advice of Natural England and/or the Countryside Council for Wales, and provide the IPC with such information as it may reasonably require to determine whether an Appropriate Assessment is required.	This is addressed in Volume 5.20, Applicant's Report to Support Habitats Regulations Assessment
4.3.1	In the event that an Appropriate Assessment is required, the applicant must provide the IPC with such information as may reasonably be required to enable it to conduct the Appropriate Assessment. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects.	This is addressed in Volume 5.20, Applicant's Report to Support Habitats Regulations Assessment
<b>Alternatives</b>		
4.4	Applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility	This is described in Volume 5.2.1.
4.4	In some circumstances there are specific legislative requirements, notably under the Habitats Directive, for the IPC to consider alternatives. These should also be identified in the ES by the applicant.	This is addressed in Volume 5.20, Applicant's Report to Support Habitats Regulations Assessment
<b>Criteria for 'Good Design' for Energy Infrastructure</b>		

Para	Requirement	Location in the ES Suite
4.5.1	Applying “good design” to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible.	Good design or 'embedded mitigation' is described in the Design and Access Statement at Volume 7.2, Volume 5.5.1, section 5.2 and further discussed in all ES topic chapters at section X.7 Mitigation, except for Noise and Vibration which is section 14.6 and Visual Effects, section 7.8.
4.5.3	The IPC needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be.	Good design or 'embedded mitigation' is described the Design and Access Statement at Volume 7.2, Volume 5.5.1, section 5.2 and further discussed in all ES topic chapters at section X.7 Mitigation, except for Noise and Vibration which is section 14.6 and Visual Effects, section 7.8; FRAs address the adaptability of the Proposed Development and are provided in Volume 5.23.
4.5.3	In so doing, the IPC should satisfy itself that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible.	Good design or 'embedded mitigation' is described in the Design and Access Statement at Volume 7.2, Volume 5.5.1, section 5.2 and further discussed in all ES topic chapters at section X.7 Mitigation, except for Noise and Vibration which is section 14.6 and Visual Effects, section 7.8; FRAs address the adaptability of the Proposed Development and are provided in Volume 5.23.
4.5.3	Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation.	This is described in Volume 5.6.1, section 6.7

Para	Requirement	Location in the ES Suite
4.5.3	Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.	Good design or 'embedded mitigation' is described in the Design and Access Statement at Volume 7.2, Volume 5.5.1, section 5.2; this point is specifically addressed in Volumes 5.6.1 and 5.7.1 at sections 6.7 and 7.7
4.5.3	For the IPC to consider the proposal for a project, applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved.	This is described in Volume 5.2.1.
4.5.3	Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected.	This is described in Volume 5.2.1.
<b>Climate Change Adaptation</b>		
4.8.5	The ES should set out how the proposal will take account of the projected impacts of climate change. While not required by the EIA Directive, this information will be needed by the IPC.	This is described in all ES topic chapters at the end of section X.5 (section 4 for Noise and Vibration): Prediction and Assessment of Significance of the Potential Effects, Heading 'Climate Change' and the FRAs (Volume 5.23)
4.8.6	The IPC should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure.	This is described in all ES topic chapters at the end of section X.5 (4 for Noise): Prediction and Assessment of Significance of the Potential Effects, Heading 'Climate Change'
4.8.7	Applicants should apply as a minimum, the emissions scenario that the Independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections.	This is described in all ES topic chapters at the end of section X.5 (section 4 for Noise and Vibration): Prediction and Assessment of Significance of the Potential Effects, Heading 'Climate Change'

Para	Requirement	Location in the ES Suite
4.8.8	The IPC should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.	This is addressed in the FRAs for the Proposed Development, provided at Volume 5.23
4.8.9	Where energy infrastructure has safety critical elements (for example parts of new fossil fuel power stations or some electricity sub-stations), the applicant should apply the high emissions scenario (high impact, low likelihood) to those elements.	This is addressed in the FRAs for the Proposed Development, provided at Volume 5.23
4.8.11	Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest UK Climate Change Risk Assessment, when available and in consultation with the EA.	This is described in all ES topic chapters at the end of section X.5 (4 for Noise and Vibration): Prediction and Assessment of Significance of the Potential Effects, Heading 'Climate Change'
4.10.7	Working in close cooperation with EA and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, IDBs, the IPC should be satisfied before consenting any potentially polluting developments that: the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.	Relevant topic chapters of the ES have assessed the likely requirement for environmental permits and other consents; National Grid has liaised with the regulatory authorities involved. These are described in section 5 of Volumes 5.9.1, 5.10.1 and 5.13.1
<b>Health</b>		
4.13.2	Where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate.	Potential effects on human beings is addressed in assessment section, section 5 (section 4 for Noise and Vibration) of Volumes 5.12, 5.13, 5.14, 5.15 and 5.16
4.13.2	The impacts of more than one development may affect people simultaneously, so the applicant and the IPC should consider the cumulative impact on health.	This is addressed in Volume 5.17

Para	Requirement	Location in the ES Suite
4.13.3	The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests.	Potential effects on human beings is addressed in assessment section, section X.5 of Volumes 5.12, 5.13, 5.14, 5.15 and 5.16, and section 14.4 (Noise)
4.13.4	New energy infrastructure may also affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.	This is addressed in Volume 5.15.1 at section 15.5 (assessment) and section 15.6 (Inter-relationship of effects).
4.13.5	The IPC will want to take account of health concerns when setting requirements relating to a range of impacts such as noise.	This is addressed in Volume 5.14.1, section 14.4
<b>Common Law Nuisance and Statutory Nuisance</b>		
4.14.2	It is very important that, at the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited are considered by the IPC so that appropriate requirements can be included in any subsequent order granting development consent. (See section 5.6 on Dust, odour, artificial light etc. and section 5.11 on Noise and vibration.)	Potential nuisances are addressed in the Statement of Statutory Nuisance at Volume 5.24
<b>Generic Impacts</b>		
<b>Air Quality and Emissions</b>		
5.2.2	Any ES on air emissions will include an assessment of CO2 emissions, but the policies set out in section 2, including the EU ETS, apply to these emissions.	This is addressed in Volume 5.13.1, section 13.5
5.2.7	The ES should describe any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project	This is addressed in Volume 5.13.1, sections 13.5 to 13.8
5.2.7	The ES should describe the predicted absolute emission levels of the proposed project, after mitigation methods have been applied	This is provided in Volume 5.13.1, section 13.8
5.2.7	The ES should describe existing air quality levels and the relative change in air quality from existing levels	This is provided in Volume 5.13.1, sections 13.4 and 13.5
5.2.7	The ES should describe any potential eutrophication impacts	Eutrophication effects are scoped out
5.2.11	The IPC should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage.	Details are provided in Volume 5.26

Para	Requirement	Location in the ES Suite
5.2.13	The mitigations identified in section 5.13 on traffic and transport impacts will help mitigate the effects of air emissions from transport.	See Volume 5.12.1, section 12.8; Volume 5.13.1, section 13.5 to 13.8; Volume 5.26.5 (Draft Construction Traffic Management Plan (CTMP))
<b>Biodiversity and Geological Conservation</b>		
5.3.3	The applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity.	For species and habitats, this is provided at Volume 5.8.1, section 8.5 and Volume 5.20; there are no sites of geological conservation importance.
5.3.4	The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests.	Embedded mitigation for biodiversity is described in Volume 5.8.1, section 8.7
5.3.4	As a general principle, and subject to the specific policies in Part 5.3 of NPS EN-1, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives; where significant harm cannot be avoided, then appropriate compensation measures should be sought.	Mitigation for biodiversity is described in Volume 5.8.1, section 8.7 and the Biodiversity Mitigation Strategy (BMS) at Volume 5.26.3
5.3.9	For the purposes of considering development proposals affecting them, as a matter of policy the Government wishes pSPAs to be considered in the same way as if they had already been classified. Listed Ramsar sites should, also as a matter of policy, receive the same protection	Sites included in the assessment are described at Volume 5.8.1, section 8.4
5.3.18	The applicant should include appropriate mitigation measures as an integral part of the proposed development	Mitigation for biodiversity is described in Volume 5.8.1, section 8.7 and the BMS at Volume 5.26.3
5.3.18	The applicant should demonstrate that during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;	Controls and mitigation for construction works are provided in the BMS at Volume 5.26.3
5.3.18	The applicant should demonstrate that during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements	Controls and mitigation for construction works are provided in the BMS at Volume 5.26.3
5.3.18	The applicant should demonstrate that habitats will, where practicable, be restored after construction works have finished	Restoration measures are described in Volume 5.8.1, section 8.7 and the BMS at Volume 5.26.3

Para	Requirement	Location in the ES Suite
5.3.18	The applicant should demonstrate that opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals	Restoration measures are described in Volume 5.8.1, section 8.7 and the BMS at Volume 5.26.3; also reference the Off-site Planting and Enhancement Scheme (OSPES), Volume 5.25
<b>Dust, odour, artificial light, smoke, steam and insect infestation</b>		
5.6.4	The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the Environmental Statement.	Volume 5.13.1, section 13.5 and Volume 5.15.1, section 15.6 describe the potential effects. These are summarised in the Statement of Statutory Nuisance at Volume 5.24
5.6.4	The assessment provided by the applicant should describe the type, quantity and timing of emissions	Volume 5.13.1, section 13.5 and Volume 5.15.1, section 15.6 describe the potential effects.
5.6.4	The assessment provided by the applicant should describe the aspects of the development which may give rise to emissions	Volume 5.13.1, section 13.5 and Volume 5.15.1, section 15.6 describe the potential effects.
5.6.4	The assessment provided by the applicant should describe premises or locations that may be affected by the emissions	Volume 5.13.1, section 13.5 and Volume 5.15.1, section 15.6 describe the potential effects.
5.6.4	The assessment provided by the applicant should describe effects of the emission on identified premises or locations	Volume 5.13.1, section 13.5 and Volume 5.15.1, section 15.6 describe the potential effects.
5.6.4	The assessment provided by the applicant should describe measures to be employed in preventing or mitigating the emissions	Volume 5.13.1, section 13.7 and Volume 5.15.1, section 15.7 describe the mitigation measures.
5.6.11	Mitigation measures may include one or more of the following: engineering: prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated; lay-out: adequate distance between source and sensitive receptors; reduced transport or handling of material; and administrative: limiting operating times; restricting activities allowed on the site; implementing management plans.	Volume 5.13.1, section 13.7 and Volume 5.15.1, section 15.7 describe the mitigation measures.
<b>Flood Risk</b>		
5.7.4	Applications for energy projects of 1 hectare or greater in Flood Zone 1 in England or Zone A in Wales <sup>113</sup> and all proposals for energy projects located in Flood Zones 2 and 3 in England or Zones B and C in Wales should be accompanied by a FRA.	FRAs for the Route, Sandford Substation, the extension to Seabank Substation, the CSE Compounds at Bridgwater Tee and the CSE compound at South of the Mendip Hills
5.7.4	The minimum requirements for FRAs are that they should:	FRAs for the Route, Sandford Substation, the extension to Seabank Substation, the CSE Compounds at Bridgwater Tee and the CSE compound at South of the Mendip Hills
5.7.4	be proportionate to the risk and appropriate to the scale, nature and location of the project.	

Para	Requirement	Location in the ES Suite
5.7.4	consider the risk of flooding arising from the project in addition to the risk of flooding to the project	address all of these issues and are provided at Volume 5.23.
5.7.4	take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made	Volume 5.10.1, section 10.5 includes summary assessment text for the FRAs; section 10.7 and the Draft CEMP (Volume 5.26.1) include flood risk management (mitigation) measures.
5.7.4	be undertaken by competent people, as early as possible in the process of preparing the proposal	
5.7.4	consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure	
5.7.4	consider the vulnerability of those using the site, including arrangements for safe access	
5.7.4	consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and identify flood risk reduction measures, so that assessments are fit for the purpose of the decisions being made	
5.7.4	consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes	
5.7.4	include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project	
5.7.4	consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems	
5.7.4	consider if there is a need to be safe and remain operational during a worst case flood event over the development's lifetime	
5.7.4	be supported by appropriate data and information, including historical information on previous events	
5.7.7	Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions with the EA, and, where relevant, other bodies such as Internal Drainage Boards, sewerage undertakers, navigation authorities, highways authorities and reservoir owners and operators.	
5.7.7	Such discussions should identify the likelihood and possible extent and nature of the flood risk, help scope the FRA, and identify the information that will be required by the IPC to reach a decision on the application when it is submitted.	

Para	Requirement	Location in the ES Suite
5.7.8	If the EA has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the EA and take all reasonable steps to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns.	
5.7.9	The IPC should be satisfied that where relevant:	
5.7.9	the application is supported by an appropriate FRA;	
5.7.9	the Sequential Test has been applied as part of site selection	
5.7.9	a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk	
5.7.9	the proposal is in line with any relevant national and local flood risk management strategy	
5.7.9	priority has been given to the use of sustainable drainage systems (SuDs)	
5.7.9	in flood risk areas the project is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed over the lifetime of the development.	
5.7.10	The IPC will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010.	
5.7.12	The IPC should not consent development in Flood Zone 3 or Zone C (Wales) unless it is satisfied that the Sequential and Exception Test requirements have been met.	
5.7.16	For the Exception Test to be passed	
5.7.16	it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk	
5.7.16	The project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs	
	A FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall	
5.7.18	To satisfactorily manage flood risk, arrangements are required to manage surface water and the impact of the natural water cycle on people and property.	
5.7.20	Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.	

Para	Requirement	Location in the ES Suite
5.7.21	The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.	
5.7.23	Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.	
5.7.24	Essential energy infrastructure which has to be located in flood risk areas should be designed to remain operational when floods occur.	
5.7.24	In addition, any energy projects proposed in Flood Zone 3b the Functional Floodplain (where water has to flow or be stored in times of flood), or Zone C2 in Wales, should only be permitted if the development will not result in a net loss of floodplain storage, and will not impede water flows.	
5.7.25	Flood Warning and evacuation plans should be in place for those areas at an identified risk of flooding	
5.7.25	The applicant should take advice from the emergency services when producing an evacuation plan for a manned energy project as part of the FRA.	
5.7.25	Any emergency planning documents, flood warning and evacuation procedures that are required should be identified in the FRA.	
<b>Historic Environment</b>		
5.8.8	As part of the ES the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance.	This is provided at Volume 5.11.1, section 11.4
5.8.8	As a minimum the applicant should have consulted the relevant Historic Environment Record and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact.	This is provided at Volume 5.11.1, section 11.4
5.8.9	Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation.	This is provided at Volume 5.11.1, section 11.4
5.8.9	Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact.	These are provided at Volume 5.18
5.8.10	The applicant should ensure that the extent of the impact of the proposed development on the significance of any heritage assets affected can be adequately understood from the application and supporting documents.	An assessment of effects is provided at Volume 5.11.1, section 11.5

Para	Requirement	Location in the ES Suite
5.8.14	<p>There should be a presumption (by the IPC) in favour of the conservation of designated heritage assets and the more significant the designated heritage asset, the greater the presumption in favour of its conservation should be.</p> <p>Substantial harm to or loss of designated assets of the highest significance, including Scheduled Monuments; registered battlefields; grade I and II* listed buildings; grade I and II* registered parks and gardens; and World Heritage Sites, should be wholly exceptional.</p>	This is addressed in Volume 5.11.1, section 11.5 and 11.8
5.8.15	<p>Where the application will lead to substantial harm to or total loss of significance of a designated heritage asset the IPC should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that loss or harm.</p>	This is addressed in Volume 5.11.1, section 11.5, 11.7 and 11.8
5.8.19	<p>A documentary record of our past is not as valuable as retaining the heritage asset and therefore the ability to record evidence of the asset should not be a factor in deciding whether consent should be given.</p>	This is addressed in Volume 5.11.1, section 11.5, 11.7 and 11.8
5.8.20	<p>Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost. The extent of the requirement should be proportionate to the nature and level of the asset's significance. Developers should be required to publish this evidence and deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.</p>	This is addressed in Volume 5.11.1, section 11.5, 11.7 and 11.8 and the Outline WSI at Volume 5.26.4
5.8.21	<p>Where appropriate, the IPC should impose requirements on a consent that such work is carried out in a timely manner in accordance with a written scheme of investigation that meets the requirements of this section and has been agreed in writing with the relevant Local Authority and that the completion of the exercise is properly secured</p>	This is provided in the Outline WSI at Volume 5.26.4
<b>Landscape and Visual Assessment</b>		
5.9.5	<p>The applicant should carry out a landscape and visual assessment and report it in the ES.</p>	This is provided in Volumes 5.6.1 and 5.7.1
5.9.5	<p>The Landscape and visual assessment should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project.</p>	This is addressed in Volume 5.6.1, section 6.4 and 6.5
5.9.5	<p>The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.</p>	This is addressed in Volume 5.6.1, section 6.2
5.9.6	<p>The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.</p>	This is addressed in Volume 5.6.1, section 6.5

Para	Requirement	Location in the ES Suite
5.9.7	The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.	This is addressed in Volume 5.7.1, section 7.5
5.9.8	Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape.	This is addressed in Volume 5.6.1, section 6.5
5.9.8	Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate.	Route options are described in Volume 5.2.1; embedded mitigation by design for landscape is described in Volume 5.6.1, section 6.7
5.9.10	<p>National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. consideration of such applications should include an assessment of:</p> <ul style="list-style-type: none"> <li>• the need for the development, including in terms of national considerations, and the impact of consenting or not consenting upon the local economy;</li> <li>• the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in section 4.4; and</li> <li>• any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated</li> </ul>	A summary of the needs case is provided in Volume 5.2.1; route and connection options considered are also summarised in Volume 5.2.1; the potential effects and mitigation of effects on the AONB landscape are described in Volume 5.6.1, section 6.5
5.9.14	Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention.	This is addressed in Volume 5.6.1, section 6.2
5.9.16	In reaching a judgment, the IPC should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable.	This is addressed in Volume 5.6.1, section 6.5
5.9.19	It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors. This may assist the IPC in judging the weight it should give to the assessed visual impacts of the proposed development.	This is addressed in Volume 5.17

Para	Requirement	Location in the ES Suite
5.9.22	Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.	Embedded mitigation by design for reducing adverse landscape and visual effects is described in the Design and Access Statement at Volume 7.2  Landscape mitigation proposals are described at Volume 5.6.1, section 6.7 and Volume 5.7.1, section 7.7
5.9.23	Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.	This is addressed in OSPES, Volume 5.25
<b>Land Use</b>		
5.10.5	The ES (see section 4.2) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing.	This is addressed in Volume 5.15.1, section 15.6
5.10.5	Applicants should also assess any effects of precluding a new development or use proposed in the development plan.	This is addressed in Volume 5.15.1, section 15.6
5.10.6	Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements.	This is addressed in Volume 5.15.1, section 15.6
5.10.7	Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations.	This is addressed in Volume 5.15.1, section 15.6
5.10.7	Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed.	This is addressed in Volume 5.9.1, section 9.5
5.10.7	For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination.	This is addressed in Volume 5.9.1, section 9.5
5.10.8	Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.	This is addressed in Volume 5.9.1, section 9.5
5.10.23	Where a project has a sterilising effect on land use (for example in some cases under transmission lines) there may be scope for this to be mitigated through, for example, using or incorporating the land for nature conservation or wildlife corridors or for parking and storage in employment areas.	This is addressed in Volume 5.15.1, section 15.6

Para	Requirement	Location in the ES Suite
5.10.24	Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way.	This is addressed in Volume 5.7.1, section 7.8; Volume 5.12.1, section 12.8; Volume 5.15.1, sections 15.5 and 15.6; and the Public Rights of Way Management Plan at Volume 5.26.6.
<b>Noise &amp; Vibration</b>		
5.11.4	The applicant should include a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise	This is addressed in Volume 5.14.1, section 14.4
5.11.4	The applicant should include identification of noise sensitive premises and noise sensitive areas that may be affected;	This is addressed in Volume 5.14.1, section 14.4
5.11.4	The applicant should include the characteristics of the existing noise environment	This is addressed in Volume 5.14, section 14.3
5.11.4	The applicant should include a prediction of how the noise environment will change with the proposed development:	This is addressed in Volume 5.14.1, section 14.4
5.11.4	> in the shorter term such as during the construction period	
5.11.4	> in the longer term during the operating life of the infrastructure	
5.11.4	> at particular times of the day, evening and night as appropriate	
5.11.4	The applicant should include an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas	This is addressed in Volume 5.14.1, section 14.4
5.11.4	The applicant should include measures to be employed in mitigating noise	This is addressed in Volume 5.14.1, section 14.6
5.11.15	The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should also be considered	This is addressed in Volume 5.14.1, section 14.4 and 14.5
5.11.16	Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance.	This is addressed in Volume 5.14.1, section 14.2
5.11.16	For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.	This is addressed in Volume 5.14.1, section 14.2
5.11.7	The applicant should consult EA and Natural England (NE), or the Countryside Council for Wales (CCW), as necessary and in particular with regard to assessment of noise on protected species or other wildlife.	This is addressed in Volume 5.8.1, section 8.6

Para	Requirement	Location in the ES Suite
5.11.7	The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.	This is addressed in Volume 5.8.1, section 8.6
5.11.9	The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims:	Potential effects on human beings from noise effects are addressed in Volume 5.14.1, section 14.4
5.11.9	avoid significant adverse impacts on health and quality of life from noise; mitigate and minimise other adverse impacts on health and quality of life from noise; and where possible, contribute to improvements to health and quality of life through the effective management and control of noise.	
5.11.12	Mitigation measures may include one or more of the following: engineering: reduction of noise at point of generation and containment of noise generated; lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural barriers, or other buildings; and administrative: restricting activities allowed on the site; specifying acceptable noise limits; and taking into account seasonality of wildlife in nearby designated sites.	This is addressed in Volume 5.8.1, section 8.7; BMS at Volume 5.26.3; Volume 5.14.1, section 14.6; Draft CTMP at Volume 5.26.5
<b>Socio-economic Impacts</b>		
5.12.2	Where the project is likely to have socio-economic impacts at local or regional levels, the applicant should undertake and include in their application an assessment of these impacts as part of the ES	This is addressed by Volume 5.15
5.12.3	-This assessment should consider all relevant socio-economic impacts, which may include:  -the creation of jobs and training opportunities  -the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities  -effects on tourism  -the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure.	This is addressed by Volume 5.15.1, section 15.5
	-cumulative effects	This is addressed by Volume 5.17
5.12.4	Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.	This is addressed by Volume 5.15.1, section 15.2 and 15.3
5.12.5	Socio-economic impacts may be linked to other impacts, for example the visual impact of a development is considered in section 5.9 but may also have an impact on tourism and local businesses.	This is addressed by Volume 5.15.1, section 15.6
<b>Traffic and Transport</b>		

Para	Requirement	Location in the ES Suite
5.13.3	If a project is likely to have significant transport implications, the applicant's ES should include a transport assessment, using the NATA/WebTAG methodology stipulated in Department for Transport guidance, or any successor to such methodology.	A TA is provided at Volume 5.22
5.13.3	Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.	This is described in Volume 5.12.1, section 12.1; the TA, Volume 5.22 and the Draft CTMP at Volume 5.26.5
5.13.4	Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts.	This is provided in the Draft CTMP at Volume 5.26.5
5.13.4	The applicant should also provide details of proposed measures to improve access by public transport, walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.	This is provided in the Draft CTMP at Volume 5.26.5
5.13.6	A new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development	This is provided in the Draft CTMP at Volume 5.26.5
5.13.10	Water-borne or rail transport is preferred over road transport at all stages of the project, where cost-effective.	An assessment is described in the TA at Volume 5.22
5.13.11	The IPC may attach requirements to a consent where there is likely to be substantial HGV traffic that:	Likely requirements are included in the Draft DCO in Volume 5.12.1, section 12.8; the TA at Volume 5.22 and the Draft CTMP at Volume 5.26.5
5.13.11	control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements; make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.	
Waste		
5.14.6	The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan.	This is provided in the Outline WMP at Volume 5.26.2
5.14.6	The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation.	This is provided in the Outline WMP at Volume 5.26.2

Para	Requirement	Location in the ES Suite
5.14.6	The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.	This is provided in the Outline WMP at Volume 5.26.2
5.14.7	The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that:	This is provided in the Outline WMP at Volume 5.26.2
5.14.7	>any such waste will be properly managed, both on-site and off-site; the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.	
<b>Water Quality and Resources</b>		
5.15.2	Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES or equivalent	This is described in Volume 5.10.1, section 10.5; and the FRAs at Volume 5.23
5.15.2	The ES should in particular describe the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges	This is described in Volume 5.10.1, section 10.5
5.15.3	The ES should in particular describe existing water resources affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies)	This is described in Volume 5.10.1, section 10.5
5.15.3	The ES should in particular describe existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics	This is described in Volume 5.10.1, section 10.5
5.15.3	The ES should in particular describe any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions.	This is described in Volume 5.10.1, section 10.5 and Volume 5.8.1, section 8.8
5.15.6	The IPC should satisfy itself that a proposal has regard to the River Basin Management Plans and meets the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater.	This is described in Volume 5.10.1, section 10.5 and Volume 5.8.1, section 8.8

<b>Para</b>	<b>Requirement</b>	<b>Location in the ES Suite</b>
5.15.8	The IPC should consider whether mitigation measures are needed over and above any which may form part of the project application. (See sections 4.2 and 5.1.) A construction management plan may help codify mitigation at that stage.	This is described in Volume 5.10.1, section 10.7
5.15.9	The risk of impacts on the water environment can be reduced through careful design to facilitate adherence to good pollution control practice. For example, designated areas for storage and unloading, with appropriate drainage facilities, should be clearly marked.	This is described in Volume 5.10.1, section 10.7
5.15.10	The impact on local water resources can be minimised through planning and design for the efficient use of water, including water recycling.	This is described in Volume 5.10.1, section 10.7

Table 1.4 Signposting Table for Compliance with NPS EN-5

Para No.	Requirement	Location in ES Suite
<b>Climate Change Adaptation</b>		
2.4.1	Applicants should set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it would be resilient to: flooding, particularly for substations that are vital for the electricity transmission and distribution network; effects of wind and storms on overhead lines; higher average temperatures leading to increased transmission losses; and earth movement or subsidence caused by flooding or drought (for underground cables).	Volume 5.23 FRAs address the issue of resilience to flooding; pylon design for resilience to other aspects of Climate change such as wind and storms and higher temperatures, is addressed in National Grid's published Climate Adaptation Report (Ref 1.4)
2.4.2	Section 4.8 of EN-1 advises that the resilience of the project to climate change should be assessed in the Environmental Statement (ES) accompanying an application. For example, future increased risk of flooding would be covered in any FRA (see section 5.7 in EN-1).	This is addressed in all ES Chapters at the end of the Assessment section which is found at section X.5 in all Volume 5.6 to 5.16 except for Noise and Vibration at section 14.4
<b>Consideration of Good Design</b>		
2.5.2	Proposals for electricity networks infrastructure should demonstrate good design in their approach to mitigating the potential adverse impacts which can be associated with overhead lines, particularly those set out in Sections 2.7 to 2.10.	Good design or 'embedded mitigation' is the Design and Access Statement at Volume 7.2, Volume 5.5.1, section 5.2 and addressed in all ES Chapters in the Mitigation section which is found at section X.7 in all Volumes 5.6 to 5.16 except for Visual Effects, at section 7.8 and Noise and Vibration at section 14.6
<b>Biodiversity and Geological Conservation</b>		
2.7.1 & 2.7.2	Large birds such as swans and geese may collide with overhead lines associated with power infrastructure, particularly in poor visibility. Large birds in particular may also be electrocuted when landing or taking off by completing an electric circuit between live and ground wires. Even perching birds can be killed as soon as their wings touch energised parts. The applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the Environmental Impact Assessment (EIA) and ES (see Section 4.2 of EN-1). Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds.	This is addressed in Volume 5.8.1, section 8.5 and Volume 5.20 Applicant's Report to Support Habitats Regulations Assessment

Para No.	Requirement	Location in ES Suite
2.7.4	Careful siting of a line away from, or parallel to, but not across, known flight paths can reduce the numbers of birds colliding with overhead lines considerably.	Volume 5.2.1 summarises the Route Options reports which included consideration of Holford Rules. These are also summarised in Volume 5.8.1, section 8.5 and Volume 5.20 Applicant's Report to Support Habitats Regulations Assessment
2.7.5	Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird vision can also reduce the number of deaths. The design and colour of the diverters will be specific to the conditions – the line and pylon/transmission tower specifications and the species at risk.	This is addressed in the mitigation section of Volume 5.8.1, section 8.7, Volume 5.26.3, the BMS and Volume 5.20 Applicant's Report to Support Habitats Regulations Assessment
<b>Landscape &amp; Visual</b>		
2.8.4	The ES should set out details of how consideration has been given to undergrounding or sub-sea cables as a way of mitigating such impacts, including, where these have not been adopted on grounds of additional cost, how the costs of mitigation have been calculated.	Volume 5.2.1, Chapter 2 summarises the Strategic Options report which considered connection options such as sub-sea cables and undergrounding.
2.8.6	Holford Rules applicability?	Volume 5.2.1 summarises the Route Options reports which included consideration of Holford Rules. The rules are also considered in the assessments for Landscape and Visual Effects at Volume 5.6.1, section 6.5 and Volume 5.7.1, section 7.5.
2.8.10	The main opportunities for mitigating potential adverse landscape and visual impacts of electricity networks infrastructure are:	These are described in the mitigation sections of Volume 5.6.1 at section 6.7 and 5.7 at section 7.8.
2.8.10	Consideration of network reinforcement options (where alternatives exist) which may allow improvements to an existing line rather than the building of an entirely new line	This is addressed in the Statement of Reasons (SOR) at Volume 7.5

Para No.	Requirement	Location in ES Suite
2.8.10	Selection of the most suitable type and design of support structure (i.e. different lattice tower types, use of wooden poles etc.) in order to minimise the overall visual impact on the landscape.	The Pylon Design Options report is summarised in Volume 5.2.1; Mitigation by design is also addressed in the mitigation section of Volume 5.6.1, section 6.7 and Volume 5.7.1, section 7.8
2.8.11	Landscape schemes, comprising off-site tree and hedgerow planting are sometimes used for larger new overhead line projects to mitigate potential landscape and visual impacts, softening the effect of a new above ground line whilst providing some screening from important visual receptors. These can only be implemented with the agreement of the relevant landowner(s) and advice from the relevant statutory advisor may also be needed	These are provided in the OSPES at Volume 5.25
2.8.11	Screening, comprising localised planting in the immediate vicinity of residential properties and principal viewpoints can also help to screen or soften the effect of the line, reducing the visual impact from a particular receptor.	Site specific planting and other mitigation measures are provided in Volume 5.6.1, section 6.7 and Volume 5.7.1, section 7.8
<b>Noise and Vibration</b>		
2.9.8 & 2.9.9	While standard methods of assessment and interpretation using the principles of the relevant British Standards are satisfactory for dry weather conditions, they are not appropriate for assessing noise during rain, which is when overhead line noise mostly occurs, and when the background noise itself will vary according to the intensity of the rain. Therefore an alternative noise assessment method to deal with rain-induced noise is needed, such as the one developed by National Grid as described in report TR(T)94,1993	This is addressed in Volume 5.14.1, section 14.2 Method
2.9.12	Applicants should have considered the following measures:	Embedded mitigation and further mitigation measures are provided at Volume 5.14.1, section 14.6
2.9.12	The positioning of lines (see Section 2.8 (landscape/visual impact)) to help mitigate noise;	
2.9.12	Ensuring that the appropriately sized conductor arrangement is used to minimise potential noise;	
2.9.12	Quality assurance through manufacturing and transportation to avoid damage to overhead line conductors which can increase potential noise effects;	
2.9.12	Ensuring that conductors are kept clean and free of surface contaminants during stringing/installation	
2.9.13	The ES should include information on planned maintenance arrangements.	This is described in Volume 5.3.1, Project Description at section 3.7
<b>EMF</b>		
2.10.10	Before granting consent to an overhead line application, the IPC should satisfy itself that the proposal is in accordance with the ICNIRP (1998) guidelines	This is described in Volume 5.16.1, at sections 16.5 and 16.10

Para No.	Requirement	Location in ES Suite
2.10.11	The Government has developed with industry a voluntary Code of Practice, “Optimum Phasing of high voltage double-circuit Power Lines – A Voluntary Code of Practice” <sup>26</sup> , published in February 2011 that defines the circumstances where industry can and will optimally phase lines with a voltage of 132kV and above. Applicant should demonstrate compliance with this.	This is described in Volume 5.16.1, at section 16.5
2.10.14	The diagram at the end of section 2.10 shows a basic decision tree for dealing with EMFs from overhead power lines to which the IPC can refer.	This is shown in Volume 5.16.1, at Inset 16.1
2.10.15	The applicant should have considered the following factors:	
2.10.15	Height, position, insulation and protection (electrical or mechanical as appropriate) measures subject to ensuring compliance with the Electricity Safety, Quality and Continuity Regulations 2002	This is described in Volume 5.16.1, at section 16.5
2.10.15	that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise effects of EMFs;	This is described in Volume 5.16.1, at section 16.5
2.10.15	Any new advice emerging from the Department of Health relating to Government policy for EMF exposure guidelines.	This is described in Volume 5.16.1, at section 16.2
2.10.15	Where it can be shown that the line will comply with the current public exposure guidelines and the policy on phasing, no further mitigation should be necessary.	This is described in Volume 5.16.1, at sections 16.5 and 16.7

## 1.7 Structure of the Environmental Statement

### Introduction

1.7.1 The ES is split into 19 volumes. A number of supporting documents are also provided. A full list of volumes and titles can be found in **Tables 1.5 and 1.6**.

1.7.2 **Volumes 5.1.1 to 5.5.1** present the ‘upfront’ chapters, providing an introduction to the Proposed Development and the ES; the need case; a detailed description of the Proposed Development; planning policy review and EIA method and approach respectively.

1.7.3 **Volumes 5.6 to 5.16** set out the effects assessments for each of the EIA topics. **Volume 5.17** sets out the cumulative effects assessments for all of the topics and **Volume 5.18** presents the ES photomontages.

1.7.4 The Non-Technical Summary is included at **Volume 5.19**.

1.7.5 Supporting documents for the ES are provided in **Volumes 5.20 to 5.27**. A full list of volumes and titles can be found in **Table 1.5**.

Table 1.5 Environmental Statement Structure

Volume	ES Chapter	Document Name
<b>Environmental Statement</b>		
5.1.1	1	Introduction
5.2.1	2	Project Need and Alternatives
5.3.1	3	Project Description
5.4.1	4	Planning Policy Context
5.5.1	5	Environmental Impact Assessment Approach and Method
5.6.1	6	Landscape
5.7.1	7	Visual Effects
5.8.1	8	Biodiversity and Nature Conservation
5.9.1	9	Ground Environment
5.10.1	10	Hydrology and Water Resources
5.11.1	11	Historic Environment
5.12.1	12	Traffic and Transport
5.13.1	13	Air Quality and Emissions
5.14.1	14	Noise and Vibration
5.15.1	15	Socio-economics and Land Use
5.16.1	16	Electric and Magnetic Fields
5.17.1	17	Cumulative Effects
5.18	18	Environmental Statement Photomontages
5.19	19	Environmental Statement Non-Technical Summary

### **Figures and Appendices**

1.7.6 Figures and appendices for the chapters of the ES are contained within each ES Volume where relevant. They are named according to their chapter numbers as follows:

- Figures: Chapter number then 1, 2, 3 etc. e.g. Figure 1.1.
- Appendices: Chapter number then A, B, C etc. e.g. Appendix 1A.

1.7.7 A full list of these is provided in the Hinkley DCO Document Application List.

### **Structure of Topic Assessment Chapters**

1.7.8 Each of the topic assessment chapters within the ES (Chapters 6 to 16) is structured in the same way to ensure a consistent approach across the ES as follows:

- Introduction;
- Policy and Legislation;
- Method;
- Baseline Environment;
- Prediction and Assessment of the Significance of the Potential Effects;
- Consideration of inter-relationship of potential effects between specialist environmental topics;

- Mitigation;
- Residual Effects;
- Cumulative Effects (summary of detail provided in Chapter 17); and
- Conclusions.

## 1.8 Supporting Documents

1.8.1 The ES suite of documents includes a number of supporting documents as well as figures and appendices to the ES chapters; the supporting documents, and their appendices, are located in **Volumes 5.20 to 5.27** and detailed in **Table 1.6**.

Table 1.6 Supporting Documents Structure

Volume	Document Name
<b>Supporting Documents</b>	
5.20	The Applicant's Report to Support Habitats Regulations Assessment
5.21	Arboricultural Impact Assessment
5.22	Transport Assessment
5.23	Flood Risk Assessments
5.23.1	<i>Bridgwater Tee CSE Compounds FRA</i>
5.23.2	<i>South of the Mendip Hills CSE Compound FRA</i>
5.23.3	<i>Sandford Substation FRA</i>
5.23.4	<i>Seabank Substation FRA</i>
5.23.5	<i>Hinkley Point C Connection Route FRA</i>
5.24	Statement of Statutory Nuisance
5.25	Off-site Planting and Enhancement Scheme
5.26.1	Construction Environmental Management Plan
5.26.2	<i>Appendix 1 – Outline Waste Management Plan</i>
5.26.3	<i>Appendix 2 - Biodiversity Mitigation Strategy</i>
5.26.4	<i>Appendix 3 – Outline Written Scheme of Investigation for the Mitigation of Effects on Archaeological Remains</i>
5.26.5	<i>Appendix 4 – Draft Construction Traffic Management Plan</i>
5.26.6	<i>Appendix 5 - Public Rights of Way Management Plan</i>
5.27	Schedule of Operational Mitigation and Enhancement Measures

1.8.2 Some of these supporting documents are required under Regulation 5 of the Infrastructure Planning (APFP) Regulations 2009, as listed above e.g. **Volume 5.20** (Applicant's Report to Support Habitats Regulations Assessment); others have been produced to inform topic assessments, **Volume 5.21** Arboricultural Impact Assessment and **Volume 5.22** TA; **Volume 5.23** FRAs is a requirement under NPS EN-1 and NPPF; **Volume 5.24** Statement of Statutory Nuisance is a requirement under the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (section 5(2)(f)); **Volume 5.25** OSPES provides details of agreed proposals for landscape enhancement, to be funded by National Grid; **Volume 5.26**, the Draft CEMP provides details of mitigation measures to minimise adverse effects from the construction phase of the Proposed Development; and **Volume 5.27** Schedule of Operational Mitigation and Enhancement Measures provides

details of other mitigation and enhancement measures not covered in the Draft CEMP.

1.8.3 The Draft CEMP and its appendices are joint National Grid and WPD documents and present the approach and application of environmental management and mitigation for the construction of the Proposed Development. Whilst there is no statutory requirement for these documents to be submitted, they have been produced to ensure that construction activities for the Proposed Development are carried out in accordance with current legislation and good practice for minimising the adverse effects of construction on the environment and the local community.

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1.1 National Grid: Hinkley Point C Connection Need Case for the South West and the South Wales and Gloucestershire Regions (August 2013).

1.2 National Policy Statement (EN-1) Overarching National Policy Statement, DECC 2012

1.3 National Policy Statement (EN-5) for Electricity Networks Infrastructure, DECC 2012

1.4 National Grid, Climate Adaptation Report, 2010  
<http://www2.nationalgrid.com/responsibility/how-were-doing/grid-data-centre/climate-change/>

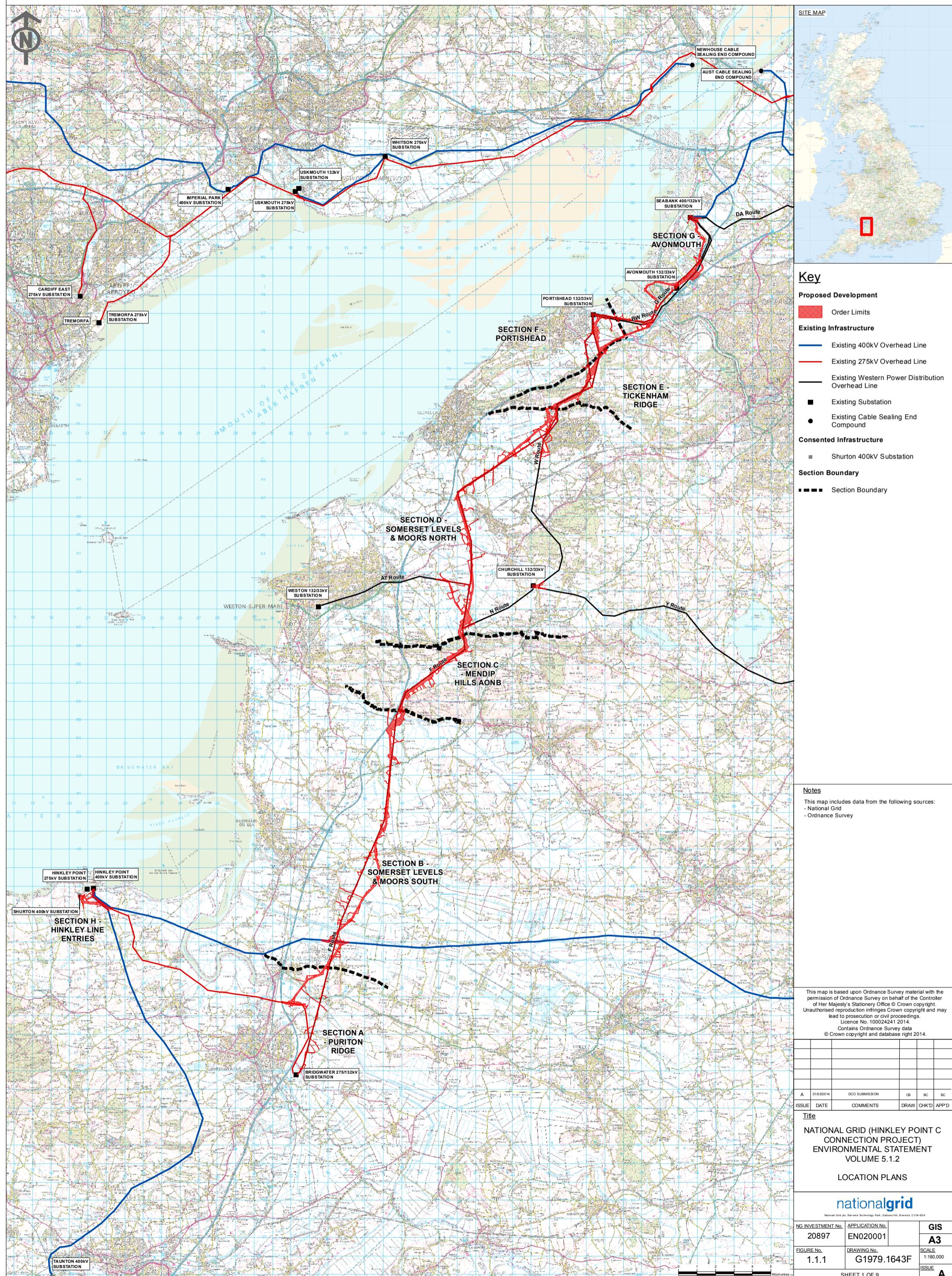


## Figure 1.1 – Location Plans

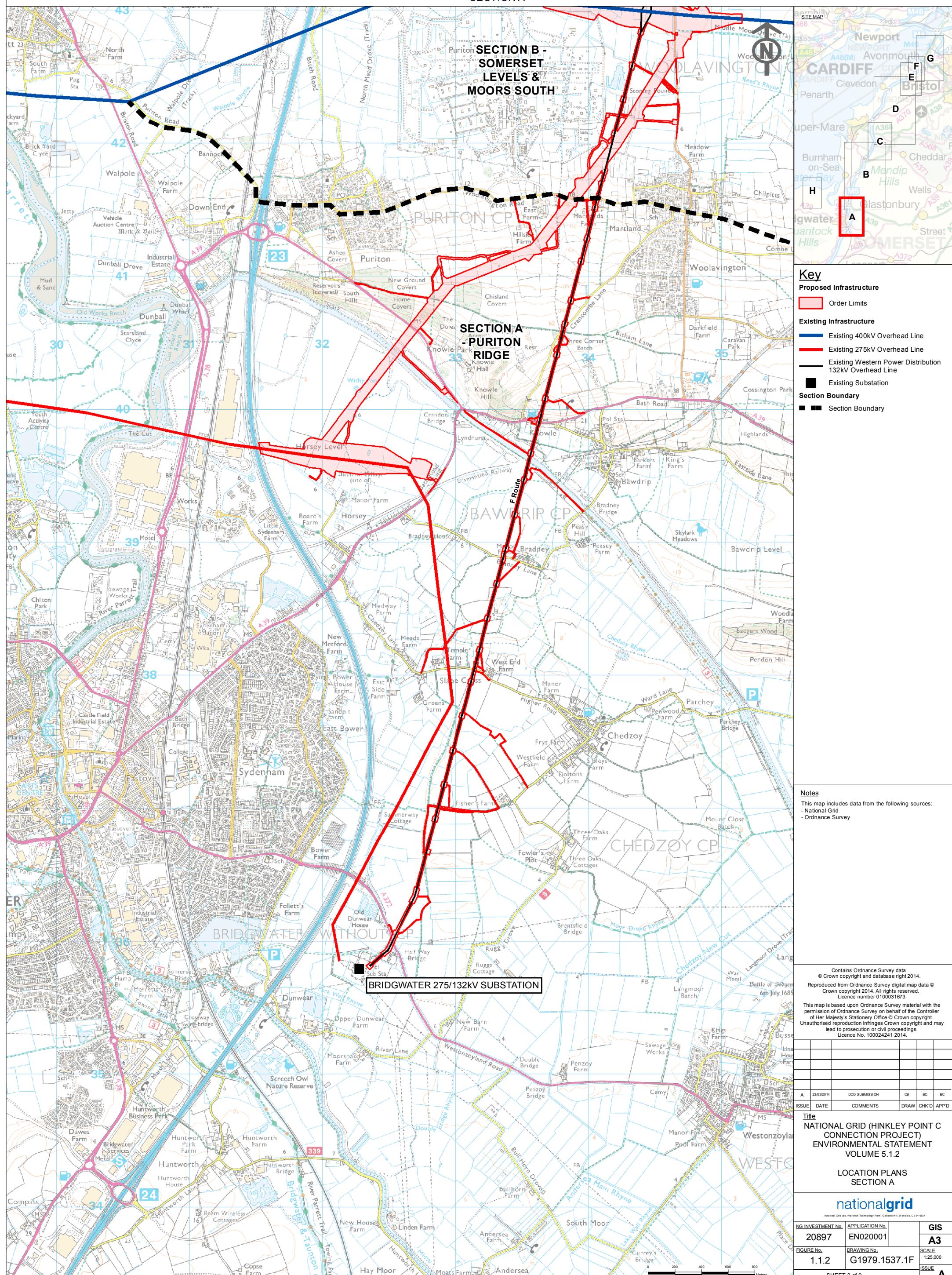


NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)  
ENVIRONMENTAL STATEMENT  
VOLUME 5.1.2

LOCATION PLANS

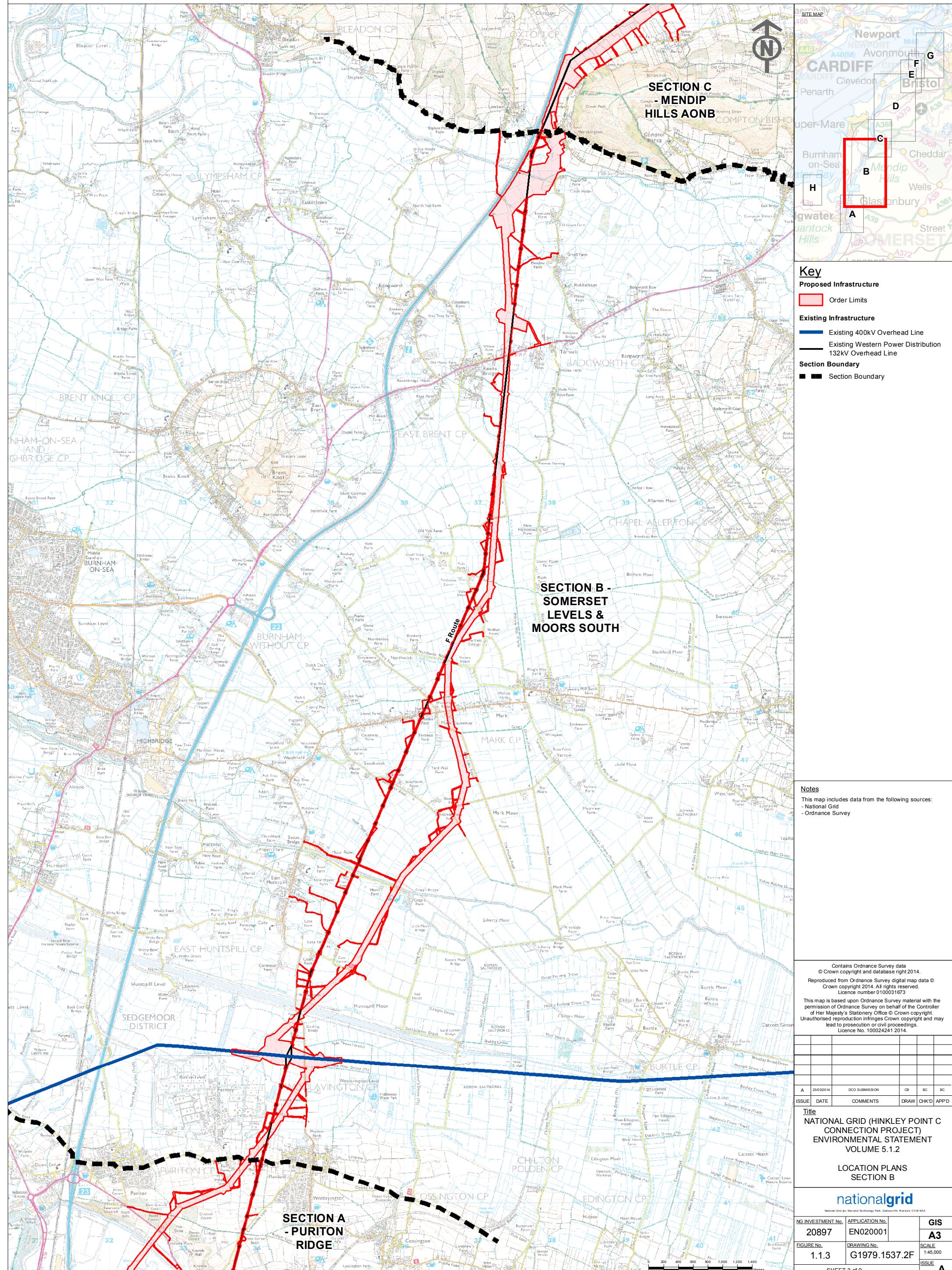


LOCATION PLANS  
SECTION A



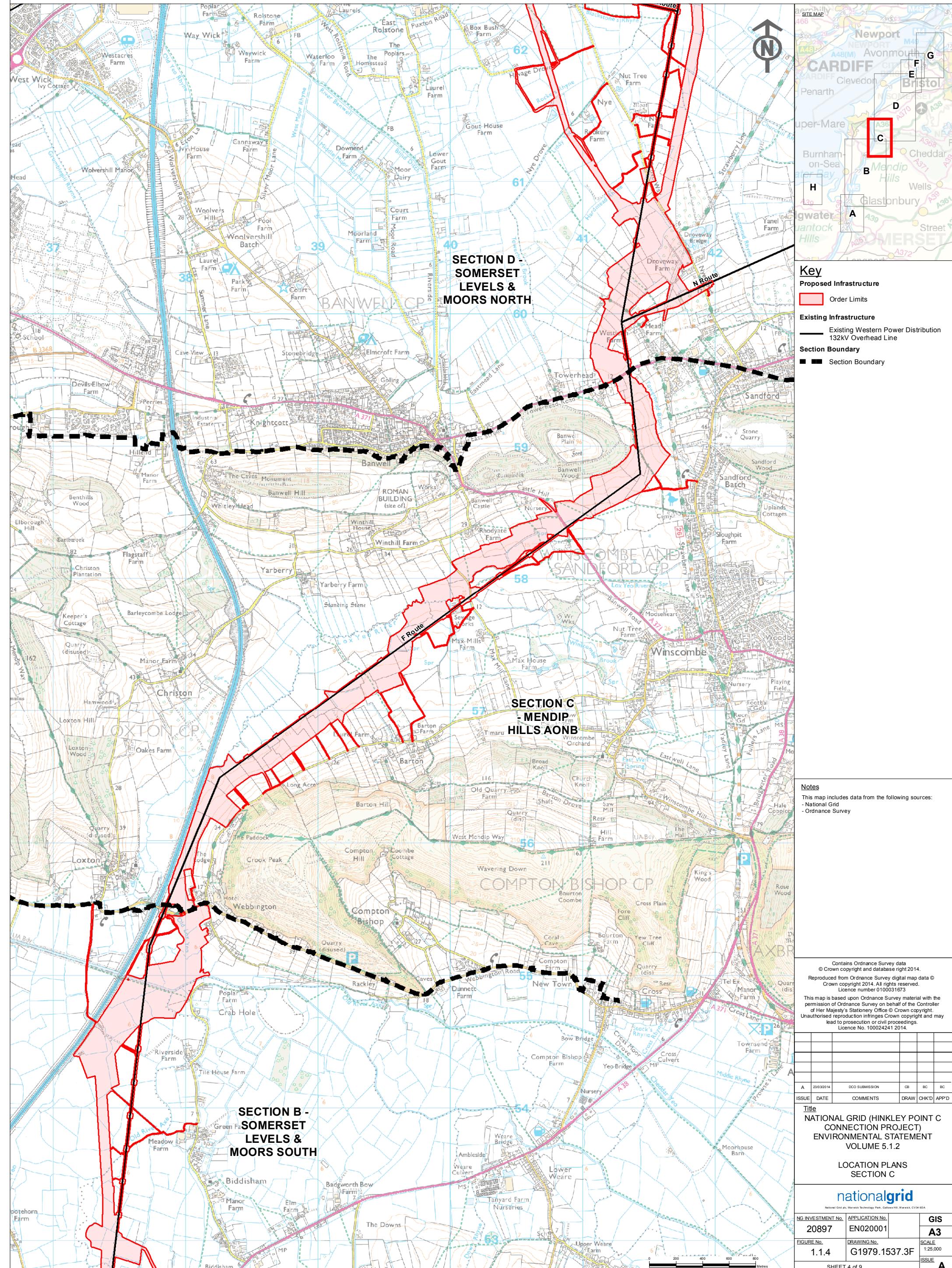
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)  
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## LOCATION PLANS SECTION B

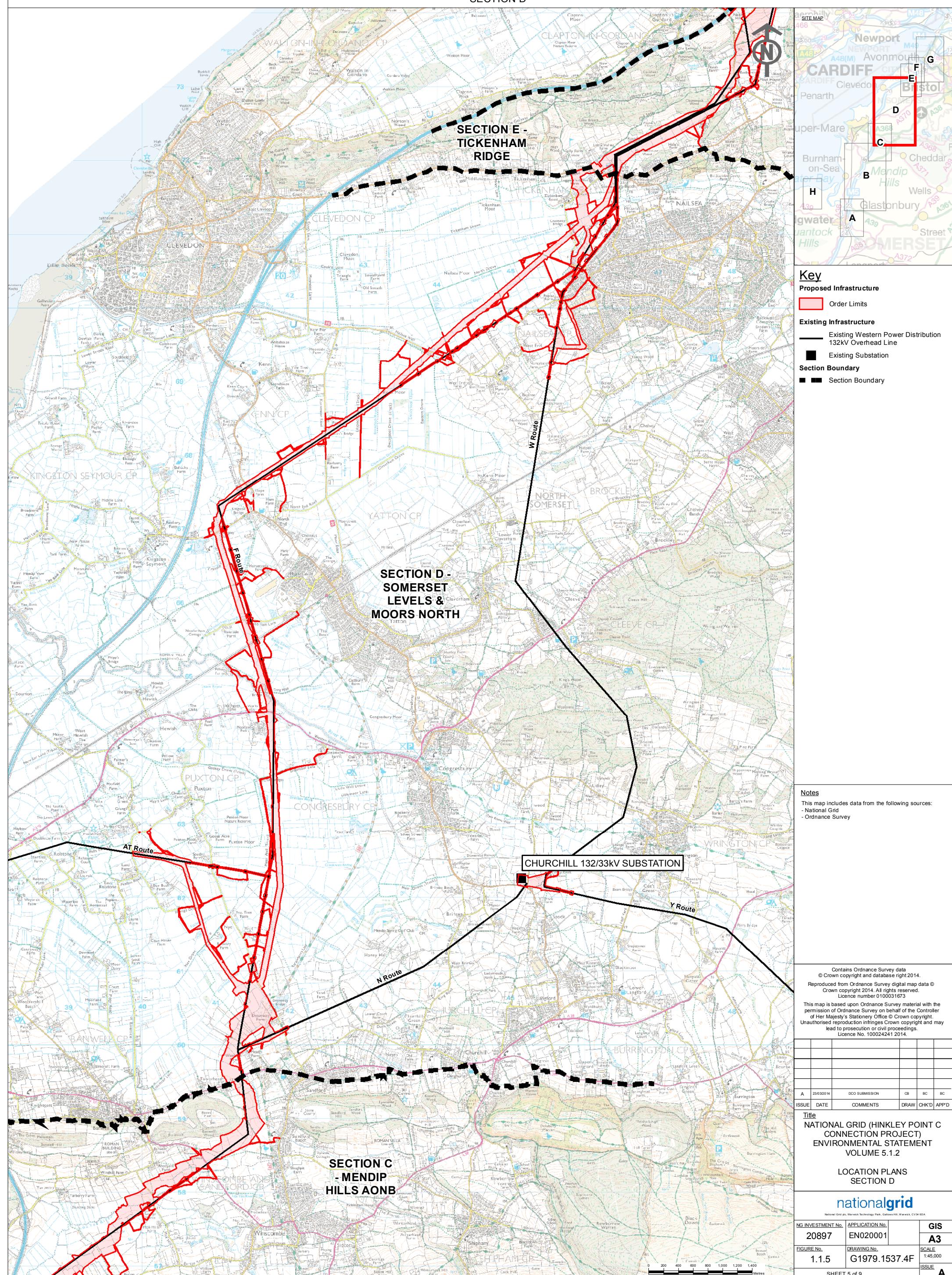


NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)  
ENVIRONMENTAL STATEMENT  
VOLUME 5 1 2

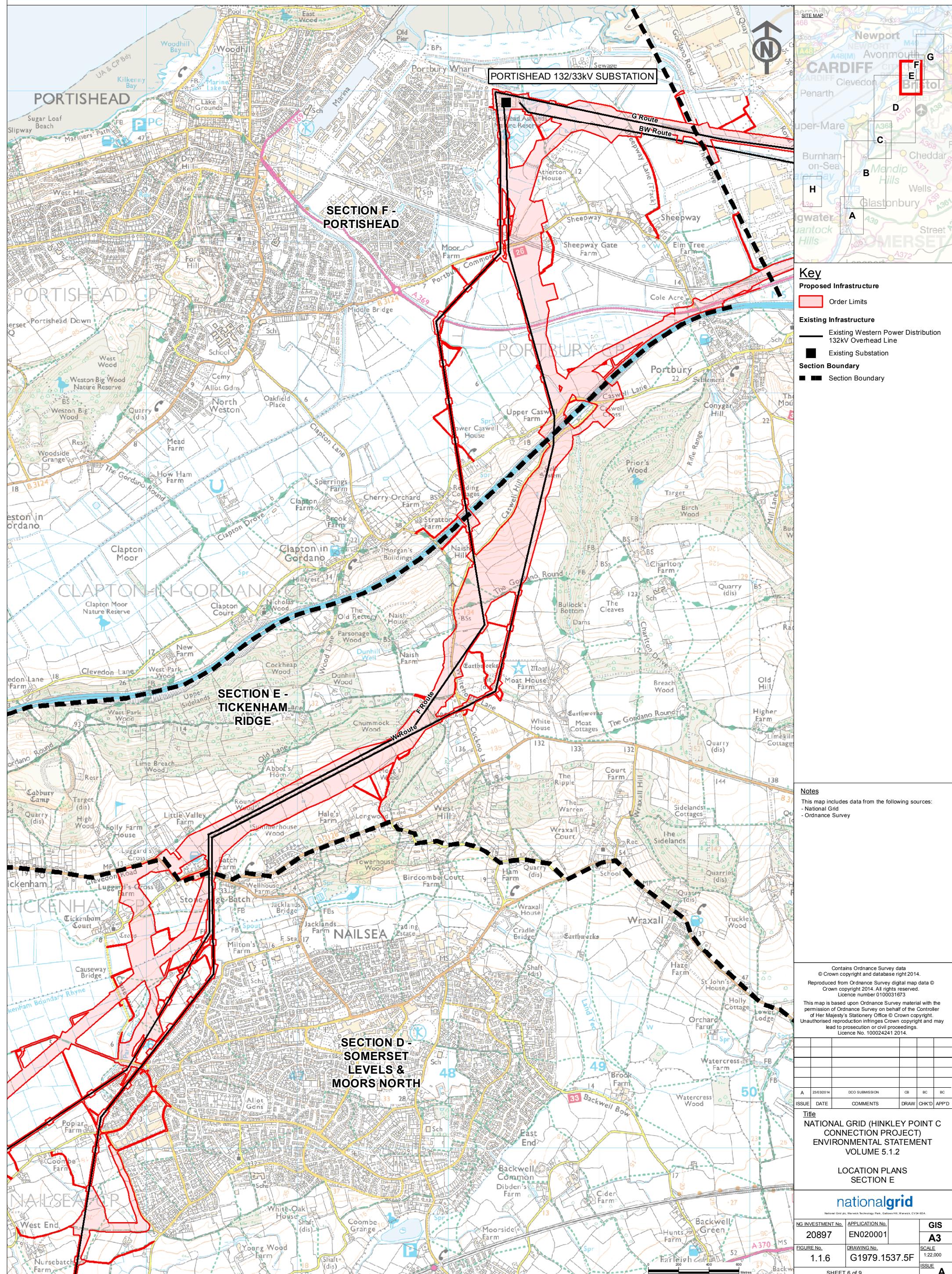
## LOCATION PLANS SECTION C



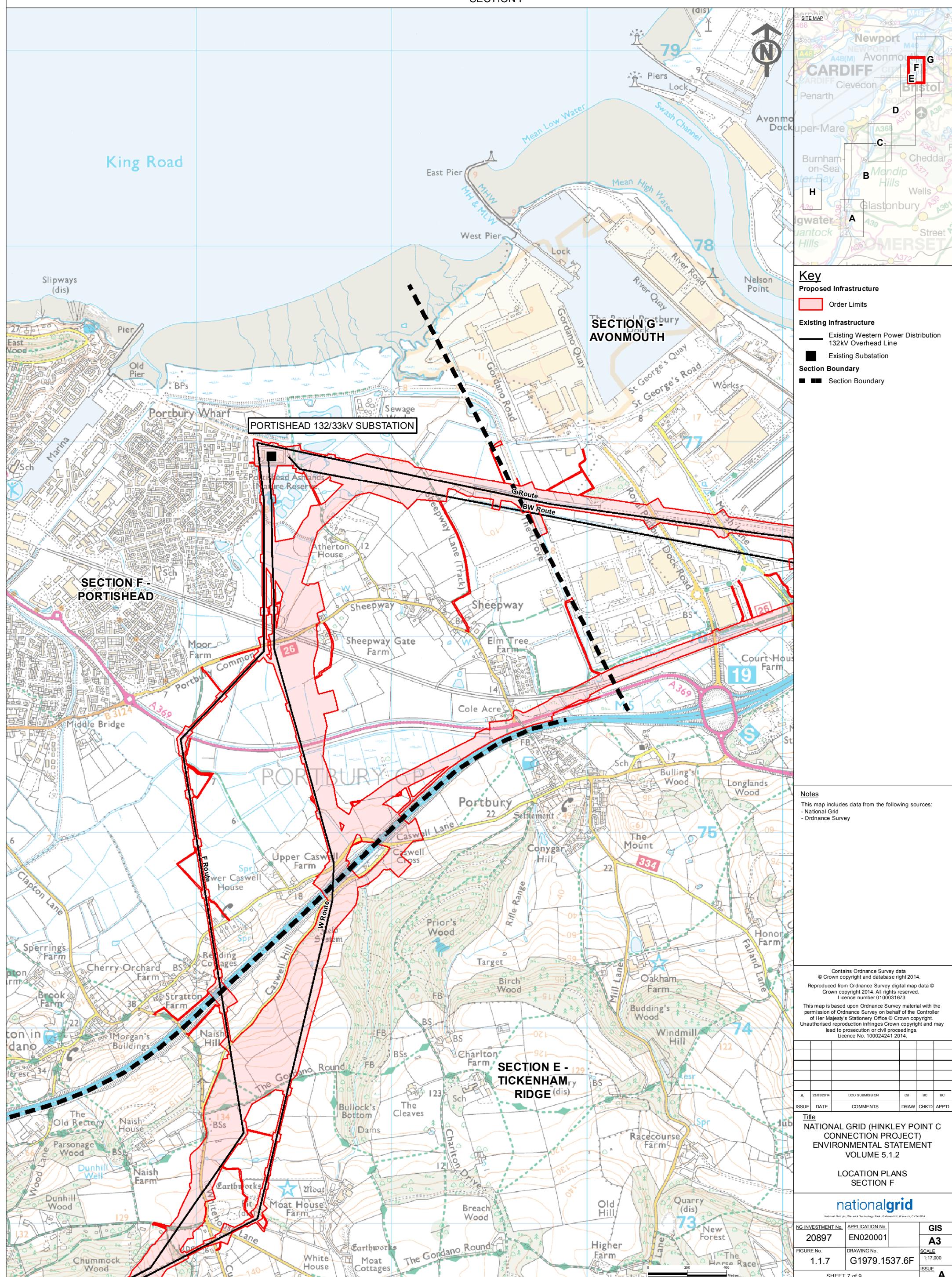
LOCATION PLANS  
SECTION D



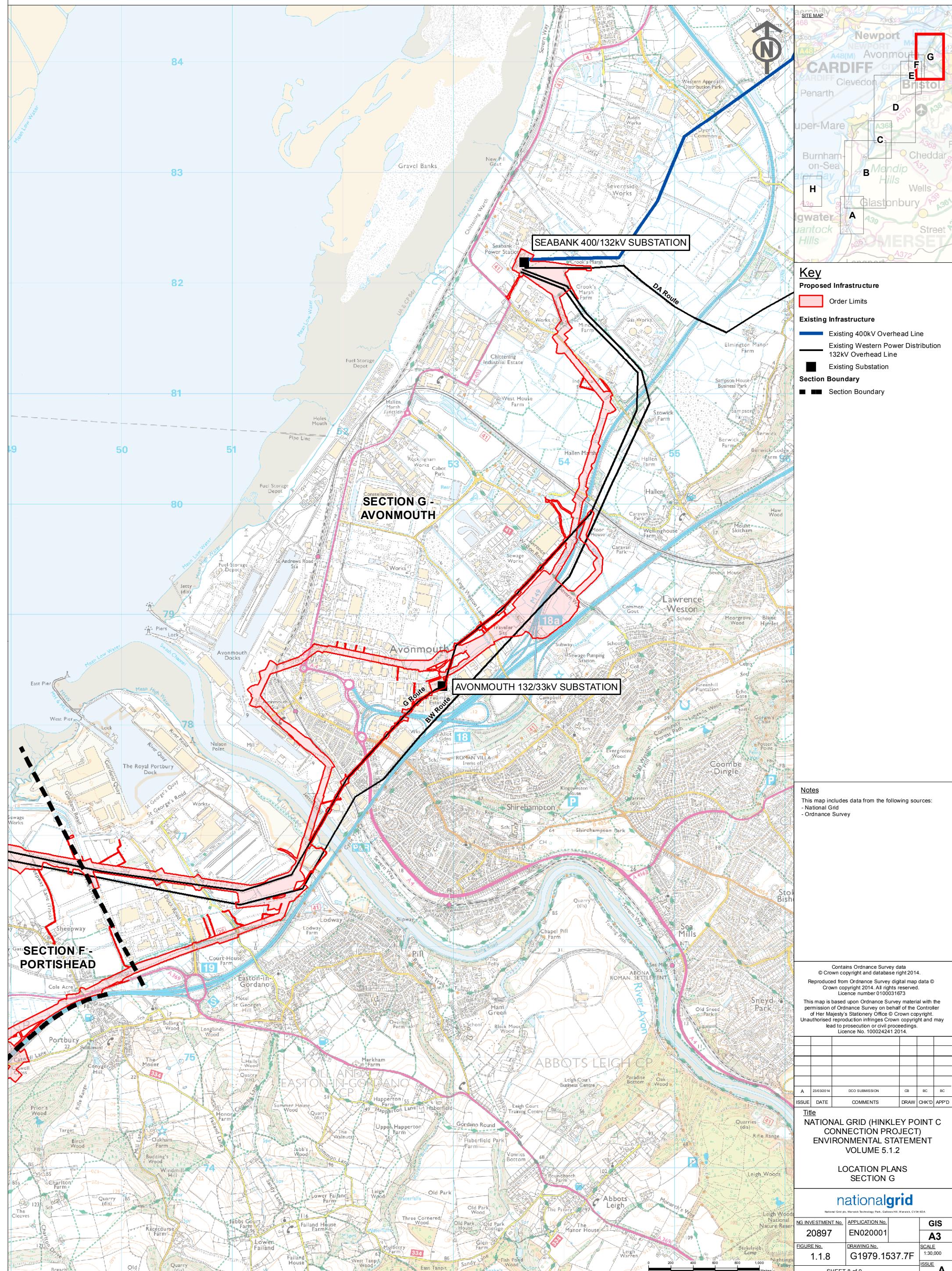
LOCATION PLANS  
SECTION E



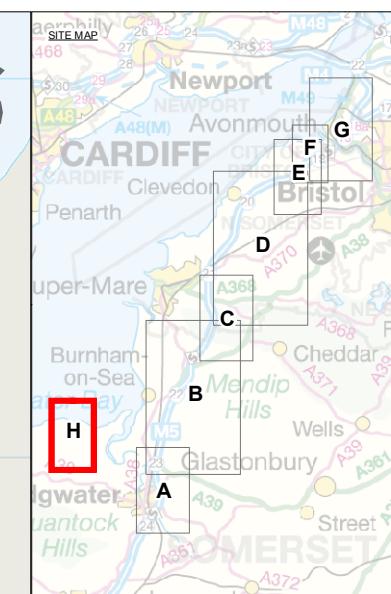
LOCATION PLANS  
SECTION F



LOCATION PLANS  
SECTION G



LOCATION PLANS  
SECTION H



**Key**

**Proposed Infrastructure**

- Order Limits (Red shaded area)

**Existing Infrastructure**

- Existing 400kV Overhead Line (Blue line)
- Existing 275kV Overhead Line (Red line)
- Existing Substation (Black square)

**Consented Infrastructure**

- Shurton 400kV Substation (Grey square)

